ORIGINAL

OPEN MEETING

MEMORANDUM

TO: THE COMMISSION

FROM: Utilities Division

DATE: February 28, 2012

RE: TUCSON ELECTRIC POWER COMPANY- APPLICATION FOR APPROVAL OF ITS 2011-2012 ENERGY EFFICIENCY IMPLEMENTATION PLAN (DOCKET NO. E-01933A-11-0055)

STAFF UPDATE

Staff has prepared amendments relating to three alternative proposals: (i) Staff's Proposed Order, with Staff's Proposed Amendment No. 1 to update the Demand-side Management Surcharge ("DSMS"), and Staff's Proposed Amendment No. 2 to establish a deferral account to track lost fixed costs arising from Tucson Electric Power energy efficiency programs; (ii) Staff's Proposed Order with Staff's Proposed Amendment No. 3, to establish a conditional waiver of the 2012 Energy Efficiency Standard and reset the DSMS to reflect the lower spending levels; and (iii) TEP's Proposed Order, revised to reflect TEP's Proposed Modified Implementation Plan, with Staff's Proposed Amendment No. 4.

Staff's Proposed Amendment No. 1. The amendment would change the DSMS in the Proposed Order from $0.003812 per kWh to $0.003877 per kWh. This change reflects updated information from TEP regarding its program spending through December 2011 and a recalculation of the DSMS to reflect TEP's projected sales in 2012. The use of one year of projected sales conforms to the terms of the existing Settlement Agreement (Decision No. 70628). Any over- or under-collection would be taken into account at the next DSMS adjustor reset.

Staff's Proposed Amendment No. 2. The amendment would authorize TEP to defer unrecovered fixed costs associated with energy efficiency savings, using a methodology approved by Staff. The deferral account would allow TEP, which is currently subject to a general rate case stay-out provision, to address the recovery of fixed costs.

Staff's Proposed Amendment No. 3. The amendment would waive the Energy Efficiency Standard for 2012, but not the cumulative 2020 standard, and would reset the DSMS to $0.002326. The conditional waiver sets spending at no less than 2010 levels, bases Performance Incentives on methodology determined in the last rate case, requires an annual true-up and bases recovery from all customers on a per-kWh basis.

Staff's Proposed Amendment No. 4. The amendment would address Staff's concerns (addressed in more detail below) regarding the Modified Implementation Plan proposed by TEP (Attached).

Of the three alternatives, Staff recommends approval of Alternative (i), Staff's Proposed Order, with Staff's Proposed Amendment No. 1 to update the DSMS, and Staff's Proposed Amendment No. 2 to establish a deferral account.

TEP'S PROPOSED MODIFIED IMPLEMENTATION PLAN

On January 31, 2012, TEP filed its Proposed Modified Implementation Plan ("Modified Plan") which included (i) the programs recommended by Staff at 75% of the proposed budget; (ii) an Interim Performance Incentive; (iii) no Authorized Revenue Recovery True-up ("ARRT"); (iv) a proposed budget (inclusive of the current uncollected balance and performance incentives) of $29,694,240; (v) the 2013 Implementation Plan budget at the same level as 2012, but allowing TEP to propose modifications intended to improve 2013 Implementation Plan effectiveness; and (vi) a proposed per-kWh Demand-Side Management Surcharge ("DSMS") of $0.003608 for residential customers, with a proposed 4.19% rate for all other customer classes. (The 4.19 percent would apply to all charges, except taxes and other governmental charges.)

TEP states that its proposed Modified Plan provides it with "a reasonable opportunity to meet the EE Standard for 2012 and possibly for 2013."

Staff's Comments

True-up. TEP's proposals regarding the Interim Performance Incentive are based significantly on projections of savings, participation and activity levels. Staff notes that actual savings, participation and activity levels are likely to vary from projections and that these variations may impact the amount due the Company from any approved performance incentives, in addition to impacting the Demand-Side Management ("DSM") bank balance (which tracks the difference between the amount taken in through the DSM adjustor and actual spending). If the Commission approves the Modified Plan, Staff recommends that TEP file for a DSMS reset in April of 2013, including a true-up of the Base Performance Incentive and Other Performance Metric Incentives, as well as a true-up of any under- or over-collection in the DSM bank balance.

Verification of Net Benefits. TEP has proposed a Base Performance Incentive based on Net Benefits and without a cap based on spending, along with an additional incentive (Other Performance Metrics) based partly on Net Benefits per customer dollar spent. TEP should include information supporting the Net Benefits claimed for purposes of calculating the true-up in the reset application.

Total New Performance Incentive for 2012 at 120% of Goal. If the Commission approves the Modified Plan, the Interim Performance Incentive should treat $8,695,654 calculated as 120 percent of the Goal as a hard dollar cap. If Net Benefits are higher than anticipated, it could

result in an unpredictable impact on both the Base and the Other Metrics components of the Interim Performance Incentive. Designating an explicit cap would control performance incentive costs, make them more predictable, and protect ratepayers.

Total New Performance Incentive for 2012 at 80% of Goal. Under TEP's proposal, should the Company fall short of achieving 80% for any metric that is part of the Interim Performance Incentive, the Company would still collect a minimum of 80% on that metric. In total, this would mean that the Company would collect at least 80% of the $7,246,379 Goal, or $5,797,103, regardless of its performance.

Staff believes the Interim Performance Incentive should not have a minimum. With any minimum, let alone a minimum equal to 80 percent of the Goal, there is a risk that the Company could receive a performance incentive that is too high relative to the actual energy savings achieved. (For example, it would be inequitable for TEP to receive an Interim Performance Incentive equivalent to 80 percent of the Goal, if the savings it actually achieved were equivalent to only 50 percent of the Goal.)

The Company states that its recommended methodology has been proposed, in part, to address lost fixed cost recovery. However, for there to be lost fixed costs associated with energy efficiency, there have to be savings associated with energy efficiency, meaning sales the utility has foregone as a result of the Company's energy efficiency programs. It makes no sense to guarantee recovery for lost fixed costs at a level higher than what the utility may actually experience.

Staff is also concerned that this proposal, with its high guarantee, is not designed to incentivize energy efficiency above the "floor." Generally, more per-unit effort is required to achieve savings at the higher levels of energy efficiency, than at the lower levels, where efficiency is made easier by the availability of "low hanging fruit." An Interim Performance Incentive which includes a high guaranteed "floor" payment could limit the incentive to achieve energy efficiency savings, particularly at higher levels.

Staff recommends that the Company's Interim Performance Incentive track with its actual achievements with respect to both Net Benefits and Other Performance Metrics. In addition, if the actual and verifiable Net Benefits achieved are less than 50 percent of the Goal, TEP should be reimbursed for only its prudently incurred costs associated with the portfolio and Other Performance Metrics, but should receive no Interim Performance Incentive.

Basis of the DSMS Charge. Staff modified tables provided by TEP to clarify the differing impacts of the per-kWh and bill percentage billing proposals. As both tables demonstrate, the 4.19 percent rate proposed by the Company for Non-residential customer classes instead of the usual per-kWh rate, would result in impacts that vary markedly among the classes, benefitting some at the expense of others. For example, smaller Non-residential customers listed in the table would experience a large percentage increase, while the larger Non-

residential customers would see decreases. Staff believes this is inequitable. In order to maintain equity, Staff recommends that all customers pay the DSMS on the same per-kWh basis.

Differences in DSM Charge in a Month

Sample of Nonresidential Customers in a winter month	$0.003608 per kWh	4.19% of bill before taxes and assessments	Difference	% Difference
Private Street & Area Lighting (GS-51) (201 kWh)	$0.73	$1.82	$1.09	149.3%
General Service (GS-10) (165,000 kWh)	$595.32	$721.52	$126.20	21.2%
Large General Service (I-13) (545,600 kWh and 200 kW)	$1,968.52	$1,221.68	-$746.84	-37.9%
Large Light and Power (LLP-14) (5,762,400 kWh and 12,096 kW)	$20,790.74	$15,777.45	-$5,013.29	-24.1%

Monthly Bill Impact of DSM Charge

Sample of Nonresidential Customers in a winter month	Monthly Bill with $0.003608 per kWh	Monthly Bill with 4.19% of bill before taxes and assessments	Difference	% Difference
Private Street & Area Lighting (GS-51) (201 kWh)	$51.75	$52.99	$1.24	2.4%
General Service (GS-10) (165,000 kWh)	$19,245.57	$19,380.89	$135.32	0.7%
Large General Service (I-13) (545,600 kWh and 200 kW)	$35,532.08	$34,701.25	-$830.83	-2.3%
Large Light and Power (LLP-14) (5,762,400 kWh and 12,096 kW)	$430,323.60	$424,968.91	-$5,354.69	-1.2%

Cost-Effectiveness. The Company has also proposed to amend the language with respect to calculating cost-effectiveness. Staff does not concur with TEP's proposal to retain a third party and, moreover, this method would be inconsistent with the method for calculating cost-effectiveness used with other utilities. Staff has proposed compromise language similar to that proposed in the APS Settlement Agreement.

Recommendation

Staff recommends that, of the three alternative proposals, the Commission approve Staff's Proposed Order, including Staff's Proposed Amendment No. 1 to update the DSMS, and

Staff's Proposed Amendment No. 2 to establish a deferral account to track lost fixed costs arising from TEP's energy efficiency programs.

Steven M. Olea
Director
Utilities Division

SMO:JMK:kdh\CHH

ORIGINATOR: Julie McNeely-Kirwan

PROPOSED STAFF AMENDMENT NO. 1

TIME/DATE PREPARED:

COMPANY: Tucson Electric Power Company AGENDA ITEM NO.

DOCKET NO. E-1933A-11-0055 OPEN MEETING DATE:

Page 58, line 1, DELETE "$0.003812" and **REPLACE WITH** "$0.003877"

Page 58, Lines 3-8, DELETE the existing bill impact table and **REPLACE WITH:**

Residential Usage	**kWh/month**	**Current DSMS/kWh**	**Current Bill Impact/month**	**Staff Proposed DSMS/kWh**	**Staff Proposed DSMS Impact/month**
Summer Average	1100	$0.001249	$1.37	$0.003877	$4.26
Winter Average	680	$0.001249	$0.85	$0.003877	$2.64
Annual Average	880	$0.001249	$1.10	$0.003877	$3.41

Page 58, Line 14-1/2, DELETE "$0.003812" and **REPLACE WITH** "$0.003877"

Page 63, Line 4, DELETE "$0.003812" and **REPLACE WITH** "$0.003877"

Page 68, Line 18, DELETE "$0.003812" and **REPLACE WITH** "$0.003877"

Make all conforming changes.

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

STAFF PROPOSED AMENDMENT NO. 2

TIME/DATE PREPARED:

COMPANY: Tucson Electric Power Company AGENDA ITEM NO.____

DOCKET NO(S). E-01933A-11-0055 OPEN MEETING DATE:

Page 57, line 26, **INSERT New Findings of Fact**:

"The Energy Efficiency Rules require TEP to reduce its kWh sales. To the extent that TEP recovers its fixed costs through its kWh charges, a reduction in kWh sales could affect TEP's ability to recover its fixed costs and could therefore negatively affect TEP's financial health. In addition, TEP is currently subject to a general rate case stay-out provision, approved by the Commission in TEP's last rate case."

"Staff recommends that TEP be authorized to defer the unrecovered fixed costs related to lost revenues associated with energy efficiency savings incurred following the effective date of this Decision, for consideration in its next rate case. Tucson Electric Power Company should file in this Docket, within 30 days of the effective date of this Decision, its proposed methodology for calculating and recording the unrecovered fixed costs. This methodology should be approved by Staff before Tucson Electric Power Company may record any amounts in a deferral account. Tucson Electric Power Company should file, as a compliance item in this Docket, quarterly reports of the account, detailing the current balance and all transactions recorded during the quarter, including the calculations used to determine the recorded amounts. The reports should be filed each April, July, October and January, covering the preceding calendar quarter."

