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MEMORANDUM

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AZ CORP COMMISSION
DOCKET CONTROL

DOCKETED BY

TO: THE COMMISSION

FROM: Utilities Division

DATE: July 15, 2008

RE: TUCSON ELECTRIC POWER COMPANY- APPLICATION FOR APPROVAL OF ITS RESIDENTIAL NEW CONSTRUCTION PROGRAM WITHIN ITS PROPOSED DEMAND-SIDE MANAGEMENT PORTFOLIO FOR 2008-2012 (DOCKET NO. E-01933A-07-0401)

On July 2, 2007, Tucson Electric Power Company ("TEP") filed an application for approval of its proposed Demand-Side Management ("DSM") Program Portfolio. On November 14, 2007, TEP filed a revised Portfolio Plan, modifying the delivery mechanism and the measurement and evaluation plans, for some programs. The Program Portfolio consists of ten proposed programs, including the Residential New Construction Program reviewed herein.

The proposed Residential New Construction Program ("Program") is the continuation of a current program with some modifications. The current program was approved by the Commission as the Pilot New Home Construction Program on October 14, 1994 (Decision No. 58796). The original program operated initially under the Good Cents name. Good Cents was phased out in 1999. On February 9, 1998 (Decision No. 60680), the Commission approved TEP's Special Residential Schedule No. 208 ("Rate 208") which represented TEP's Heating, Cooling and Comfort Guarantee program. A related rate schedule, Special Residential Schedule No. 201 ("Rate 201"), was approved by the Commission in 2000 (Decision No. 62103). The current home construction program is marketed as the Guarantee Home Program ("GHP").

Program Description

The Residential New Construction Program is intended to encourage the construction of houses that are more energy-efficient than would otherwise be built. The Program emphasizes a whole-house building approach to improve health, safety, comfort, durability, and energy efficiency. The most cost-effective time to install energy efficiency measures is at the time of construction.

The Program has two options: the Guarantee Option and the Non-Guarantee Option. Under the Guarantee Option, homes must meet both prescriptive (a list of measures) and performance (maximum energy use for the whole home) standards and pass inspections and performance testing. The homes must use electricity for cooling, space heating, and water heating. Natural gas may be used for other purposes, such as stoves and fireplaces. Solar water heating is allowed. TEP then guarantees the cost for heating and cooling for five years. (As

originally approved, the guarantee was for three years.) If the actual annual heating and cooling consumption exceeds a predetermined level based on an engineering simulation of the home, TEP credits the customer's bill for the difference in cost at the end of the year. Less than 3 percent of the homes exceed the estimated heating and cooling costs.

Under the Guarantee Option, TEP also provides a written guarantee on comfort, defined as (1) equipment sized and installed to provide interior temperatures that are 30 degrees cooler than exterior temperatures at design temperatures for Tucson and (2) equipment sized and installed to maintain interior temperatures and humidity within the range of comfort in the comfort chart published by the American Society of Heating, Refrigeration and Air Conditioning Engineers. Customers also qualify for Rate 201 which provides reduced electric rates for these guaranteed homes. TEP proposes to offer incentives to builders under the Guarantee Option, to help offset the incremental cost of additional framing detail and installation of return-air paths required to pass pressure testing as part of the performance requirement. The TEP GHP logo is required on all advertisements for the subdivision.

Under the Non-Guarantee Option, the homes must meet the same construction standards, except that the framing and return-air paths measures are not required. Homeowners receive certification that duct leakage has been kept to a pre-set minimum and that insulation has been installed properly. Natural gas space heating and water heating are allowed. No builder incentives are paid.

Program Objectives

The objectives of the Program are the following:

a. reduce peak demand and overall energy consumption in new homes;

b. increase new home energy efficiency standards to Program standards in a minimum of 60 percent of new homes constructed in TEP's service territory;

c. increase GHP construction standards to include an option for higher efficiency HVAC;

d. retain existing builder participation and encourage new builder participation;

e. increase the number of, and share of the market for, homes built to program standards;

f. promote upgrades to renewable resources to improve whole house efficiency performance;

g. assist builder sales agents with promoting and selling energy-efficient homes;

h. provide information to help explain the benefits of energy-efficient features;

i. train builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency through improved design and installation practices; and

j. increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home.