Page 68, line 16, **INSERT New Ordering Paragraphs:**

"IT IS FURTHER ORDERED that Tucson Electric Power Company is hereby authorized to defer the unrecovered fixed costs related to lost revenues associated with energy efficiency savings incurred following the effective date of this Decision, for consideration in its next rate case. Tucson Electric Power Company shall file in this Docket, within 30 days of the effective date of this Decision, its proposed methodology for calculating and recording the unrecovered fixed costs. This methodology shall be approved by Staff before Tucson Electric Power Company may record any amounts in the deferral account. Tucson Electric Power Company shall file, as a compliance item in this Docket, quarterly reports of the account, detailing the current balance and all transactions recorded during the quarter, including the calculations used to determine the recorded amounts. The reports shall be filed each April, July, October and January, covering the preceding calendar quarter."

Make all conforming changes.

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

PROPOSED STAFF AMENDMENT NO. 3

TIME/DATE PREPARED:

COMPANY: Tucson Electric Power Company AGENDA ITEM NO.

DOCKET NO. E-01933A-11-0055 OPEN MEETING DATE:

On page 57, line 26, INSERT new Findings of Fact:

252. Although the cumulative 2020 standard should not be waived, compliance with the Energy Standard for 2012 should be waived.

253. The waiver for 2012 should take place under the following conditions: (i) spending for the energy efficiency portfolio should not decrease below the level recorded for 2010 in the Semi-Annual Progress Report filed on March 1, 2011 (exclusive of the cost for the baseline study); (ii) the Performance Incentives for 2010 and 2011 should be calculated based on actual spending during those years, and on the current methodology, as determined in the last rate case; (iii) the 2012 Performance Incentive should be projected based on 2010 spending levels and using the current methodology, as determined in the last rate case; (iv) all projections, including the projected Performance Incentive, must be trued-up at the next reset; and (v) the DSMS should be calculated on a per-kWh basis based on projected annual kWh sales for 2012 (adjusted for Lifeline sales), and should include the current under-collected balance, the projected 2012 spending level and the Performance Incentives as described in this paragraph.

254. For future resets, the DSMS should be reset annually either in an implementation plan or in a separate application filed no later than April 1. The EE rules require an implementation plan to be filed by June 1 in every odd year, but the utility has the option to file annually. In years when the utility does not file an implementation plan, TEP should file for a reset of the adjustor rate, or file to indicate why a reset is not necessary.

255. Based on the above, the DSMS should be set at $0.002326.

Page 58, line 1, DELETE "$0.003812" and **REPLACE WITH** "$0.002326"

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

PROPOSED STAFF AMENDMENT NO. 3

TIME/DATE PREPARED:

COMPANY: Tucson Electric Power Company AGENDA ITEM NO.

DOCKET NO. E-01933A-11-0055 OPEN MEETING DATE:

Page 58, Lines 3-8, DELETE the existing bill impact table and **REPLACE WITH:**

Residential Usage	**kWh/month**	**Current DSMS/kWh**	**Current Bill Impact/month**	**DSMS with Conditional Waiver**	**Bill Impact of DSMS with Conditional Waiver**
Summer Average	1100	$0.001249	$1.37	$0.002326	$2.56
Winter Average	680	$0.001249	$0.85	$0.002326	$1.58
Annual Average	880	$0.001249	$1.10	$0.002326	$2.05

Page 58, Line 14-1/2, DELETE "$0.003812" and **REPLACE WITH** "$0.002326"

Page 63, Line 4, DELETE "$0.003812" and **REPLACE WITH** "$0.002326"

Page 68, DELETE Lines 16-17

Page 68, Line 18, DELETE "$0.003812" and **REPLACE WITH** "$0.002326"

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

PROPOSED STAFF AMENDMENT NO. 3

TIME/DATE PREPARED:

COMPANY: Tucson Electric Power Company AGENDA ITEM NO.

DOCKET NO. E-01933A-11-0055 OPEN MEETING DATE:

On page 69, line 5, INSERT New Ordering Paragraphs:

"*Waiver*

IT IS FURTHER ORDERED that Tucson Electric Power Company is granted a waiver from the Energy Efficiency Standards for 2012, but that the Company is not granted a waiver from the cumulative 2020 Energy Efficiency Standard.

IT IS FURTHER ORDERED that annual spending for the energy efficiency portfolio should not decrease below the level recorded for 2010 in the Semi-Annual Progress Report filed on March 1, 2011 (exclusive of the cost for the baseline study).

IT IS FURTHER ORDERED that the Performance Incentives for 2010 and 2011 should be calculated based on actual spending during those years and calculated using the current methodology, as determined in the last rate case.

IT IS FURTHER ORDERED that the 2012 Performance Incentive should be projected based on 2010 spending levels and calculated using the current methodology, as determined in the last rate case, and trued-up at the next reset.

IT IS FURTHER ORDERED that the DSMS should be calculated on a per-kWh basis based on projected annual kWh sales for 2012 (adjusted for Lifeline sales), and should include the current under-collected balance, the projected 2012 spending level as described in Finding of Fact No. 253 and the Performance Incentives as described in Finding of Fact No. 253.

IT IS FURTHER ORDERED that Tucson Electric Power Company file annually for a reset, or to indicate that a reset is not necessary, either in an implementation plan or in a separate application filed no later than April 1 each year, beginning in 2013, until further order of the Commission.

Make all conforming changes.

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

PROPOSED STAFF AMENDMENT NO. 4
(TO COMPANY'S PROPOSED MODIFIED IMPLEMENTATION PLAN)

TIME/DATE PREPARED: _____

COMPANY:TUCSON ELECTRIC POWER COMPANY AGENDA ITEM NO.

DOCKET NO(S). E-01933A-11-0055 OPEN MEETING DATE:

Page 63, Line 23, After "Plan" **INSERT** ", as modified by the Commission,"

Page 65, Line 9, After "will" **DELETE** "be banded at 80% to 120% of the target performance incentive of $7,246,379." and **REPLACE WITH:**

"have a target performance incentive of $7,246,379, with a hard dollar cap at 120% of the target, equal to $8,695,654. With the exception of the hard dollar cap, the Company's Interim Performance Incentive should track with its actual achievements with respect to both Net Benefits and Other Performance Metrics. In addition, if the actual and verifiable Net Benefits achieved are less than 50% of Goal, TEP should be reimbursed for its prudently incurred costs associated with the portfolio and Other Performance Metrics, but should receive no Interim Performance Incentive. "

Page 67, Line 5, After "Implementation Plan." **INSERT:**

"However, TEP will file for a reset of the DSM adjustor mechanism in April of 2013, and include a true-up of the Interim Performance Incentive based on actual Net Benefits achieved, as well as a true-up of any over- or under-collection. Included with the reset filing must be information supporting the Net Benefits claimed for purposes of calculating the true-up."

Page 67, Line 8-1/2, After "to $0.003608 per kWh" **DELETE** "for residential customers and to a 4.19% rate on all charges (except taxes and other governmental assessments) for all other customer classes." and **REPLACE WITH** "for all customer classes."

** **Make all conforming changes**

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

PROPOSED STAFF AMENDMENT NO. 4
(TO COMPANY'S PROPOSED MODIFIED IMPLEMENTATION PLAN)

TIME/DATE PREPARED: _____

COMPANY:TUCSON ELECTRIC POWER COMPANY AGENDA ITEM NO.

DOCKET NO(S). E-01933A-11-0055 OPEN MEETING DATE:

Page 68, Line 1, After "Plan" **INSERT** ", as modified above,"

Page 73, Line 22, After "Modified Implementation Plan" **INSERT** ", as modified herein"

Page 73, Line 26, After "reset to $0.003608 per kWh" **DELETE** "for residential customers and to a 4.19% rate on all charges (except taxes and other governmental assessments) for all other customer classes." and **REPLACE WITH** "for all customer classes."

Page 74, DELETE Lines 12 through 26, INSERT New Ordering Paragraph:

"IT IS FURTHER ORDERED that "Tucson Electric Power Company shall use the inputs and methodology that Commission Staff uses when calculating the present value of benefits and costs for DSM measures in its Societal Cost Test. Commission Staff will regularly re-evaluate such inputs and methodologies, considering comments from Tucson Electric Power Company and other stakeholders."

** **Make all conforming changes**

THIS AMENDMENT:

_____ Passed _____ Passed as amended by _____

_____ Failed _____ Not Offered _____ Withdrawn

TEP'S PROPOSED MODIFIED IMPLEMENTATION PLAN

BEFORE THE ARIZONA CORPORATION COMMISSION

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

TEP's Proposed Modified Implementation Plan

IN THE MATTER OF THE APPLICATION OF TUCSON ELECTRIC POWER COMPANY FOR APPROVAL OF ITS 2011-2012 ENERGY EFFICIENCY IMPLEMENTATION PLAN

DOCKET NO. E-01933A-11-0055

DECISION NO._____

ORDER

Open Meeting
December 13 and 14, 2011
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

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

2. TEP provides service in the counties of Cochise and Pima. The Company has approximately 400,000 customers, 365,000 of whom are Residential and 36,000 of whom are Commercial or Industrial, along with a small number of Mining, Public Street and Highway lighting and Resale customers.

Implementation Filing

3. On January 31, 2011, TEP filed its application for approval of the Company's Energy Efficiency Implementation Plan for 2011-2012 ("Implementation Plan"). On August 22, 2011, the Company filed updated information concerning several elements of the original filing, including the Residential Financing Program, the budgets, Implementation Plan savings, the

Authorized Revenue Requirement True-up ("ARRT") and the Demand-side Management ("DSM") Adjustor.

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

i. *TEP 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.* TEP is proposing a performance incentive of $16.4 million for two years, based on a modification of the performance incentive structure.

iii. *Authorized Revenue Requirement True-up ("ARRT") Mechanism.* The ARRT Mechanism is intended to recover the revenue requirements associated with energy efficiency kWh savings until approval of decoupling or a similar mechanism in the Company's next rate case. TEP has proposed an updated ARRT of $16.7 million over two years; and

iv. *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, DSM Performance Incentive, and ARRT.

Scope and Structure of Program Review

5. *Existing and Proposed Programs.* The TEP 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) and 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.

6. Summarized descriptions are provided for existing programs, but the focus of Staff's review and analysis was new programs, proposed changes to existing programs and new Implementation Plan components or enhancements, along with the Company's proposals regarding the ARRT 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.

7. TEP 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.
Residential Direct Load Control–Pilot	Existing, no modifications proposed	Reduced use of AC units through Utility control.

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 TEP C&I Comprehensive Program, but with a separate budget specifically for school facilities.
CHP Joint Program – Pilot	New (Proposed)	Joint program in cooperation with Southwest Gas to promote increased development of CHP installations.

Small Business Direct Install	Existing, with new measures proposed	Persuade small business customers to install high-efficiency equipment at their facilities and encourage contractors to promote the Program.
C&I Comprehensive	Existing, with new measures proposed	Persuade business customers to install high-efficiency equipment at their facilities and encourage contractors to provide turn-key installation services to business customers.
Commercial Direct Load Control	Existing, no modifications proposed	A third-party implementation contractor negotiates load reduction agreements with multiple customers and "aggregates" these customers to provide TEP a guaranteed load reduction upon request.
Commercial New Construction	Existing, with proposed new measure	A re-branding of the Efficient Commercial Building Design Program intended to assist customers in designing and constructing energy efficient buildings.

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, community education, in home energy use monitors and CFL giveaway outreach events.
Home Energy Reports	Existing, no modifications proposed	Energy reports comparing a customer's usage to that of their neighbors. Reviewed herein as part of the Behavioral Comprehensive 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.
Education and Outreach	Existing. On-line Energy Audits and Academic Education components transferred to Behavioral Comprehensive sector programs.	Education programs designed to increase participation in the TEP 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. Below are the proposed budgets for the TEP 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 August 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.