Products and Services

TEP provides the following products and services through the Program:

a. builder and contractor education and training;

b. homebuyer and realtor/sales agent awareness and education materials;

c. consumer training sessions for homeowners who purchase Guarantee Homes;

d. pre-construction meetings with builders and subcontractors prior to the start of a development;

e. on-site inspections and testing of each home constructed to Program standards;

d. guaranteed heating and cooling costs and comfort provided to homeowner for five years;

e. Rate 201 remains with the home, even if it is sold; and

f. builder incentives for meeting GHP standards and advertising requirements.

Program Standards and Incentives

Program standards include thermal performance standards plus requirements regarding windows, framing, insulation, air sealing, HVAC equipment and sizing, other equipment, and combustion safety.

TEP proposes to offer an incentive to builders of $400 for each home that meets GHP standards and passes all inspections and testing. The builder must adhere to advertising requirements. An additional $150 per home would be offered if 14 SEER HVAC equipment is installed. No incentive would be offered for a home built under the Non-Guarantee Option.

TEP has estimated a builder's incremental costs for the energy efficiency measures required by the GHP requirements to be $812.97 with a 13 SEER heat pump and $992.67 with a

14 SEER heat pump. Included in the amounts are costs for the ventilation system, mastic sealing to reduce duct leakage, upgraded windows, return air paths and savings from reduction in HVAC tonnage. However, the total incremental costs also include items for switching from natural gas to electric equipment. Those items are upgrading the electrical system for heat pumps, savings from installing a heat pump instead of an air conditioner and a gas furnace, and combustion-related savings. A home can qualify for the Guarantee with a 13 SEER heat pump that is the minimum SEER level that can be manufactured under federal minimum efficiency requirements. It is Staff's position that installing electric equipment in new homes in place of what would normally be gas equipment constitutes fuel switching.

Staff recommends that incentives be capped at 75 percent of the builder's incremental costs of installing cost-effective energy efficiency measures, taking into account any tax credits for applicable energy efficiency improvements. Staff recommends that no incentive should be given for installing electric equipment instead of natural gas equipment because ratepayer funds should not be used for fuel switching. Staff further recommends that the same incentives be offered for homes built under the Non-Guarantee Option as for those built under the Guarantee Option to avoid fuel switching. The proposed incentive amounts are below 75 percent of the incremental costs for installing energy efficiency measures in both categories of homes.

Delivery Strategy

The Residential New Construction Program is managed in house by TEP. TEP provides program administration; marketing; planning; coordination of builder and contractor training and consumer education activities; and all inspections, testing, and technical assistance. Some activities such as training, inspections, and other program support may also be provided through specialized vendors or supplemental work force units under TEP's direction.

TEP uses the following trade allies and subcontractors:

a. building science trainers for training and education;

b. HVAC contractors for sizing, installation, and start-up of HVAC systems;

c. framing contractors for framing and blocking detail to enhance insulation performance;

d. insulation contractors for installing insulation according to specifications;

e. outside contractor to perform load calculations from plans;

f. Southwest Energy Solutions and supplemental work force for inspections and testing; and

g. Arizona Energy Office for training, education, and awareness.

Marketing

TEP markets the Program by including messages on inspector vans, builder materials, customer bills, bill inserts, TEP's Web site, and TEP vehicles. TEP also provides sponsorships, training seminars for current and potential GHP homeowners, training CDs for sales professionals, call center on-hold messages, builder field guides, and model home signage. In addition, TEP will also advertise the Program through radio, television (network and cable), newspapers, and trade materials.

Monitoring and Evaluation

In 1999, TEP contracted with Energy Simulation Specialists to complete an analysis on the expected savings gained from GHP standards compared to the baseline building practices at that time. In 2007, an updated study by Enovity compared homes built to GHP standards with the IECC 2003, the minimum code in the Tucson area. Actual test data can be used to verify performance and compliance because TEP conducts duct-blaster tests, blower-door tests, insulation inspections, framing inspections, and testing of HVAC performance and pressure management on homes constructed in the Program.