9. Proposed costs for the DSM performance incentive and the ARRT are not included in this table.

UPDATED TEP EE IMPLEMENTATION PLAN BUDGET 2011 TABLE

Sector	Program Name	Incentives	Program Delivery	Program Marketing	Program Administration	Evaluation	Total
Residential	Efficient Products	$1,291,500	$418,603	$256,515	$49,296	$80,637	$2,096,550
	Appliance Recycling	$0	$20,713	$5,178	$14,085	$1,599	$41,574
	Residential New Construction	$1,140,000	$476,800	$200,000	$17,850	$73,386	$1,908,036
	Existing Homes/Audit Direct Install	$1,154,360	$618,697	$265,959	$17,850	$61,706	$2,118,572
	Shade Tree	$200,000	$78,853	$13,943	$14,085	$12,275	$319,155
	Low-Income Weatherization	$525,000*	$48,568	$5,736	$14,085	$17,802	$611,190
	Multi-Family	$0	$0	$0	$0	$0	$0
	Residential Direct Load Control (Pilot)	$0	$655,000	$98,250	$12,750	$19,150	$785,150
	Subtotal	**$4,310,860**	**$2,317,232**	**$845,580**	**$140,000**	**$266,554**	**$7,880,227**
Commercial	C&I Comprehensive	$2,165,375	$1,125,568	$329,094	$28,169	$145,928	$3,794,134
	Commercial Direct Load Control	$650,000	$625,283	$0	$10,563	$50,000	$1,335,846
	Small Business Direct Install	$1,505,956	$654,855	$324,122	$14,085	$99,961	$2,598,978
	Commercial New Construction	$279,310	$59,695	$33,900	$14,085	$15,480	$402,469
	Bid for Efficiency (Pilot)	$0	$34,160	$4,441	$7,042	$1,826	$47,469
	Retro-Commissioning	$0	$0	$0	$0	$0	$0
	Schools Facilities	$0	$0	$0	$0	$0	$0
	CHP Joint Program (Pilot)	$0	$20,000	$2,000	$0	$0	$22,000
	Subtotal	**$4,600,640**	**$2,519,560**	**$693,557**	**$73,944**	**$313,194**	**$8,200,896**
Behavior	Home Energy Reports	$247,500	$85,913	$16,671	$35,211	$15,412	$400,706
	Behavioral Comprehensive	$110,450	$300,794	$50,000	$14,085	$19,013	$494,341
	Subtotal	**$357,950**	**$386,706**	**$66,671**	**$49,296**	**$34,425**	**$895,048**
Support	Education and Outreach	$0	$350,000	$16,530	$9,859	$7,528	$383,917
	Residential Energy Financing	$4,000	$85,000	$36,399	$14,085	$3,331	$142,815
	Codes Support	$0	$41,250	$6,188	$0	$1,898	$49,335
	Program Development, Analysis and Reporting Software[1]	$0	$630,238	$0	$0	$0	$630,238
	Subtotal	**$4,000**	**$1,106,488**	**$59,117**	**$23,944**	**$12,756**	**$1,206,305**
	TOTAL	**$9,273,450**	**$6,329,987**	**$1,664,925**	**$287,183**	**$626,930**	**$18,182,475**
Percentage of Total Budget		**51%**	**35%**	**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.

[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.

UPDATED TEP EE IMPLEMENTATION PLAN BUDGET 2012 TABLE

Sector	Program Name	Incentives	Program Delivery	Program Marketing	Program Administration	Evaluation	Total
Residential	Efficient Products	$1,571,232	$417,639	$298,331	$50,775	$93,519	$2,431,495
	Appliance Recycling	$189,000	$562,822	$60,146	$14,507	$33,059	$859,533
	Residential New Construction	$915,000	$565,505	$200,000	$18,386	$67,956	$1,766,846
	Existing Homes/Audit Direct Install	$2,253,180	$698,233	$442,712	$18,386	$102,375	$3,514,886
	Shade Tree	$200,000	$84,336	$14,217	$14,507	$12,522	$325,582
	Low-Income Weatherization	$525,000	$53,207	$5,782	$14,507	$17,955	$616,451
	Multi-Family	$40,950	$94,234	$13,518	$14,507	$6,528	$169,738
	Residential Direct Load Control (Pilot)	$40,000	$105,370	$21,806	$13,133	$4,508	$184,816
	Subtotal	**$5,734,362**	**$2,581,346**	**$1,056,511**	**$158,707**	**$338,422**	**$9,869,348**
Commercial	C&I Comprehensive	$2,557,394	$1,162,607	$372,000	$29,014	$164,841	$4,285,856
	Commercial Direct Load Control	$1,452,000	$1,259,079	$0	$10,880	$30,000	$2,751,959
	Small Business Direct Install	$1,753,478	$676,286	$364,465	$14,507	$112,349	$2,921,085
	Commercial New Construction	$279,310	$62,676	$34,199	$14,507	$15,628	$406,319
	Bid for Efficiency (Pilot)	$330,000	$85,253	$53,983	$14,507	$19,350	$503,092
	Retro-Commissioning	$110,000	$24,141	$20,121	$14,507	$6,751	$175,520
	Schools Facilities	$78,158	$52,287	$6,914	$14,507	$6,075	$157,941
	CHP Joint Program (Pilot)	$0	$20,000	$2,000	$0	$0	$22,000
	Subtotal	**$6,560,340**	**$3,342,329**	**$853,681**	**$112,430**	**$354,993**	**$11,223,772**
Behavior	Home Energy Reports	$513,200	$69,283	$29,124	$36,268	$25,915	$673,790
	Behavioral Comprehensive	$602,380	$698,765	$50,000	$14,507	$54,626	$1,420,279
	Subtotal	**$1,115,580**	**$768,048**	**$79,124**	**$50,775**	**$80,541**	**$2,094,069**
Support	Education and Outreach	$0	$350,000	$17,026	$10,155	$7,544	$384,724
	Residential Energy Financing	$7,995	$375,415	$37,458	$14,507	$7,270	$442,645
	Codes Support	$0	$56,180	$8,427	$7,979	$2,903	$75,490
	Program Development, Analysis and Reporting Software	$0	$649,145	$0	$0	$0	$649,145
	Subtotal	**$7,995**	**$1,430,740**	**$62,911**	**$32,641**	**$17,717**	**$1,552,004**
	TOTAL	**$13,418,277**	**$8,122,464**	**$2,052,227**	**$354,552**	**$791,673**	**$24,739,193**
Percentage of Total Budget		**54%**	**33%**	**8%**	**1%**	**3%**	**100%**

SAVINGS: 2011 AND 2012

10. TEP reports that the Company anticipates meeting the EE standards for both 2011 and 2012. Based on the August 2011 filing, the Company anticipates total savings of approximately 311,146,000 kWh (or 311,126 MWh) for 2011 and 2012. The following table

shows TEP's projected savings by year, and the percentage of cumulative savings, as compared to the previous year's retail sales (2010 retail sales are actual, but 2011 sales are forecast).

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	9,291,788				
2011	9,335,237	135,781	135,781	1.46%	1.25%
2012		175,365	311,146	3.33%	3.00%

RESIDENTIAL PROGRAMS

A. APPLIANCE RECYCLING

11. Program Description. TEP's proposed new Appliance Recycling Program ("Appliance Program") is designed to remove and recycle inefficient working refrigerators and freezers. TEP 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 5,400 units per year, for 2011-2013. The Appliance Program would offer residential customers a $35 incentive, plus free pick-up and recycling for working, but inefficient, refrigerators and freezers.

12. 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.

13. 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. TEP estimates an average monthly dollar savings of $8.47 for refrigerators and $6.55 for freezers for its customers. Savings can go higher. For example, the TEP Green Energy site estimates that a standard, non-Energy Star side-by-side standard refrigerator (15 to 20 years old),

uses an average of 190 kWh per month and costs $17.10 to operate, while the comparable Energy Star refrigerator uses 44 kWh per month and costs $3.96. The Energy Star site notes that replacing a refrigerator from the 1970s can save more than $200 per year, while replacing a refrigerator from the 1980s can save over $100 per year. Another consideration is that the existing inefficiencies of older refrigerators and freezers may be magnified by storage in garages or on porches, causing them to expend more power in order to keep their contents cool, and making them even more costly for consumers to operate.

14. Eligibility. The Program is open to TEP 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.

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

16. 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.

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

18. Program Analysis/Issues. The JACO recycling facility in Phoenix will recycle all the appliances picked up from the TEP service territory. JACO was chosen because the company has a recycling center in Phoenix capable of meeting the TEP Appliance Recycling Program's needs. (It would not be cost-effective for JACO to set up a facility in the TEP territory, because JACO would require at least 10,000 units per year for three years to cover the estimated $250,000 in construction costs.) JACO will set up a local office and storage facility for the TEP area, and will store appliances locally until they can be transported in quantity, in order to minimize shipping costs.

19. 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."

20. Cost-Effectiveness. Based on Staff's analysis, the refrigerator measure has a benefit-cost ratio of 2.91 and the freezer measure has a benefit-cost ratio of 2.21, making both measures cost-effective.

21. Staff Recommendation. Staff has recommended that the TEP Appliance Recycling Program be approved and that it include both the refrigerator and freezer measures.

22. Staff has also recommended 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 program, and would allow more TEP customers to participate, potentially removing more inefficient appliances from the grid. (The proposed total incentive budget is $189,000. A per-unit incentive of $35 would allow 5,400 TEP customers to participate, while an incentive of $30 would allow 6,300 to participate.)

23. Staff has also recommended 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 TEP 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

24. 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.

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25. 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 Small Business Direct Install Existing Facilities ("SBDIEF") Program. Once the Multi-Family Program has ramped up and matured, TEP 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.

26. 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.

27. 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 TEP DSM Implementation Plan.

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

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

30. 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.

31. 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.

32. 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.

33. 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 improvement in existing complexes and through energy efficiency improvements to common areas through the Small Business Direct Install Existing Facilities Program.

34. 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

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Install Program, while the 5+ Multifamily Housing market segment would be served by the proposed Multifamily Program.

35. Cost-Effectiveness. Based on Staff's analysis, the benefit-cost ratio for each of the three proposed direct install measures is approximately 2.1, making all three measures cost-effective.

36. As noted elsewhere, improvements to common areas will be a part of the Small Business Direct Install Existing Facilities Program. Costs and savings associated with the common area improvements will, accordingly, be tracked as a part of that program.

37. Staff Recommendation. Staff has recommended 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

38. Program Description. This is an existing Residential program previously approved by the Commission in Decision No. 70383 (June 13, 2010), with 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 $1.14 per unit.

39. 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.

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

41. Delivery and Marketing. TEP 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.

42. Program Analysis/Issues. While there are reports questioning the life expectancy of CFLs in practice, there is currently very 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.

43. Cost-Effectiveness. To be cost-effective, an energy efficiency measure should have a benefit-cost ratio above 1.0, based on a comparison of avoided costs with costs incurred to purchase and deliver an energy efficiency measure. The existing CFL measure was found to be cost-effective when it was approved, with a 1.6 benefit-cost ratio, and the most recent semi-annual DSM filing (for January through June 2011) reported demand and energy savings for 2010 that were significantly above projections, indicating a higher than anticipated benefit-cost ratio.

44. Three of the proposed new measures have benefit-cost ratios above 1.0, while one does not. The Variable Speed Pool Pump has a benefit-cost ratio of 1.4, the Advanced Power Strips have a benefit-cost ratio of 1.8, and the Pool Pump Timer measure has a benefit-cost ratio of 2.4. The Residential LED light has a benefit-cost ratio of 0.77, well below 1.0. The lower benefit-cost ratio is largely due to energy savings that are low compared to the cost of the measure.