2007 Program Results

Since the Residential New Construction Program is an existing program, information on program results is available in TEP's semi-annual DSM reports. In 2007, 1,626 homes were completed under the Program. Three of those homes had gas heating. Savings per home with electric heat pumps and electric water heating were estimated at 1.2 kW and 1,850 kWh per year.

The Tucson housing market has experienced a decrease in new home construction. There were 10,360 housing permits in 2005, dropping to 7,800 in 2006, and 4,472 in 2007. It may be difficult for TEP to reach its estimated participation levels in 2008 and 2009.

Program Budget

Details of the proposed 2008 budget of $3,200,000 for the Residential New Construction program are shown in Table 1. TEP's proposed total budget amounts and participation levels for 2008 through 2012 are shown in Table 2.

Table 1
Proposed 2008 Budget
Residential New Construction Program

Budget Category	Budget Amount	Percent of Total Budget
Planning and Administration[1]	$115,652	3.6%
Program Management, Marketing, & Advertising[2]	$383,838	12.0%
Program Implementation[3]	$398,357	12.4%
Training and Technical[4]	$632,850	19.8%
Consumer Education[5]	$8,222	0.3%
Incentives[6]	$1,661,081	51.9%
Total Program Budget	***$3,200,000***	***100.0%***

[1] Includes management of budgets, oversight of implementation, program development, coordination, customer follow-up, etc.
[2] Includes all expenses related to marketing the program and increasing consumer awareness.
[3] Includes labor, overhead costs, and other direct delivery costs such as test equipment and load calculations.
[4] Includes energy efficiency training, inspections and testing, and technical assistance for program participants.
[5] Includes consumer seminars, brochures, TEP's Web site, and general consumer education.
[6] Includes incentives paid directly to builders for participation in the program.

Table 2
Proposed Budgets and Expected Participation Levels 2008-2012
Residential New Construction Program

Year	Total Budget	Participation Levels
2008	$3,200,000	3,545
2009	$3,644,072	4,410
2010	$3,663,824	4,368
2011	$3,649,415	4,251
2012	$3,605,086	4,068

If TEP's monitoring and evaluation activities indicate that the program is not meeting expected cost-effectiveness, Staff recommends that budget amounts be redirected toward other residential DSM programs. Staff further recommends that TEP be allowed to shift up to 25 percent of funding between residential DSM programs, but not out of the Low-Income Weatherization program. Staff also recommends that TEP ensure that its in-house labor costs are recovered either through base rates or through the DSM adjustor, if a DSM adjustor is approved, but not from both.

When the Commission approved Rate 208, Decision No. 60680 ordered that shareholders, not ratepayers, would cover all costs associated with the Heating, Cooling and Comfort Guarantee program. The costs included the payment of any credits to customers

because of the Guarantee. Staff recommends that shareholders, not ratepayers, continue to pay for any credits to customers under the Guarantee. Ratepayers should not be responsible for the risk of having to back up the Guarantee.

Cost-Benefit Analysis

Staff used the Societal Cost Test to calculate the net societal benefits of the Program. The Commission's 1991 Resource Planning Decision No. 57589 established that the Societal Cost Test should be used for the purposes of establishing whether a DSM program can be considered cost-effective. Under the Societal Cost Test, a program's incremental benefits to society must exceed the incremental costs of having the program in place for the program to be cost-effective.

Societal costs for the Residential New Construction Program include home builder costs for installing more energy-efficient measures and utility program costs (excluding incentives). The societal benefits of the Program include TEP's deferred generation capacity costs (based on data from the U.S. Energy Information Administration), TEP's avoided energy costs (adjusted for line losses). Other benefits include reduced water consumption and reduced air pollution, although dollar values have not been assigned to those benefits.

Staff's analysis indicates a ratio of benefits to costs of 1.15[1] for the program, assuming electric heating. Staff concludes that the Program is cost-effective.