45. Staff Recommendations.

- Staff has recommended 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 has also recommended 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 has recommended 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

46. Program Description. The Low-Income Weatherization ("LIW") Program is an existing program designed to conserve energy and lower utility bills for TEP 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.

47. 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 TEP ratepayer funds to lower household energy consumption for low-income customers and increase the number of weatherized homes.

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

49. Delivery and Marketing Strategy. The Program is delivered through the Tucson Urban League ("TUL") and Pima County Community Services ("PCCS"). Due to the popularity of the Program, 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 TEP. TEP also promotes the Program on its website and through speaking engagements and outreach presentations.

50. Program Analysis/Issues. TEP is proposing to tie the eligibility level for the TEP LIW Program to the eligibility level set for the federal Low-Income Home Energy Program ("LIHEAP"). Currently, eligibility for the TEP LIW Program is set at 150 percent of the federal poverty level, while the federal LIHEAP eligibility level is set at 200 percent. Increasing the TEP LIW eligibility level would allow the Program to serve more customers, and tracking the TEP

level with the level set by LIHEAP (whether increasing or decreasing) would streamline the administrative process for community action agencies delivering the Program.

51. Cost-Effectiveness. The benefit-cost ratio for the Low-Income Weatherization Program is 1.03, slightly above the level required for cost-effectiveness.

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

- Staff has recommended that the Low-Income Weatherization Program be approved for continuation as part of TEP's Implementation Plan.
- Staff has also recommended that TEP be allowed to tie the eligibility level for the TEP 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

53. Program Description. The Residential New Construction Program, also known as the Zero Net Energy Homes Program, is a continuation of the existing program design that was approved by Decision No. 71638 (April 14, 2010). The Residential New Construction Program is designed with an incentive schedule that awards larger incentives for more efficient homes. The incentive schedule for the Residential New Construction 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.

54. To qualify for an incentive, homes must be tested by an approved energy rater, and meet one of the three tiers in the 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 Residential New Construction 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.

55. Program Objectives and Rationale. The objectives of the Residential New Construction 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.

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

57. Delivery and Marketing Strategy. Program delivery is provided by TEP staff, and participation of independent RESNET approved home energy raters. TEP 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.

58. 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.

59. Program Analysis/Issues. In Decision No. 71638, Tier 2 and Tier 3 were added to the existing Residential New Construction Program, with monetized carbon values taken into account in calculating cost-effectiveness. (TEP included potential costs of complying with carbon dioxide (CO2) regulation in its benefit-cost calculations.) Without the monetized carbon value, Tier 2 had a benefit-cost ratio of 0.75, well below the 1.0 benefit-cost ratio required for cost-effectiveness. No benefit-cost analysis of Tier 3 was done because, according to information provided by TEP, the only difference between Tier 2 and Tier 3 were the additional costs for solar measures.

60. Staff did not recommend approval of the Zero Net Homes Program, as proposed, but found that Tier 2 had a benefit-cost ratio of 1.1, if the Company's lowest proposed CO2 value was included.

61. The Commission approved the Zero-Net Energy Homes Pilot Program in April 2010, stating "The Commission believes that TEP's Pilot Program advances the Company's efforts

with regard to energy efficiency and broadens its current program offerings." The Decision also noted that "inclusion of a modest CO2 value in determining the proposal's cost effectiveness is appropriate, particularly for a pilot project and in light of likely Federal action addressing carbon within the proposed pilot project timeframe."

62. To date, no federal action has taken place which creates a clearly monetized value for the avoided costs of complying with carbon dioxide regulation. Without a monetized value, Staff practice has been to assume that the value of avoided emissions, although unknown, is greater than zero, and likely to make measures with benefit-cost ratios close to 1.0 cost-effective in practice.

63. Cost-Effectiveness. Benefit-cost ratios for the three New Residential Construction tiers were re-evaluated to determine cost-effectiveness based on current information, and taking into account the absence of federal regulations regarding carbon. Staff included gas savings for Tier 1 and Tier 2 (for duel fuel homes) when calculating updated cost-effectiveness.

64. Based on the Societal Test, and without monetized carbon values, the benefit-cost ratio for Tier 1 homes is 1.17, making the Tier 1 measure cost-effective. The benefit-cost ratio for Tier 2 is 0.88, making Tier 2 too low to be considered cost-effective, even taking into account the non-monetized environmental savings.

65. Staff Recommendation. Staff has recommended that the Tier 1 measure be approved for continuation, but has recommended that the Tier 2 and Tier 3 measures not be continued. If the Commission does not approve the Tier 2 and Tier 3 measures, Staff has recommended that they be discontinued once the Residential New Construction Program has met its existing commitments for Tier 2 and Tier 3 homes.

F. Existing Homes and Audit Direct Install

66. 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.72028 in December 10, 2010). No modification of this Program is being proposed in the current filing.

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67. 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 $1,000. TEP plans to submit the Existing Home Program to EPA with a request to utilize EPA labeling as Home Performance with ENERGY STAR.

68. *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. TEP has included a Residential Financing Pilot Program in this Plan for 2011-2012 which will be used to enhance participation in this program.

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

70. Delivery and Marketing Strategy. TEP 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 TEP. 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.

71. TEP 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

72. Cost-Effectiveness. The enhanced Existing Homes Program was approved in December 2010, with a benefit-cost ratio of 1.06, making the Program cost-effective. No modifications of the Program have been proposed, so a re-calculation of cost-effectiveness was not necessary.

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

G. Shade Tree

74. Program Description. The Shade Tree Program is an ongoing element of the Implementation Plan, approved in Decision No. 70455 (August 6, 2008). 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. TEP customers are allowed to purchase shade trees for $8.00 per tree, if they agree to plant the trees on the east, west, or south sides of their homes.

75. 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.

76. In addition, there are Community and the Schools tree planting projects, but these must meet the planting criteria outlined for planting residential trees.

77. Budget. See TEP EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program. Program funds are leveraged with a significant in-kind contribution of labor, material and technical support from individuals and the community.

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78. Delivery and Marketing Strategy. TEP provides DSM funds for the planting of trees within the guidelines that provide kWh savings. TEP partners with Trees for Tucson, a local non-profit organization that manages and administers the Program.

79. Due to the popularity of the Program, DSM revenues are not normally allocated for advertising and promotion. TEP employees currently inform customers about the Program during speaking engagements and outreach presentations. Other efforts entail website promotion, newspaper advertising, planting and care brochure, presentations at schools, tree tours, and tree care workshops.

80. Cost-Effectiveness. In Decision No. 70455, Staff calculated the benefit-cost ratio for this Program at 3.14, making it highly cost-effective. No modifications have been proposed for this Program.

81. Staff Recommendation. Staff has recommended that the TEP Shade Tree Program be approved for continuance.

H. Residential and Small Commercial Direct Load Control – Pilot

82. Program Description. TEP is requesting budget approval to continue this program with no additional modifications. The Residential and Small Commercial Direct Load Control ("DLC") Program was first approved in Decision No. 71846 (August 25, 2010). With the DLC Program TEP intends to better manage peak demand and to mitigate system emergencies through direct load control of residential central air-conditioners ("AC").

83. The DLC Program will use two-way communication that sends load control signals to equipment at the home and provides interval consumption data back to TEP for all participants. The two-way communication will allow TEP to provide usage and billing information to customers via an in-home display or the Internet.

84. Participants will receive either: (i) a free thermostat that can be programmed manually or remotely via the Internet; or (ii) a load control device placed on their air conditioning unit. In exchange, customers will permit TEP to cycle AC units or raise thermostat temperature settings for a limited number of hours or events per year. It is expected that TEP will . . .

call roughly 8 to 10 load control events each year. Customers would have the option to change thermostat settings or override cycling strategies during a control event, but could risk penalty if they do so repeatedly.

85. Program Objectives and Rationale. The DLC Program pilot is intended to control air conditioners during peak hours as a cost-effective means to reduce peak system load.

86. Delivery and Marketing Strategy. The Program's delivery strategy includes a third party implementation contractor, Tendril Networks, whose responsibilities include provision of load control equipment and control software that can be used by TEP to call and monitor load control events, training on software and assistance in designing effective load control strategies, recruitment of participants, participant tracking, technology installation, marketing, and call center/customer satisfaction.

87. Recruitment is based on specific criteria to ensure participants represent the population of eligible customers. Participants are required to have functioning broad band connection and would receive a $50 incentive. Customers also receive an internet-enabled programmable thermostat that will be installed by a qualified contractor at no cost to the customer. Residential recruitment started in June 2011 with an email marketing request for applications. Installation of program devices is underway.

88. Cost-Effectiveness. As discussed in Decision No. 71846, Staff calculated a benefit-cost ratio of 1.39 for the DLC Program.

89. Staff Recommendation. Staff has recommended continuation of the Residential and Small Commercial Direct Load Control Program.

90. Measurement, Evaluation, and Research. As discussed in Decision No. 71846, TEP intends for an independent evaluation contractor to conduct a process evaluation, an impact evaluation and a technology assessment.

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

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I. Bid for Efficiency

92. Program Description. Under TEP'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. TEP would then select winning applicants based on specified criteria.

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

94. 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.

95. 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.

96. TEP'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.

97. Budget. TEP requested a budget of $47,469 for the first year (2011) of the BFE Program and a budget of $503,092 for 2012. See the TEP Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

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98. 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.

99. 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 TEP customers, ESCOs and engineering / architecture firms. Any third-party project sponsor must submit an application with the consent and support of the identified TEP 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).

100. 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. TEP 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.

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

- TEP, 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.
- TEP/IC will evaluate projects and make awards;
- TEP/IC will perform pre-installation metering;
- Customer will implement the proposed project;
- TEP will pay 50 percent of the incentive amount prior to installation;
- TEP/IC will perform post-installation metering; and
- TEP will pay the remaining incentive amount based on the actual M&V energy savings (based on first year operation).

102. TEP 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 include the full Program offering in its 2014 DSM Implementation Plan.

103. 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.

104. Under TEP'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.

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105. TEP 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 1.86, indicating that the Program would be cost-effective.

106. Staff Recommendations

- Staff has recommended that the TEP 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.

J. RETRO-COMMISSIONING PROGRAM

107. Program Description. TEP'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. TEP states that improvements made in response to RCx efforts are comparatively inexpensive to implement and typically offer paybacks of less than two years.

108. 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).

109. 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

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110. 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.

111. Budget. TEP has requested a two-year budget for the RCx Program totaling $175,520. Incentives comprise $110,000, with program delivery, administration, marketing and evaluation costs accounting for the balance of the budget.

112. Delivery and Marketing Strategy. TEP would offer an online application for customers interested in the RCx Program on the TEP 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.

113. For selected customers, and subsequent to the Screening Energy Audit, TEP 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 TEP at no cost to the customer.

114. For selected customers that implement recommendations identified in the O&M Review, TEP 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.

115. 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.

116. Eligibility. The RCx Program will be available to TEP commercial and industrial customers with at least one meter on an eligible rate schedule. 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.

117. 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 TEP 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.

118. Cost-Effectiveness. TEP 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 2.38, indicating that the Program would be cost-effective.

119. Staff Recommendations. Staff has recommended that the TEP Retro-commissioning Program be approved.

K. SCHOOL FACILITIES PROGRAM

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

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121. The TEP Schools Program would be open to participation by all existing kindergarten through twelfth grade school facilities in the TEP 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 TEP C&I Comprehensive Program ("C&I Program"), but the Schools Program would only service eligible schools. TEP 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.

122. 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.

123. 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.

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

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- 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.

125. 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

126. Budget. The Program will begin in 2012 with a proposed first-year budget of $157,941. See The TEP Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

127. 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 TEP based on projected energy savings would utilize contractors to provide turn-key installation services to schools. Incentives would be paid directly to the contractors.

128. TEP 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.

129. 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.

130. Program Analysis/Issues. The Schools Program lists a total of 30 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.

131. 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.

132. Cost-Effectiveness. Based on these anticipated savings, Staff has determined that the typical School Facilities Program project would have a benefit-cost ratio of 1.71, 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.

133. Staff Recommendations. Staff has recommended that the School Facilities Program be approved.

L. Combined Heat and Power – Pilot

134. Program Description. TEP is requesting budget approval for a new Combined Heat and Power ("CHP") Pilot Program in 2011. The TEP CHP Pilot Program is a proposed Joint Utility Program to be implemented in cooperation with Southwest Gas. Distributed Generation ("DG') is defined in A.A.C. R14-2-2401 as "the production of electricity on the customer's side of the meter, for use by the customer, through a process such as CHP." R14-2-2401 goes on to define CHP as "combined heat and power, which is using a primary energy source to simultaneously produce electrical energy and useful heat." TEP proposes this program as a pilot to assist in developing methods and procedures for future joint utility programs with Southwest Gas or other utilities. TEP proposes to provide support for the existing Southwest Gas DG Program (Decision

No. 69917, September 27, 2007) by sharing costs for marketing and outreach, training, and design. Specifically, TEP would pay up to 10 percent of the design costs for a CHP installation. TEP would cooperate with Southwest Gas on marketing and outreach strategy to maximize the effect of marketing and outreach expenses.

135. Program Objectives and Rationale. The primary goal of the Program is to provide support for the existing Southwest Gas DG Program, specifically for CHP projects. TEP states that the market potential for CHP is substantial and could contribute significantly to energy conservation in Arizona, and could accrue significant societal and customer benefits as well. According to TEP, CHP is an affordable, clean, and reliable way to meet a customer's energy needs. With gas used as the primary fuel, the process is far more efficient than electricity or gas use alone because the waste heat is used as well. The economics of the CHP system depends on effective use of the thermal energy in the exhaust gases. Exhaust gases are primarily used for heating the facility and could also be applied to heat recovery steam generators (HRSG) to produce additional electric power.

136. Delivery and Marketing Strategy. Program delivery, incentives, and administration; as well as the marketing and communications strategy would be provided by Southwest Gas through its DG Program. TEP would assist with marketing and outreach, design assistance, and interconnection design expertise. TEP would assign an in-house program manager to coordinate joint program delivery with Southwest Gas.

137. Cost-Effectiveness. TEP's analysis of this program showed a benefit-cost ratio of 8.5. Although Staff's analysis indicated a lower benefit-cost ratio of 6.5, it still indicated a cost-effective program based upon avoided provision of TEP capacity and energy.

138. Staff Recommendation. In Staff's opinion, this program could increase the amount of CHP in TEP's service area, and, due to CHP's inherent efficiencies, increase the efficiency of energy use. Staff has recommended approval of the CHP Pilot Program.

M. Small Business Direct Install

139. Program Description. TEP 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 Ctrls ("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

140. The Small Business Direct Install Program is an existing program, approved by the Commission in Decision No. 70457 (August 6, 2008). The Program offers incentives for a select group of retrofit and replace-on-burnout energy efficiency measures in existing facilities. Eligible customers include customers who qualify for TEP's Rate 10 - Small General Service pricing plan (typically an aggregate monthly demand of 200 kW or less). 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 lighting measures range from $7 to $65, HVAC measures range from $125 to $675, and Refrigeration measures average $127.

141. Program Objectives and Rationale. The Small Business Direct Install 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 small business customers to install high-efficiency equipment at their facilities and encourage contractors to promote the Program.

142. Budget. See TEP EE Implementation Plan Budget Table herein which lists the sector, projected costs per category, and total budget for each program. The Small Business Direct Install Program shows total costs for 2011-12 of $7.6 million.

143. Delivery and Marketing Strategy. 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).

144. 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.

145. Cost-Effectiveness. The original Program approved with Decision No. 70457 showed an overall benefit-cost ratio of 1.87 and a range of measure benefit-cost ratios ranging from 1.04 to 3.6. In this filing, the new proposed measures range from 1.4 to 10.8 with an overall benefit-cost ratio of 3.4.

146. Staff Recommendation. Staff recommends approval to continue the Small Business Direct Install Program, with the proposed new measures.

N. Commercial & Industrial ("C&I") Comprehensive

147. Program Description. TEP is requesting budget approval to continue the C&I Comprehensive Program and approval of additional measures listed below:

- Heat Pump Water Heaters - Tier 1
- CO Sensors
- CO2 Sensors
- Cooling Tower Sub cooling
- Economizers
- High Perf Glazing
- PTAC/PTHP
- Shade Screens
- Window Films
- EMS - Lighting Schedule
- Induction Lighting
- LED Channel Signs
- LED Pedestrian Signals
- LED Traffic Lights
- LED Street and Parking Lights
- Outdoor CFL

- T8 to Premium T8
- Green Motor Rewind
- Beverage Controls ("vending miser")
- Snack Controls ("vending miser")
- Efficient Compressors
- Efficient Condensers
- Floating Head Pressure Controls
- Refrigerated Display Automatic Door Closers
- Refrigerated Display Gaskets
- Coin Operated Washers - Tier 1
- Coin Operated Washers - Tier 2
- Advanced Power Strips - Occupancy Sensors
- Advanced Power Strips - Timer Plug Strip
- Advanced Power Strips - Load Sensor

148. Incentives for the above measures range from under $2 up to $200, except those for chillers and heat pumps/air conditioners. The average incentive for chillers is $13,465. Heat pump and air conditioning incentives average, respectively, $556 and $575.

149. The C&I Comprehensive Program is an existing program, approved by the Commission in Decision No. 70403 (July 3, 2008) under the name of Non-Residential Existing Facilities Program. The Program provides prescriptive incentives to large commercial customers who are under TEP's Rate 13 and Rate 14 pricing plans (typically an aggregate monthly demand exceeding 200 kW) for the installation of energy-efficiency measures, including lighting equipment and controls, HVAC equipment, motors and motor drives, compressed air and refrigeration measures. Prescriptive incentives are offered for a schedule of measures in each of these categories. Customers can also propose their own innovative energy efficiency solutions by offering a custom energy efficiency measure. The average incentive for custom projects is $4,270.

150. Program Objectives and Rationale. The C&I Comprehensive Program is designed to address the barriers to this market segment, including limited awareness and lack of knowledge about the benefits and costs of energy efficiency improvements, performance uncertainty associated with energy efficiency projects, and the required short-term payback. The program's purpose is to encourage 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.

151. Budget. The Summary Implementation Plan Implementation Costs for 2012, Table 3-11 in the filing, shows projected costs by category, and total budget for each program. The C&I Comprehensive Program shows total utility cost of $4.28 million and total lifetime net benefits of $20 million.

152. Delivery and Marketing Strategy. The Program is delivered by a third party implementation contractor who provides program administration, application review, participation tracking and reporting, project quality control, and technical support. In addition to the implementation contractor, key partnering relationships and marketing outreach include: the local architectural and engineering community, electrical, mechanical and building contractors, equipment manufacturers, distributors and vendors, professional and trade service associations, and the educational and promotional pieces designed to assist facility operators and decision makers with the information necessary to improve the energy efficiency of their facilities.

153. Cost-Effectiveness. With Decision No. 70403, the Commission approved this program's predecessor, the Non-Residential Existing Facilities Program which showed a benefit-cost ratio of 2.5 using Staff's methodology. The new measures described in this filing show similar cost effectiveness, except for one measure, the LED Street and Parking Lights which both TEP and Staff show a benefit-cost ratio less than one. Therefore, Staff does not recommend approval of this measure.

154. Staff Recommendation. Staff recommends approval of the C&I Comprehensive Program, except for the proposed additional measure LED Street and Parking Lights.

O. C&I Direct Load Control

155. Program Description. The C&I Direct Load Control Program is an existing program, approved previously by as the Commercial and Industrial Demand Response Program in Decision No. 71787 (July 12, 2010). TEP is requesting budget approval to continue this program with no additional modifications.

156. This is a commercial and industrial load curtailment program. Customers are compensated with incentives for their participation at negotiated levels that vary depending on

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multiple factors including the size of the facility, amount of kW under load control, and the frequency with which the resource can be utilized.

157. Program Objectives and Rationale. Commercial and industrial load represents a total of approximately 22 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 is capable of reducing 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.

158. 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 "aggregate" these customers to provide TEP a confirmed and guaranteed load reduction capacity available upon request. The contract between TEP and the demand response ("DR") aggregator, EnerNOC, is similar to a power purchase agreement in that EnerNOC is obligated to provide megawatts of load curtailment while maintaining a degree of flexibility in how the curtailments are achieved. Incentives are provided by EnerNOC and customized based on a variety of factors, including the amount of load that can be reduced.

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

160. Cost Effectiveness. With Decision No. 71787, the Commission approved the original Program, showing a Staff-determined benefit-cost ratio of 2.47. Since TEP is making no modifications to the Program, it remains a cost-effective program.

161. Staff Recommendation. Staff has recommended approving the C&I Direct Load Control Program for continuation.

P. Commercial New Construction Program

162. Background. On August 6, 2008, in Decision No. 70459, the Commission approved the Efficient Commercial Building Design Program for TEP. The Program was

approved on a two-year pilot basis. On July 1, 2010, TEP filed an application for approval to continue the Program for an indefinite period. In December, 2010, TEP informed Commission Staff that a request for continuation would be contained in TEP's 2011 Energy Efficiency Implementation Plan ("EE Plan"). TEP filed the EE Plan on February 1, 2011, and rebranded the Efficient Commercial Building Design Program as the "Commercial New Construction Program." TEP is also proposing one additional measure for this Program, high-performance glazing.

163. Program Description. The Commercial New Construction Program is geared toward the building owner/developer by incenting the increased use of energy efficiency measures during the design phase of a commercial building's development. Program incentives are based on improved building energy efficiency compared to a baseline design, as determined by a building energy simulation program such as the Department of Energy's eQUEST program. The Building Design Incentive is limited to a maximum of $75,000 per project and the Design Assistant Incentive is limited to a maximum of $10,000 per design team.

164. Program Objectives and Rationale. Commercial New Construction provides incentives to offset the additional design cost of alternative, more energy-efficient designs. The Program is performance-based and includes design assistance for the design team, performance-based incentives for the building owner/developer, and energy design information resources. Design assistance involves efforts to integrate energy efficiency into a customer's design process as early as possible.

165. In addition to the design incentives and performance-based incentives for the building owner/developer, this Program provides technical support services to the design community.

166. Budget. TEP requested a budget of $402,469 for 2011 for the Commercial New Construction Program and a budget of $406,319 for 2012. See the TEP Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

167. Eligibility. All new commercial building projects and major renovations to existing buildings in the TEP service territory that receive or will receive electric service from TEP are

eligible to participate in the Program. Major renovation for this purpose would be a substantial or significant change to an existing structure, such as completely gutting a building and installing insulation, new windows, and new HVAC equipment.

168. Delivery and Marketing. TEP will continue to market the Program to building owners, developers and members of the design team. The Program uses a variety of educational and promotional pieces to assist building owners and developers with the necessary information to understand various energy efficiency options, and to encourage them to discuss these options with their design professionals early in the design process. TEP will continue to promote the Program through focused outreach to the building development community.

169. Cost Effectiveness. Although the original pilot did not enjoy a high level of participation due primarily to the poor economic environment, participation has grown dramatically during the first half of 2011. TEP reports a total of ten Program applications that would produce a total energy savings of 1,635,490 kWh. Based on these estimated savings, Staff has calculated the benefit-cost ratio for the Program as 2.70. The proposed new measure, high-performance glazing, has a calculated benefit-cost ratio of 1.14.