Energy and Environmental Savings

TEP's estimates of total annual participation goals and energy savings are presented in Table 3. TEP's kWh and therm savings assume baseline natural gas space and water heating switching to electric space and water heating.

Table 3
Energy Savings
Residential New Construction Program

ANNUAL INCREMENTAL REDUCTIONS	2008	2009	2010	2011	2012
Electricity - peak demand (kW)	3,756	4,673	4,629	4,505	4,311
Electricity - energy (kWh)	7,359,684	9,156,756	9,069,549	8,826,614	8,446,640
Natural Gas (therms)	41,471	51,597	51,106	49,737	47,596

Total electricity and natural gas savings over the lifetime of the measures are estimated by TEP to be 771,466 MWh and 4,347,102 therms. Environmental benefits based on those projected lifetime savings are provided in Table 4.

[1] A number above 1 is considered cost-effective; a number below 1 is considered not cost-effective.

Table 4
TEP's Projected Lifetime Environmental Benefits
With Program in Place 2008-2012

	Environmental Factors	Environmental Savings
SOx	2.39 lbs./MWh	1,843,805 lbs.
NOx	3.97 lbs./MWh	3,062,722 lbs.
CO_2 (resulting from electric savings)	2,088 lbs./MWh	1,610,821,795 lbs.
CO_2 (resulting from gas savings)	11.8 lbs./therm	51,295,802 lbs.
Water	500 gals./MWh	385,733,188 gals.

Reporting Requirements

Staff recommends that TEP continue to include the Residential New Construction program in its semi-annual reports. The information should include, at a minimum:

a. the number of participating builders;

b. the number of homes committed to the Program;

c. the number of homes built under the Program;

d. copies of new or revised marketing materials;

e. gas and electric savings as determined by the monitoring and evaluation process;

f. the amount of the program budget spent, by budget category, during the previous six months, the previous year, and since the inception of the program;

g. any significant impacts on program cost-effectiveness;

h. environmental savings; and

i. descriptions of any problems and proposed solutions, including movements of funding from one program to another.

Summary of Staff Recommendations

Staff recommends approval of the Residential New Construction program with the following conditions:

a. Incentives should be capped at 75 percent of the builder's incremental costs of installing cost-effective energy efficiency measures, taking into account any tax credits for applicable energy efficiency improvements.

b. No incentive should be given for installing electric equipment instead of natural gas equipment.

c. The same incentives should be offered for homes built under the Non-Guarantee Option as for those built under the Guarantee Option to avoid fuel switching.

d. If TEP's monitoring and evaluation activities indicate that the program is not meeting expected cost-effectiveness, budget amounts be redirected toward other residential DSM programs.

e. TEP should be allowed to shift up to 25 percent of funding between residential DSM programs, but not out of the Low-Income Weatherization program.

f. TEP should ensure that its in-house labor costs are recovered either through base rates or through the DSM adjustor, if a DSM adjustor is approved, but not from both.

g. Shareholders, not ratepayers, should continue to pay for any credits to customers under the Guarantee.

Ernest G. Johnson
Director
Utilities Division

EGJ:BEK:lhm\JMA

ORIGINATOR: Barbara Keene

BEFORE THE ARIZONA CORPORATION COMMISSION

MIKE GLEASON
Chairman
WILLIAM A. MUNDELL
Commissioner
JEFF HATCH-MILLER
Commissioner
KRISTIN K. MAYES
Commissioner
GARY PIERCE
Commissioner

IN THE MATTER OF THE APPLICATION OF TUCSON ELECTRIC POWER COMPANY'S REQUEST FOR APPROVAL OF ITS RESIDENTIAL NEW CONSTRUCTION DEMAND-SIDE MANAGEMENT PROGRAM	DOCKET NO. E-01933A-07-0401 DECISION NO. _____ ORDER

Open Meeting
July 29 and 30, 2008
Phoenix, Arizona

BY THE COMMISSION:

FINDINGS OF FACT

1. Tucson Electric Power Company ("TEP" or "the Company") is engaged in providing electric power within portions of Arizona, pursuant to authority granted by the Arizona Corporation Commission.