170. Staff believes that offering incentives and technical guidance during the design stage of commercial building projects is an important method of implementing energy efficiency measures. Staff further believes that by increasing the visibility of the Program through better online marketing and continued use of educational seminars, participation in the Program can be further increased. Therefore, Staff has recommended that the Program be approved for continuance.

171. Program Analysis/Issues. The subject Program is a continuation of the Program formerly known as "Efficient Commercial Building Design" that was originally approved as a two-year pilot on August 6, 2005, under Decision No. 70459.

172. The implementation of the original pilot occurred during the start of the current economic downturn. The financial environment resulted in a near total halt in loans for all types of commercial building development projects, as well as a concomitant decrease in overall building project activity.

173. Staff believes that the financial climate played a major part in the lower than anticipated participation in the original pilot, and that the reduction in new buildings within TEP's service area directly affected participation in the pilot. Participation in the Program grew dramatically during the first half of 2011, with TEP reporting the completion of two Design Assistance projects and the receipt of eight New Construction applications. Staff believes that this trend of increasing participation in the Program will continue.

174. Staff has recommended that TEP continue its outreach efforts to building owner, developer and design professional organizations (e.g. American Institute of Architects, American Society of Professional Engineers, Urban Land Institute, National Association of Office and Industrial Properties, etc.). Staff further recommended that TEP extend its outreach activities to include banks and other lending institutions that service the building design and construction industry. In addition, TEP should communicate with local building code officials to apprise them of Program benefits and encourage the adoption of higher performance building and energy codes.

175. Baseline Study. At the inception of this pilot program, TEP had not conducted a formal baseline study of new commercial construction design characteristics. In preparing the analysis for the pilot program, the baseline performance conditions of new commercial construction projects were estimated based on best available knowledge of current market conditions and design practices. To confirm the baseline assumptions made in the preparation of this plan, TEP hired Navigant Consulting ("Navigant") to conduct a formal baseline study of commercial building practices. Funding for this baseline study was approved by Decision No. 71109 on June 5, 2009.

176. The study, entitled "Assessment of Baseline Practices for Commercial New Construction", dated June 25, 2010, was submitted by TEP to Staff at the time that TEP filed its application to continue the pilot program. The objective of this report was to determine how commercial buildings are currently being designed and specified within TEP's service area. The baseline study concluded that, except for federal and state buildings, new commercial construction in the TEP service area is generally built to code. Where buildings are constructed above code . . .

requirements, it is generally in pursuit of LEED (Leadership in Energy and Environmental Design) certification.

177. The baseline study offered several recommendations for TEP to consider in relation to the pilot program. A summary of those recommendations includes:

- Federal and other government buildings are generally mandated to build above code. Therefore, TEP should consider modifying its Program applications to determine whether a building is public or private, and require higher savings for public buildings.
- TEP should monitor code changes and talk to code officials on a regular basis.
- TEP should provide education to the building industry to define an integrated design approach and help this to become standard practice.
- TEP should encourage the use of commissioning agents (perhaps through specific incentives) to ensure that buildings operate as specified by design.
- TEP should consider adding a prescriptive path to the Program to provide incentives for specific technologies, such as high R value roofs and walls, variable speed drives and high efficiency motors, higher efficiency lighting systems.
- The Report states that the most important recommendation is "...to educate architects about life-cycle costs and how to sell these ideas to clients, educate owners who are buying from private developers, and educate the market about considering life cycle costs versus first costs in determining the value of a building..."

178. Staff Recommendations. Staff generally concurs with the recommendations of the baseline study with the exception that TEP should first ascertain the cost-effectiveness of using third-party commissioning agents. Staff has made the following additional recommendations:

- Staff has recommended that the Program, including the high-performance glazing measure, be approved for a second two-year period.
- Staff has further recommended that TEP implement the recommendations in the "Assessment of Baseline Practices for Commercial New Construction" prepared by Navigant Consulting, including modification of Program performance thresholds (for public buildings) and Program applications to differentiate between public and private sector facilities.
- Staff has further recommended that Measurement & Evaluation statistics for the Program be included in the DSM reports filed with the Commission.

- Staff has further recommended that TEP continue Program outreach efforts by targeting building owner, developer and design professional organizations, lenders and lender industry associations, and local building code officials.

- Staff has further recommended that information announcing the availability of the Program occupy a more prominent position on the TEP website.

Q. BEHAVIORAL COMPREHENSIVE

179. Program Description. The proposed Behavioral Comprehensive Program ("Behavioral Program") consists of six 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.

180. The table below lists and describes the six 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	Approved on April 7, 2011, Decision No. 72254.	Comparison of energy use to that of neighbors. An on-line energy audit component will also be added in 2012.
Direct Canvassing	New (proposed)	Door to door awareness and direct install campaign
K-12 Education	New (proposed). Consists of redesigned energy education for 6th, 7th and 8th 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

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In home Energy Use Monitors	Approved as part of the Residential Direct Load Control Pilot, August 25, 2010, Decision No. 71846.	A sub-pilot of the smart meter program. Displays near-real time usage information
CFL Giveaway	New (proposed)	CFL bulb giveaway at outreach events

181. 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.

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

183. 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 TEP DSM programs.

184. 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.

185. Beginning in 2012, the K-12 subprogram will also offer the academic support activities currently offered under the Education and Outreach ("E&O") Program. These activities include the Insulation Station, the Energy Patrol, the Electri-City exhibit at the Tucson Children's Museum and Energy Conservation Bike/Solar Generation Presentations. 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.

186. 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.

187. CFL Giveaway. The Compact Fluorescent Light Give-Away Program will complement TEP'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.

188. In-home Display. The In-Home Display measure is part of the Residential Direct Load Control Program already approved by the Commission in Decision No. 71846. The In-home Display works by providing a digital readout showing customers their current cost of energy in cents per hour and their cumulative cost for the month. Participating customers are provided with interval energy usage data in several formats on a personal web portal or on an additional physical home display device.

189. Budget. The cost for the web portal and in-home displays are included in, and budgeted with, other communicating equipment provided to customers participating in the Residential Direct Load Control program. See TEP EE Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

190. 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 TEP DSM Program

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

192. Program Analysis/Issues. The Company initially proposed to leave some elements of school-based energy efficiency education, such as the Insulation Station and the Energy Patrol, with the current Education and Outreach program. TEP is now proposing to consolidate the school-based energy education activities within the K-12 subprogram.

193. 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.

194. 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 entire kit.

Subprogram	Measures	Benefit-cost Ratios
Direct Canvassing	CFLs	2.8
K-12 Education	CFLs, Faucet Aerator, LED nightlight, Refrigerator thermometer	3.0
Community Education	CFLs, Showerhead, Faucet Aerator, LED nightlight, Refrigerator thermometer	1.57
CFL Giveaway	CFLs (18 Watt/23 Watt)	1.99/2.7

195. Staff Recommendations.

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

R. Residential Energy Efficiency Financing

196. Program Description. TEP was ordered to file an energy efficiency financing program in Decision No. 72028 (December 10, 2010). TEP 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. TEP 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. TEP's proposed Program elements include:

- Loan commitment of $2,000,000 per year for two years; this would provide approximately 424 loans per year based on an average $4,722 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 ratepayer 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 efficient 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.

197. TEP proposes to increase the DSM surcharge for residential customers by $0.00018 per kWh to fund the Program during the two year pilot program. The average annual cost to each residential customer would be $1.90. TEP proposes that the DSM Surcharge necessary to fund

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this program be collected only from residential customers, as the loan instruments described are restricted to residential customers.

198. Budgeting for the Residential and Non-residential sectors is approximately equal, and the cost for all of TEP's energy efficiency programs (including those restricted to Non-residential customers) is recovered through a single DSM adjustor surcharge. Establishing a separate DSM adjustor for the Residential Financing Program would be unnecessary, inequitable and time-consuming.

199. Program Objectives and Rationale. TEP believes that the Program's financing options would help cover the costs of energy efficiency measures, would improve customer participation in energy efficiency programs and would expand the pool of customers who 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.

200. Prior to designing the Program, TEP developed key objectives for the Company's implementation of a financing program. Three objectives stood out from the rest as fundamental in order for TEP to provide 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 TEP financing must have met the Commission's cost effectiveness test.

201. With these objectives, TEP hired Harcourt Brown Energy and Finance to assist with the evaluation, negotiations, and design of the Program. TEP selected a Third Party Financing model secured by a combination of a 10 percent loan loss reserve account and an interest rate buy-down, both funded from the DSM Surcharge, as the best program offering.

202. Target Market. The target market for this program is any residential customer in TEP's service territory who owns their home. Financing would be available for installation of approved and cost-effective energy efficiency measures.

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

204. Budget. This is a financing program supporting other program efficiency measures. Therefore, there are no energy efficiency measures specifically under this program. Nonetheless, TEP expects annual costs as follows:

RESIDENTIAL ENERGY FINANCING BUDGET TABLE
Two-Year Pilot

	Loan Amount Available	Number of Loans	Reserve Funding	Interest Rate buy-Down Funding	Program Budget
Year 1	$100,000	21	$10,000	$4,000	$142,815
Year 2	$2,000,000	424	$200,000	$79,995	$442,645

205. Delivery and Marketing Strategy. TEP's strategy for Program delivery and administration is as follows:

- Coordination between the Lender and TEP on all fund transfers would be managed in-house by a single TEP Program Manager;
- The Program Manager would also provide overall management, marketing oversight, planning and tracking of customer and contractor participation; and
- The Program Manager would coordinate all activities necessary to develop application forms and contractor training.

206. Key partnering relationships would include Community interest groups; HVAC, insulation and air sealing contractors trained in Program procedures; and the Arizona Energy Office, Pima Community College, or other industry experts to provide training, education and awareness.

207. The Program would use contractors initially recruited for the Existing Homes Program, encouraging them to promote TEP financing when working with customers. TEP would provide an orientation of the Program which would outline Program requirements and contractors responsibilities as well as discuss reporting and data collection procedures. Contractors interested in participating in the Program must attend the orientation.

208. Program Marketing and Communication Strategy. TEP would provide Program marketing and customer outreach and awareness through a range of strategies including:

- Promotions on the TEP website about the benefits of purchasing high-efficiency equipment and home performance measures;
- Promotion through contractors and through community interest groups;
- Providing information through TEP's customer care center;
- Developing marketing pieces including brochures and other collateral pieces to promote the benefits of qualifying equipment, air sealing and duct sealing, and the financing program available to fund those measures; and
- Training and seminars for participating trade allies and contractors.

209. The advertising campaign would communicate that high-efficiency systems and home performance measures would help reduce customer energy bills, provide equal or better comfort conditions, and are beneficial for the environment.

210. Program Analysis and Issues. TEP 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. TEP has now chosen Vantage West, a local Credit Union ("VW"), 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 11.099 percent down to 7.99 percent.

211. The Company notes that UNS Gas, Inc. requested a program nearly identical to the one requested here for TEP. The UNS Gas program was approved by the Commission in Decision No. 72062 (January 6, 2011).

212. Cost Effectiveness. There are no direct avoided cost benefits or energy savings from the residential financing program, and the total DSM Implementation Plan Cost for TEP would increase as a result of offering the Program. However, the indirect benefits and savings are measured at the program level where individual energy efficiency measures are included. TEP believes, and Staff agrees, that the availability of financing for the Existing Homes Program would

increase participation, and thus increase the resulting societal benefits and savings reported for the Existing Homes Program.

213. Staff Recommendations.

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

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

S. ENERGY CODES ENHANCEMENT PROGRAM

215. 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 TEP Energy Codes Enhancement Program ("ECEP") seeks to overcome barriers to the adoption of improved building codes.

216. Budget. TEP requested a budget of $49,335 for the first year (2011) of the Energy Codes Enhancement Program and a budget of $75,490 for 2012. See the TEP Implementation Plan Budget Table, herein, which lists the sector, projected costs per category, and total budget for each program.