2. On July 2, 2007, TEP filed an application for approval of its proposed Demand-Side Management ("DSM") Program Portfolio. On November 14, 2007, TEP filed a revised Portfolio Plan, modifying the delivery mechanism and the measurement and evaluation plans, for some programs. The Program Portfolio consists of ten proposed programs, including the Residential New Construction Program reviewed herein.

3. The proposed Residential New Construction Program ("Program") is the continuation of a current program with some modifications. The current program was approved by the Commission as the Pilot New Home Construction Program on October 14, 1994 (Decision No. 58796). The original program operated initially under the Good Cents name. Good Cents was

phased out in 1999. On February 9, 1998 (Decision No. 60680), the Commission approved TEP's Special Residential Schedule No. 208 ("Rate 208") which represented TEP's Heating, Cooling and Comfort Guarantee program. A related rate schedule, Special Residential Schedule No. 201 ("Rate 201"), was approved by the Commission in 2000 (Decision No. 62103). The current home construction program is marketed as the Guarantee Home Program ("GHP").

Program Description

4. The Residential New Construction Program is intended to encourage the construction of houses that are more energy-efficient than would otherwise be built. The Program emphasizes a whole-house building approach to improve health, safety, comfort, durability, and energy efficiency. The most cost-effective time to install energy efficiency measures is at the time of construction.

5. The Program has two options: the Guarantee Option and the Non-Guarantee Option. Under the Guarantee Option, homes must meet both prescriptive (a list of measures) and performance (maximum energy use for the whole home) standards and pass inspections and performance testing. The homes must use electricity for cooling, space heating, and water heating. Natural gas may be used for other purposes, such as stoves and fireplaces. Solar water heating is allowed. TEP then guarantees the cost for heating and cooling for five years. (As originally approved, the guarantee was for three years.) If the actual annual heating and cooling consumption exceeds a predetermined level based on an engineering simulation of the home, TEP credits the customer's bill for the difference in cost at the end of the year. Less than 3 percent of the homes exceed the estimated heating and cooling costs.

6. Under the Guarantee Option, TEP also provides a written guarantee on comfort, defined as (1) equipment sized and installed to provide interior temperatures that are 30 degrees cooler than exterior temperatures at design temperatures for Tucson and (2) equipment sized and installed to maintain interior temperatures and humidity within the range of comfort in the comfort chart published by the American Society of Heating, Refrigeration and Air Conditioning Engineers. Customers also qualify for Rate 201 which provides reduced electric rates for these guaranteed homes. TEP proposes to offer incentives to builders under the Guarantee Option, to

help offset the incremental cost of additional framing detail and installation of return-air paths required to pass pressure testing as part of the performance requirement. The TEP GHP logo is required on all advertisements for the subdivision.

7. Under the Non-Guarantee Option, the homes must meet the same construction standards, except that the framing and return-air paths measures are not required. Homeowners receive certification that duct leakage has been kept to a pre-set minimum and that insulation has been installed properly. Natural gas space heating and water heating are allowed. No builder incentives are paid.

Program Objectives

8. The objectives of the Program are the following:

a. reduce peak demand and overall energy consumption in new homes;

b. increase new home energy efficiency standards to Program standards in a minimum of 60 percent of new homes constructed in TEP's service territory;

c. increase GHP construction standards to include an option for higher efficiency HVAC;

d. retain existing builder participation and encourage new builder participation;

e. increase the number of, and share of the market for, homes built to program standards;

f. promote upgrades to renewable resources to improve whole house efficiency performance;

g. assist builder sales agents with promoting and selling energy-efficient homes;

h. provide information to help explain the benefits of energy-efficient features;

i. train builder construction staff and subcontractors in advanced building science concepts to increase energy efficiency through improved design and installation practices; and

j. increase homebuyer awareness and understanding of energy-efficient building practices and the benefits of purchasing an energy-efficient home.