217. Program Objectives and Rationale. The objective of the TEP 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.

218. 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. TEP 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.

219. 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.

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

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

222. Program Analysis/Issues. According to the U.S. Department of Energy[2], 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.

223. DOE research[3] shows that contemporary energy codes could save about 330 Trillion BTU by 2030, almost 2 percent of total current residential energy consumption. There

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[2] U.S. Department of Energy website: http://www.energycodes.gov/why_codes/
[3] Ibid.

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.

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

225. 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.

226. 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.

227. Cost-Effectiveness. TEP 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.

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

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T. Education and Outreach

229. Program Description. The Education and Outreach ("E&O") Program is an existing program approved in Decision No. 70402 (July 3, 2008). TEP 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.

230. The revised E&O Program would be responsible for overall marketing and general consumer education. In order to reflect this change in focus, TEP is proposing to rename the E&O Program as the Consumer Education and Outreach ("CEO") Program.

231. 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 TEP's energy efficiency and renewable programs[4], including Time of Use ("TOU") rates:

- 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.

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

233. Cost-effectiveness. The CEO Program markets the entire TEP portfolio, promotes conservation generally and educates customers about TOU rates. It does not produce direct savings. The 2012 budget, with the school-based energy education and on-line audit function

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

removed, would be approximately $194,000, or less than 1 percent of the total Implementation Plan budget for 2012.

234. Staff Recommendation.

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

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

235. 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.

236. 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.

237. 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.

238. Projected Program Development costs for 2011 equal approximately 3.47 percent of the total Implementation Plan budget, declining to approximately 2.62 percent in 2012. (In

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comparison, incentives represent, respectively, approximately 51 percent and 54 percent of the 2011 and 2012 budgets.)

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

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

240. 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.

241. Reporting. At a minimum, Reporting shall be done in accordance with the Electric Energy Efficiency Rules, Section R14-2-2415.

W. BUDGET FLEXIBILITY

242. TEP 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.

243. Shifting of Funds. Funding for the Residential and Commercial sectors is approximately equal under the proposed Implementation Plan budgets for 2011 and 2012. (The Home Energy Reports subprogram targets Residential customers and its budget should be considered part of the funding for the Residential sector.) 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 both have a reasonable opportunity to participate in energy efficiency programs.

Allowing funding shifts among programs or measures within a sector allows a reasonable degree of flexibility without the potential impact to the equitable access to participation in energy efficiency programs by Residential and Commercial customers.

244. Increase to Total Budget. With a projected budget for 2012 of $24.7 million, the up 25 percent flexibility proposed by TEP could result in an increase of over $6 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 TEP is excessive. Allowing an increase of up to 5 percent would provide TEP with flexibility in responding to higher-than-anticipated customer participation, but would better limit potential costs.

245. Staff Recommendations.

- Staff has recommended 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 has recommended 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.

X. DEMAND-SIDE MANAGEMENT SURCHARGE ("DSMS")

246. In TEP's Application, as updated on August 22, 2011, TEP is requesting recovery of the following costs through the DSMS: (i) DSM program costs, including $13.4 million from the period through 2011 (DSM costs minus the amount recovered through the existing DSM adjustor) and $24.7 million in spending projected for 2012 ; (ii) the DSM Performance Incentive, in the amount of $16 million; and (iii) the Company's proposed Authorized Revenue Requirement True-up ("ARRT") Mechanism, in the amount of $17 million.

247. DSMS Reset Level. The current DSMS is $0.001249 per kWh. In its application, TEP had requested to increase the DSMS to $0.006343 per kWh, based on its proposal as updated on August 22, 2011, and assuming a 15 month recovery period. Based on Staff's analysis above and Staff's recommendation to exclude the ARRT and to retain the existing method for calculating

the Performance Incentive, Staff recommended that the DSMS be set at $0.003812 per kWh based on a 15 month recovery period. The impacts, based on the average Residential usage, are shown in the table below

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Residential Usage	kWh/ month	Curent DSMS/kWh	Current Bill Impact/month	TEP Proposed DSMS/kWh	TEP Proposed DSMS Impact/month	Staff Proposed DSMS/kWh	Staff Proposed DSMS Impact/month
Summer Average	1,100	$0.001249	$1.37	$0.006343	$6.98	$0.003812	$4.19
Winter Average	680	$0.001249	$0.85	$0.006343	$4.31	$0.003812	$2.59
Annual Average	880	$0.001249	$1.10	$0.006343	$5.58	$0.003812	$3.35

248. 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 in the manner set in the last rate case.
- Staff has also recommended that calculation of the DSMS take into account the current DSM balance, but not include the Company's proposed ARRT at this time.
- Staff has recommended that the DSMS be reset to $0.003812 per kWh.

249. 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. TEP 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 has recommended that the current surcharge filing and DSM reporting requirement be superseded by the reporting requirements of A.A.C. R14-2-2409.
- Staff has also recommended that, 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.

. . .. . .

Y. CALCULATING COST-EFFECTIVENESS

250. 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.

Z. SUMMARY OF RECOMMENDATIONS

251. Staff has made the following recommendations based on TEP's Implementation Plan filing, as updated on August 22, 2011:

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 TEP Implementation Plan offer cost-effective savings over and above current baselines.

Appliance Recycling

- The TEP 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 TEP's Implementation Plan.

- TEP should be allowed to tie the eligibility level for the TEP 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

- The Tier 1 measure should be approved for continuation.

- The Tier 2 and Tier 3 measures should be discontinued once the Residential New Construction Program has met its existing commitments for Tier 2 and Tier 3 homes.

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.

Residential and Small Commercial Direct Load Control

- The Residential and Small Commercial Direct Load Control Program be approved to continue.

Bid for Efficiency

- The TEP 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 TEP Retro-commissioning Program should be approved.

Schools Facilities

- The School Facilities Schools Program should be approved.

CHP

- The CHP Joint Program should be approved.

Small Business Direct Install

- The Small Business Direct Install Program should be approved to continue, with the proposed new measures.

C&I Comprehensive

- The C&I Comprehensive Program should be approved, except for the proposed additional measure LED Street and Parking Lights.

Commercial Direct Load Control

- The C&I Direct Load Control Program should be approved for continuation.

Commercial New Construction

- The Commercial New Construction Program, including the high-performance glazing measure, should be approved for a second two-year period.

- TEP should implement the recommendations in the "Assessment of Baseline Practices for Commercial New Construction" prepared by Navigant Consulting, including modification of Program performance thresholds (for public buildings) and Program applications to differentiate between public and private sector facilities.

- Measurement & Evaluation statistics for the Program should be included in the DSM reports filed with the Commission.

- TEP should continue the Commercial New Construction Program's outreach efforts by targeting building owner, developer and design professional organizations, lenders and lender industry associations, and local building code officials.

- Information announcing the availability of the Program should occupy a more prominent position on the TEP website.

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.

- TEP'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

- TEP'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, but not include the Company's proposed ARRT at this time.
- No waiver of the energy efficiency rules be granted to TEP at this time.
- The DSMS should be reset to $0.003812 per kWh.

Adjust 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.

AA. TEP'S PROPOSED MODIFIED IMPLEMENTATION PLAN

252. TEP filed Exceptions to Staff's Proposed Order on December 2, 2011. In those Exceptions, TEP asserted, among other things, that: (i) the Proposed Order as written was confiscatory and needed to be amended to provide TEP with recovery of lost fixed costs revenue resulting from TEP's compliance with the Commission's Electric Energy Efficiency Rules; (ii) if the Proposed Order was not amended to provide lost fixed cost recovery, then the Commission should grant TEP a waiver from the Electric Energy Efficiency Rules; and (iii) the Commission should approve a performance incentive that encouraged program efficiency and savings, and not program spending.

253. TEP's proposed Implementation Plan was initially considered at the Commission's January 10-11, 2012 Open Meeting. After extensive discussion of the issues regarding TEP's Implementation Plan, the matter was continued to allow TEP, Staff and other interested parties to discuss potential modifications to TEP's Implementation Plan that would resolve the concerns

raised in TEP's Exceptions, comments submitted by interested parties and the issues discussed at the Open Meeting.

254. On January 31, 2012, TEP filed a Notice of Filing Proposed Modified Implementation Plan. In its Notice, TEP indicated that, subsequent to the Open Meeting, TEP, Commission Staff and other interested parties, including RUCO, Southwest Energy Efficiency Project (SWEEP) and Arizonans for Electric Choice and Competition (AECC), met several times in person and by conference call to discuss a potential compromise solution. TEP stated that the participants were unable to develop a modified Implementation Plan that all participants could agree upon. However, through its Notice, TEP submitted a compromise Implementation Plan proposal that TEP believed was generally supported in concept by the participants.

255. TEP states that its modified Implementation Plan: (i) results in a reduced DSM program budget (ii) recovers certain costs over a longer timeframe; (iii) proposes a new interim performance incentive; (iv) does not include the ARRT; and (v) results in a lower DSMS than had been proposed by Staff in its Proposed Order. Moreover, TEP believes that this compromise position still provides net benefits to all customers, provides programs for customers to reduce their electric bill, provides stability to the DSM marketplace, and provides a bridge mechanism to TEP until long-term cost synchronization can be implemented.

256. Moreover, given the time that has passed since TEP filed its initial proposed 2011-2012 Implementation Plan, TEP's Modified Implementation Plan now covers 2012 and 2013. TEP proposes an annual overall budget of $29,694,240 for 2012 and the same budget for 2013. The DSMS will be calculated by combining the two budgets and will be based collection of the combined budgets over twenty-two (22) months.

257. The main elements of TEP's Modified Implementation Plan are as follows:

- **DSM Program-specific Budgets** – The 2012 total DSM program budget will be reduced by 25%. TEP will continue all existing programs and will implement new programs as anticipated by Staff's proposed order. TEP expects to meet the EE Standard for 2012 and believes that it could possibly meet the EE Standard in 2013

under this compromise, but may ultimately need to request a waiver from the Energy Efficiency Standards depending on program performance. The table below sets for the specific initial funding levels for each program:

Program	Original Program Cost	Modified Program Cost
Efficient Products	$2,431,495	$2,453,253
Appliance Recycling	$859,533	$755,095
Res. New Construction	$1,766,846	$1,011,949
Existing Homes and Audit Direct Install	$3,514,886	$2,304,525
Shade Tree	$325,582	$250,681
Low Income Weatherization [1]	$616,451	$526,464
Multi-Family	$169,738	$181,565
Residential Direct Load Control - Pilot	$184,816	$167,864
Residential Subtotal	**$9,869,348**	**$7,651,396**
C&I Comprehensive Program	$4,285,856	$3,728,462
Commercial Direct Load Control	$2,751,959	$1,431,445
Small Business Direct Install	$2,921,085	$2,044,806
Commercial New Construction	$406,319	$515,702
Bid for Efficiency - Pilot	$503,092	$388,846
Retro-Commissioning	$175,520	$336,493
Schools Facilities	$157,941	$170,049
CHP Joint Program - Pilot	$22,000	$22,000
Commercial Subtotal	**$11,223,772**	**$8,637,804**
Home Energy Reports	$673,790	$699,197
Behavioral Comprehensive Program	$1,420,279	$724,151
Behavioral Subtotal	**$2,094,069**	**$1,423,349**
Education and Outreach	$384,724	$155,250
Residential Energy Financing	$442,645	$315,405
Codes Support	$75,490	$73,288
Program Development, Analysis and Reporting Software	$649,145	$276,115

Support Subtotal	$1,552,005	$820,058
Total	$24,739,194	$18,532,606

(1) Low Income Weatherization – TEP will allocate additional funds to the LIW program if necessary.