Products and Services

9. TEP provides the following products and services through the Program:

a. builder and contractor education and training;

b. homebuyer and realtor/sales agent awareness and education materials;

c. consumer training sessions for homeowners who purchase Guarantee Homes;

d. pre-construction meetings with builders and subcontractors prior to the start of a development;

e. on-site inspections and testing of each home constructed to Program standards;

f. guaranteed heating and cooling costs and comfort provided to homeowner for five years;

g. Rate 201 remains with the home, even if it is sold; and

h. builder incentives for meeting GHP standards and advertising requirements.

Program Standards and Incentives

10. Program standards include thermal performance standards plus requirements regarding windows, framing, insulation, air sealing, HVAC equipment and sizing, other equipment, and combustion safety.

11. TEP proposes to offer an incentive to builders of $400 for each home that meets GHP standards and passes all inspections and testing. The builder must adhere to advertising requirements. An additional $150 per home would be offered if 14 SEER HVAC equipment is installed. No incentive would be offered for a home built under the Non-Guarantee Option.

12. TEP has estimated a builder's incremental costs for the energy efficiency measures required by the GHP requirements to be $812.97 with a 13 SEER heat pump and $992.67 with a 14 SEER heat pump. Included in the amounts are costs for the ventilation system, mastic sealing to reduce duct leakage, upgraded windows, return air paths and savings from reduction in HVAC tonnage. However, the total incremental costs also include items for switching from natural gas to electric equipment. Those items are upgrading the electrical system for heat pumps, savings from installing a heat pump instead of an air conditioner and a gas furnace, and combustion-related savings. A home can qualify for the Guarantee with a 13 SEER heat pump that is the minimum

SEER level that can be manufactured under federal minimum efficiency requirements. It is Staff's position that installing electric equipment in new homes in place of what would normally be gas equipment constitutes fuel switching.

13. Staff has recommended that incentives be capped at 75 percent of the builder's incremental costs of installing cost-effective energy efficiency measures, taking into account any tax credits for applicable energy efficiency improvements. Staff has recommended that no incentive should be given for installing electric equipment instead of natural gas equipment because ratepayer funds should not be used for fuel switching. Staff has further recommended the same incentives be offered for homes built under the Non-Guarantee Option as for those built under the Guarantee Option to avoid fuel switching. The proposed incentive amounts are below 75 percent of the incremental costs for installing energy efficiency measures in both categories of homes.

Delivery Strategy

14. The Residential New Construction Program is managed in house by TEP. TEP provides program administration; marketing; planning; coordination of builder and contractor training and consumer education activities; and all inspections, testing, and technical assistance. Some activities such as training, inspections, and other program support may also be provided through specialized vendors or supplemental work force units under TEP's direction.

15. TEP uses the following trade allies and subcontractors:

a. building science trainers for training and education;

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c. framing contractors for framing and blocking detail to enhance insulation performance;

d. insulation contractors for installing insulation according to specifications;

e. outside contractor to perform load calculations from plans;

f. Southwest Energy Solutions and supplemental work force for inspections and testing; and

g. Arizona Energy Office for training, education, and awareness.

Marketing

16. TEP markets the Program by including messages on inspector vans, builder materials, customer bills, bill inserts, TEP's Web site, and TEP vehicles. TEP also provides sponsorships, training seminars for current and potential GHP homeowners, training CDs for sales professionals, call center on-hold messages, builder field guides, and model home signage. In addition, TEP will also advertise the Program through radio, television (network and cable), newspapers, and trade materials.

Monitoring and Evaluation

17. In 1999, TEP contracted with Energy Simulation Specialists to complete an analysis on the expected savings gained from GHP standards compared to the baseline building practices at that time. In 2007, an updated study by Enovity compared homes built to GHP standards with the IECC 2003, the minimum code in the Tucson area. Actual test data can be used to verify performance and compliance because TEP conducts duct-blaster tests, blower-door tests, insulation inspections, framing inspections, and testing of HVAC performance and pressure management on homes constructed in the Program.

2007 Program Results

18. Since the Residential New Construction Program is an existing program, information on program results is available in TEP's semi-annual DSM reports. In 2007, 1,626 homes were completed under the Program. Three of those homes had gas heating. Savings per home with electric heat pumps and electric water heating were estimated at 1.2 kW and 1,850 kWh per year.

19. The Tucson housing market has experienced a decrease in new home construction. There were 10,360 housing permits in 2005, dropping to 7,800 in 2006, and 4,472 in 2007. It may be difficult for TEP to reach its estimated participation levels in 2008 and 2009.

Program Budget

20. Details of the proposed 2008 budget of $3,200,000 for the Residential New Construction program are shown in Table 1. TEP's proposed total budget amounts and participation levels for 2008 through 2012 are shown in Table 2.

Table 1
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Residential New Construction Program

Budget Category	Budget Amount	Percent of Total Budget
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Total Program Budget	***$3,200,000***	***100.0%***

[1] Includes management of budgets, oversight of implementation, program development, coordination, customer follow-up, etc.
[2] Includes all expenses related to marketing the program and increasing consumer awareness.
[3] Includes labor, overhead costs, and other direct delivery costs such as test equipment and load calculations.
[4] Includes energy efficiency training, inspections and testing, and technical assistance for program participants.
[5] Includes consumer seminars, brochures, TEP's Web site, and general consumer education.
[6] Includes incentives paid directly to builders for participation in the program.

Table 2
Proposed Budgets and Expected Participation Levels 2008-2012
Residential New Construction Program

Year	Total Budget	Participation Levels
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2009	$3,644,072	4,410
2010	$3,663,824	4,368
2011	$3,649,415	4,251
2012	$3,605,086	4,068

21. If TEP's monitoring and evaluation activities indicate that the program is not meeting expected cost-effectiveness, Staff has recommended that budget amounts be redirected toward other residential DSM programs. Staff has further recommended that TEP be allowed to shift up to 25 percent of funding between residential DSM programs, but not out of the Low-Income Weatherization program. Staff has also recommended that TEP ensure that its in-house labor costs are recovered either through base rates or through the DSM adjustor, if a DSM adjustor is approved, but not from both.

22. When the Commission approved Rate 208, Decision No. 60680 ordered that shareholders, not ratepayers, would cover all costs associated with the Heating, Cooling and Comfort Guarantee program. The costs included the payment of any credits to customers because

of the Guarantee. Staff has recommended that shareholders, not ratepayers, continue to pay for any credits to customers under the Guarantee. Ratepayers should not be responsible for the risk of having to back up the Guarantee.

Cost-Benefit Analysis

23. Staff used the Societal Cost Test to calculate the net societal benefits of the Program. The Commission's 1991 Resource Planning Decision No. 57589 established that the Societal Cost Test should be used for the purposes of establishing whether a DSM program can be considered cost-effective. Under the Societal Cost Test, a program's incremental benefits to society must exceed the incremental costs of having the program in place for the program to be cost-effective.

24. Societal costs for the Residential New Construction Program include home builder costs for installing more energy-efficient measures and utility program costs (excluding incentives). The societal benefits of the Program include TEP's deferred generation capacity costs (based on data from the U.S. Energy Information Administration), TEP's avoided energy costs (adjusted for line losses). Other benefits include reduced water consumption and reduced air pollution, although dollar values have not been assigned to those benefits.

25. Staff's analysis indicates a ratio of benefits to costs of 1.15[1] for the program, assuming electric heating. Staff has concluded that the Program is cost-effective.

Energy and Environmental Savings

26. TEP's estimates of total annual participation goals and energy savings are presented in Table 3. TEP's kWh and therm savings assume baseline natural gas space and water heating switching to electric space and water heating.

Table 3
Energy Savings
Residential New Construction Program

ANNUAL INCREMENTAL REDUCTIONS	2008	2009	2010	2011	2012
Electricity - peak demand (kW)	3,756	4,673	4,629	4,505	4,311
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Natural Gas (therms)	41,471	51,597	51,106	49,737	47,596

[1] A number above 1 is considered cost-effective; a number below 1 is considered not cost-effective.