- **New Interim Performance Incentive** – A new Interim Performance Incentive, similar to the proposal made by SWEEP, will be implemented. TEP will receive 7% of net benefits resulting from its Implementation Plan as well as additional funds for hitting certain performance metrics. The payments under this mechanism will be banded at 80% to 120% of the target performance incentive of $7,246,379. This mechanism will continue until replaced by another mechanism approved by the Commission. The table below sets forth the details of the mechanism:

TEP 2012 Interim Performance Incentive Structure

	DSM Program Year 2012		
	Part I - Base Performance Incentive		
(1)	DSM Budget		$18,532,606
(2)	Net Benefits		$69,233,980
(3)	Shared Savings		7%
(4)	**Base Energy Efficiency Shared Benefits (net benefits times 7.0%)**		**$4,846,379**
	Part II - Other Performance Metrics	**Target Number**	**Dollars**
(a)	Net Benefit per customer dollar spent (net benefits/actual spending)	$3.74	$1,500,000
(b)	Community workshops – 80 community weatherization workshops	80	$150,000
(c)	Community outreach – monthly outreach to Seniors on EE	12	$150,000
(d)	Loan program – train 25 contractors on TEP's new loan program	25	$150,000
(e)	Multi-family units – energy measures installed in 625 units	625	$150,000
(f)	Low Income Weatherization – 15% increase in participation over 2011	178	$150,000
(g)	Small Business – 15% increase in energy saving over 2011 (MWh)	TBD by evaluation[1]	$150,000
	Other Performance Metrics at 100% of Goal		**$2,400,000**

Total New Performance Incentive for 2012		
At 80% of Goal		$5,797,103
At 100% of Goal		**$7,246,379**
At 120% of Goal		$8,695,654

(1) 2011 saving results will be determined by a measurement and evaluation study to be completed by March 1st,2012, and filed with TEP's 2011 compliance report.

- **Overall 2012 Budget** – The overall budget for 2012 will be lower than the budget recommended by Staff in its Proposed Order. The Table below shows a comparison of the overall budget for TEP's filed plan for 2012 (as updated on August 22, 2011), Staff's Proposed Order for 2012 (adjusted by TEP for current timing), and the compromise position that sets forth the overall 2012 budget and as well as the combination of the 2012 and 2013 overall budgets used to calculate the DSMS.

TEP Overall Budget Comparison

	TEP's Proposal (August Supplement)	Staff ROO, adjusted for timing	2012 Compromise Agreement	2012-2013 Overall Compromise Agreement
Budget				
2012 Program Budget	$24,739,192	$24,739,192	$18,532,606	$18,532,606
2013 Program Budget	NA	NA	NA	$18,532,606
Carry Over Balance	$5,614,113	$5,614,113	$2,807,057	$5,614,113
2010 Performance Incentive	$1,114,648	$1,114,648	$557,324	$1,114,648
2011 Performance Incentive	$6,706,524	$1,101,749	$550,874	$1,101,749
2012 Interim Performance Incentive	$8,577,172	$2,099,197	$7,246,379	$7,246,379
2013 Interim Performance Incentive	NA	NA	NA	$7,246,379
2011 ARRT	$3,877,937	NA	NA	NA
2012 ARRT	$12,890,440	NA	NA	NA
Total	**$63,520,027**	**$34,668,899**	**$29,694,240**	**$59, 388,480**

- **2013 Implementation Plan and Budget** - TEP may file a 2013 Implementation Plan only for the purpose of adding or modifying programs and related program specific budgets. All other aspects of TEP's Proposed 2012 Implementation Plan, as set forth herein, will remain unchanged in its 2013 Implementation Plan.

- **Demand-Side Management Surcharge (DSMS)** – DSMS will increase from $0.001249 per kWh to $0.003608 per kWh for residential customers and to a 4.19% rate on all charges (except taxes and other governmental assessments) for all other customer classes. The rate has been adjusted to reflect recovery of the proposed 2012 and 2013 budgets over 22 months. The Table below shows the average incremental increases and bill impacts by customer class. These DSMS rates will remain in effect until changed by further order of the Commission.

Average Bill Impact

	Current DSMS	Proposed DSMS	Dollar Increase	Total Bill % Increase
Residential	$1.10	$3.18	$2.08	2.39%
Small Commercial	$5.37	$18.51	$13.14	2.94%
Large Commercial	$199.84	$622	$422.11	2.80%
Industrial	$1,874	$4,481	$2,608	2.39%

263. We believe that TEP's proposed Modified Implementation Plan is a reasonable compromise to address the challenging issues related to TEP's compliance with the Commission's Electric Energy Efficiency Rules and that approval of the TEP's proposed Modified Implementation Plan for 2012 and 2013 is in the public interest. We are therefore approving an Implementation Plan budget of $29,694,240 for 2012 and $29,694,240 for 2013 with the specific program funding initially allocated as proposed by TEP in its Modified Implementation Plan. We are further approving the new Interim Performance Incentive proposed by TEP in its Modified Implementation Plan, which will remain in effect until further order of the Commission. We are also approving a DSMS that collects the combined 2012 and 2013 budgets over a twenty-two month period, which results in a DSMS rate of $0.003608 per kWh for residential customers and to a 4.19% rate on all charges (except taxes and other governmental assessments) for all other customer classes.

CONCLUSIONS OF LAW

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

2. The Commission has jurisdiction over TEP and over the subject matter of the application.

3. The Commission, having reviewed the filings in this Docket, concludes that it is in the public interest to approve TEP's Modified Implementation Plan, as discussed herein.

ORDER

IT IS THEREFORE ORDERED that Tucson Electric Power Company Modified Implementation Plan is approved, as discussed herein.

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

. . .

IT IS FURTHER ORDERED that Tucson Electric Power Company shall have the flexibility to transfer funding among cost-effective measures, within each program, to accommodate varying participation levels.

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

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

Appliance Recycling

IT IS FURTHER ORDERED that the Tucson Electric Power Company Appliance Recycling Program is approved and shall include both the refrigerator and freezer measures.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall offer a $30 incentive, rather than the $35 incentive proposed, but that the overall budget for incentives shall not be decreased.

Multi-Family Housing Efficiency

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

Efficient Products

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

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

. . .

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

Low-Income Weatherization

IT IS FURTHER ORDERED that the Low-Income Weatherization Program is approved for continuation as part of Tucson Electric Power Company's Implementation Plan.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall be allowed to tie the eligibility level for the Tucson Electric Power Company 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

IT IS FURTHER ORDERED that the Tier 1 measure is approved for continuation.

IT IS FURTHER ORDERED that the Tier 2 and Tier 3 measures shall be discontinued once the Residential New Construction Program has met its existing commitments for Tier 2 and Tier 3 homes.

Existing Homes and Audit Direct Install

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

Shade Tree

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

Residential and Small Commercial Direct Load Control

IT IS FURTHER ORDERED that the Residential and Small Commercial Direct Load Control Program is approved to continue.

Bid for Efficiency

IT IS FURTHER ORDERED that the Tucson Electric Power Company Bid for Efficiency Pilot Program is approved as a two-year pilot program as discussed herein.

. . .

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

Retro-Commissioning

IT IS FURTHER ORDERED that the Tucson Electric Power Company Retro-commissioning Program is approved.

Schools Facilities

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

CHP

IT IS FURTHER ORDERED that the CHP Joint Program is approved.

Small Business Direct Install

IT IS FURTHER ORDERED that the Small Business Direct Install Program is approved to continue, with the proposed new measures.

C&I Comprehensive

IT IS FURTHER ORDERED that the C&I Comprehensive Program is approved, except for the proposed additional measure LED Street and Parking Lights.

Commercial Direct Load Control

IT IS FURTHER ORDERED that the C&I Direct Load Control Program is approved for continuation.

Commercial New Construction

IT IS FURTHER ORDERED that the Commercial New Construction Program, including the high-performance glazing measure, is approved for a second two-year period.

IT IS FURTHER ORDERED that Tucson Electric Power Company implement the recommendations in the "Assessment of Baseline Practices for Commercial New Construction" prepared by Navigant Consulting, including modification of Program performance thresholds (for public buildings) and Program applications to differentiate between public and private sector facilities.

IT IS FURTHER ORDERED that Measurement & Evaluation statistics for the Commercial New Construction Program shall be included in the DSM reports filed with the Commission.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall continue the Commercial New Construction Program's outreach efforts by targeting building owner, developer and design professional organizations, lenders and lender industry associations, and local building code officials.

IT IS FURTHER ORDERED that information announcing the availability of the Commercial New Construction Program shall occupy a more prominent position on the Tucson Electric Power Company website.

Behavioral Comprehensive

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

Residential Energy Financing

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

IT IS FURTHER ORDERED that Tucson Electric Power Company's request that the DSM Surcharge for the Residential Energy Financing Program be collected only from Residential customers is not approved.

Energy Codes Enhancement

IT IS FURTHER ORDERED that Tucson Electric Power Company's Energy Codes Enhancement Program is approved, subject to implementation of the MER and Reporting protocols stated herein, and the program shall be renamed the Energy Code and Standards Enhancement Program.

IT IS FURTHER ORDERED that Tucson Electric Power Company be granted a waiver from A.A.C. R14-2-2404(E) to allow Tucson Electric Power Company to also count toward meeting the Energy Efficiency Standard in A.A.C. R14-2-2404, for 2012 through 2020, up to one-third of the energy savings resulting from energy efficiency appliance standards, if the energy savings are quantified and reported through a measurement and evaluation study undertaken by Tucson Electric Power Company, and Tucson Electric Power Company demonstrates and documents its efforts in support of the adoption or implementation of the energy efficiency

appliance standards, but shall not be used in the energy savings calculation used to determine Tucson Electric Power Company's performance incentive.

Education and Outreach

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

Program Development

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

. . .

Budget Flexibility

IT IS FURTHER ORDERED that Tucson Electric Power Company shall 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 shall only be done within, and not between, the Residential and Non-Residential program sectors.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall 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

IT IS FURTHER ORDERED that the DSMS shall include: (i) the program spending approved by this Order and (ii) the Interim Performance Incentive proposed by Tucson Electric Power Company in its Modified Implementation Plan.

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

IT IS FURTHER ORDERED that the DSMS shall be calculated as discussed in herein and shall be reset to $0.003608 per kWh for residential customers and to a 4.19% rate on all charges (except taxes and other governmental assessments) for all other customer classes.

Adjust Reset and Reporting Requirements

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

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

IT IS FURTHER ORDERED that Tucson Electric Power Company file a tariff in compliance with this Decision within 30 days of the effective date of this Decision.

. . .

Calculating Cost-Effectiveness

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

IT IS FURTHER ORDERED that to ensure accurate and timely cost-effectiveness analysis through the use of one model and consistent input values, Staff should attempt to retain an independent third-party consultant possibly through entities such as the United States Department of Energy State and Local Energy Efficiency Action Network Technical Assistance Program or the National Association of Regulatory Utility Commissioners State Electricity Regulators Capacity Assistance and Training program, to assist a Staff-led working group including Tucson Electric Power Company and interested stakeholders, in (a) exploring effective options for cost-effectiveness analysis models; (b) selecting and securing one model to be used by Tucson Electric Power and Staff for cost-effectiveness analysis; (c) resolving any differences in key input values used in the analysis: (d) documenting the key input values in a Technical Reference Manual to be updated by Tucson Electric Power and filed with each Implementation Plan; and (e) creating templates for Implementation Plans and annual progress and status reports.

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

BY THE ORDER OF THE ARIZONA CORPORATION COMMISSION

CHAIRMAN COMMISSIONER

COMMISSIONER COMMISSIONER COMMISSIONER

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 _____, 2011.

_____
ERNEST G. JOHNSON
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

SMO:JMK:lhm/CH

SERVICE LIST FOR: Tucson Electric Power Company
DOCKET NO. E-01933A-11-0055

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