27. Total electricity and natural gas savings over the lifetime of the measures are estimated by TEP to be 771,466 MWh and 4,347,102 therms. Environmental benefits based on those projected lifetime savings are provided in Table 4.

Table 4
TEP's Projected Lifetime Environmental Benefits
With Program in Place 2008-2012

	Environmental Factors	Environmental Savings
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NOx	3.97 lbs./MWh	3,062,722 lbs.
CO_2 (resulting from electric savings)	2,088 lbs./MWh	1,610,821,795 lbs.
CO_2 (resulting from gas savings)	11.8 lbs./therm	51,295,802 lbs.
Water	500 gals./MWh	385,733,188 gals.

Reporting Requirements

28. Staff has recommended that TEP continue to include the Residential New Construction program in its semi-annual reports. The information should include, at a minimum:

a. the number of participating builders;

b. the number of homes committed to the Program;

c. the number of homes built under the Program;

d. copies of new or revised marketing materials;

e. gas and electric savings as determined by the monitoring and evaluation process;

f. the amount of the program budget spent, by budget category, during the previous six months, the previous year, and since the inception of the program;

g. any significant impacts on program cost-effectiveness;

h. environmental savings; and

i. descriptions of any problems and proposed solutions, including movements of funding from one program to another.

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Summary of Staff Recommendations

29. Staff has recommended approval of the Residential New Construction program with the following conditions:

a. Incentives should be capped at 75 percent of the builder's incremental costs of installing cost-effective energy efficiency measures, taking into account any tax credits for applicable energy efficiency improvements.

b. No incentive should be given for installing electric equipment instead of natural gas equipment.

c. The same incentives should be offered for homes built under the Non-Guarantee Option as for those built under the Guarantee Option avoid fuel switching.

d. If TEP's monitoring and evaluation activities indicate that the program is not meeting expected cost-effectiveness, budget amounts be redirected toward other residential DSM programs.

e. TEP should be allowed to shift up to 25 percent of funding between residential DSM programs, but not out of the Low-Income Weatherization program.

f. TEP should ensure that its in-house labor costs are recovered either through base rates or through the DSM adjustor, if a DSM adjustor is approved, but not from both.

g. Shareholders, not ratepayers, should continue to pay for any credits to customers under the Guarantee.

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 application and Staff's Memorandum dated July 15, 2008, concludes that it is in the public interest to approve the TEP Residential New Construction Program as discussed herein.

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ORDER

IT IS THEREFORE ORDERED that the Tucson Electric Power Company Residential New Construction Program be approved, with the modifications included herein.

IT IS FURTHER ORDERED that incentives be capped at 75 percent of the builder's incremental costs of installing cost-effective energy efficiency measures, taking into account any tax credits for applicable energy efficiency improvements.

IT IS FURTHER ORDERED that no incentive shall be given for installing electric equipment instead of natural gas equipment.

IT IS FURTHER ORDERED that the same incentives shall be offered for homes built under the Non-Guarantee Option as for those built under the Guarantee Option avoid fuel switching.

IT IS FURTHER ORDERED that if Tucson Electric Power Company's monitoring and evaluation activities indicate that the program is not meeting expected cost-effectiveness, budget amounts be redirected toward other residential DSM programs.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall be allowed to shift up to 25 percent of funding between residential DSM programs, but not out of the Low-Income Weatherization program.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall ensure that its in-house labor costs are recovered either through base rates or through the DSM adjustor, if a DSM adjustor is approved, but not from both.

IT IS FURTHER ORDERED that Tucson Electric Power Company shall continue to include the Residential New Construction Program in its semi-annual reports per Finding of Fact No. 28.

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IT IS FURTHER ORDERED that shareholders, not ratepayers, shall continue to pay for any credits to customers under the Guarantee.

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, BRIAN C. McNEIL, 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 _____ , 2008.

_____
BRIAN C. McNEIL
EXECUTIVE DIRECTOR

DISSENT: _____

DISSENT: _____

EGJ:BEK:lhm\JMA

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