

AUSLEY & McMULLEN

ATTORNEYS AND COUNSELORS AT LAW

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November 16, 2005

HAND DELIVERED

Ms. Blanca S. Bayo, Director
Division of Commission Clerk
and Administrative Services
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

050876-EG

Re: Petition by Tampa Electric Company for Approval of Modifications to the Residential Heating and Cooling and new Construction Programs

Dear Ms. Bayo:

Enclosed for filing in the above-styled matter are the original and fifteen (15) copies of Tampa Electric Company's Petition for Approval of Modifications to the Residential Heating and Cooling and New Construction Programs.

Please acknowledge receipt and filing of the above by stamping the duplicate copy of this letter and returning same to this writer.

Thank you for your assistance in connection with this matter.

Sincerely,



James D. Beasley

JDB/pp
Enclosures

DOCUMENT NUMBER - DATE

11011 NOV 16 05

FPSC - COMMISSION CLERK

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition by Tampa Electric Company)
for Approval of Modifications to the)
Residential Heating and Cooling and New)
Construction Programs.)
_____)

DOCKET NO. 050876-EG
FILED: November 16, 2005

**PETITION BY TAMPA ELECTRIC COMPANY FOR APPROVAL OF
MODIFICATIONS TO THE RESIDENTIAL HEATING AND COOLING AND NEW
CONSTRUCTION PROGRAMS**

Tampa Electric Company (“Tampa Electric” or “the company”) pursuant to Section 366.82, Florida Statutes and Rules 25-17.015 (4) and 28-106.201, Florida Administrative Code, files this petition with the Florida Public Service Commission (“the Commission”) for approval of modifications to the company’s residential heating and cooling and new construction programs. In support of this petition the company states:

1. The name, address and telephone number of the petitioner are as follows:

Tampa Electric Company
Post Office Box 111
Tampa, FL 33601
(813) 228-4111
(813) 228-1770 (fax)

2. Tampa Electric requests that copies of all pleadings, orders, notices and other documents submitted in this proceeding be furnished to the following:

Angela Llewellyn
Administrator, Regulatory Coordination
Tampa Electric Company
Post Office Box 111
Tampa, FL 33601
(813) 228-1752
(813) 228-1770 (fax)

Lee L. Willis
James D. Beasley
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302
(850) 224-9115
(850) 222-7952 (fax)

3. In this petition, Tampa Electric seeks approval for modifications to the company's existing residential heating and cooling and new construction programs. These modifications are designed to increase the qualifying seasonal energy efficiency rating ("SEER") of heating, ventilation and air-conditioning ("HVAC") equipment to a level which exceeds a federal manufacturing standard effective January 23, 2006.

Heating and Cooling Program

4. Tampa Electric has offered its residential heating and cooling program since January 1981. During that time, program modifications have been approved by the Commission to accommodate market needs and changing manufacturing conditions. The current program was approved by the Commission as an integral component of the company's 2005-2014 Ten Year Demand Side Management ("DSM") Plan in Docket No. 040033-EG, Order No. PSC-05-0181-PAA-EG, issued February 16, 2005. The program utilizes a rebate to encourage customers to install high efficiency HVAC systems in existing single family detached dwellings.

Residential New Construction Program

5. Tampa Electric has offered its residential new construction program since July 2000. The current program is also integral to the company's 2005-2014 DSM Plan and was approved by the Commission in the aforementioned Docket No. 040033-EG. The program utilizes incentives to encourage the installation of high efficiency HVAC equipment and other construction practices that exceed the Florida Building Code requirements for new single family detached dwellings.

New Qualifying Standard for Both Programs

6. Currently, the company's minimum efficiency threshold for HVAC equipment in both programs is a SEER value of 12. The federal manufacturing efficiency standard effective

January 23, 2006 will increase the minimum SEER value available in the marketplace to 13. To keep pace with federal standards and to continue encouraging customers to cost-effectively invest in HVAC equipment with efficiencies greater than federal or state guidelines, Tampa Electric is requesting to increase the minimum equipment efficiency threshold for participation in these two programs to a SEER value of 14. All other standards for both programs will remain consistent with those previously approved by the Commission in Docket No. 040033-EG.

7. Tampa Electric is requesting May 1, 2006 to be the effective date for these modifications to the heating and cooling and residential new construction programs. This will allow approximately three months for the HVAC contractors and equipment suppliers in the company's service area to liquidate the inventory being carried to meet the current standard for both programs.


8. Consistent with filing requirements, the heating and cooling program description with program standards and the Commission's prescribed cost-effectiveness analysis are attached as Exhibits "A" and "B", respectively. Likewise, the residential new construction program description with program standards and the Commission's prescribed cost-effectiveness analysis are attached as Exhibits "C" and "D", respectively.

9. Tampa Electric is not aware of any disputed issues of material fact relative to the program modifications proposed herein.

WHEREFORE, Tampa Electric respectfully requests that the Commission grant approval of these modifications to its residential heating and cooling and new construction programs and to approve for conservation cost recovery funds prudently expended by Tampa Electric in furtherance of the proposed modified programs.

DATED this 16th day of November, 2005.

Respectfully submitted,



LEE L. WILLIS
JAMES D. BEASLEY
Ausley & McMullen
Post Office Box 391
Tallahassee, FL 32302
(850) 224-9115

ATTORNEYS FOR TAMPA ELECTRIC
COMPANY

**Tampa Electric Company
Exhibit A
Heating & Cooling Program Description**

Program: Residential Heating & Cooling

Program Start Date: January 1981

Program Description

A conservation program that uses a rebate to encourage the installation of high efficiency heating and cooling systems in existing single family detached dwellings. The program is aimed at reducing the growth of peak demand and energy through two types of equipment replacement. Type one equipment replacement is defined as a heat pump replacing resistance heat and type two equipment replacement is defined as a heat pump replacing a heat pump. Both types of equipment replacement have a threshold for qualification of 14.0 SEER. Tampa Electric's rebate is paid to the contractor performing the installation.

Program Participation Standards

1. The residential dwelling must be an existing single family detached structure (no mobile homes or multi - family units, condominiums, apartments or townhouses) in Tampa Electric's service area.
2. The system must be ducted.
3. Effective May 1, 2006, the minimum qualifying efficiency rating (ARI rating only) is 14.0 SEER.
4. For a heat pump, the maximum supplemental strip heating physically contained in the system shall not exceed 2 kW per nominal ton. On a system less than 2.5 tons, a 5 kW heat strip will be allowed.
5. For a heat pump utilizing supplemental strip heating, a two-stage indoor thermostat is required.
6. For straight cool systems, oil or electric resistance heat cannot be the primary heat source.
7. In the situation where a heating and cooling system qualifies for two rebates (Tampa Electric and a gas company), Tampa Electric will not pay its rebate so that a double payment is avoided.
8. The contractor will subtract the rebate paid by Tampa Electric from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, Tampa Electric will issue the rebate to the customer.

9. The HVAC contractor or customer submits a rebate request form to Tampa Electric. The form will be signed by the contractor or customer certifying that the equipment installed is in accordance with the program standards. The customer will sign the form verifying that the equipment was installed and that the contractor deducted the rebate amount from the total installed cost of the new HVAC unit.
10. Heating and Cooling rebate forms must be received within 30 days of installation date of the unit to assure payment to the dealer. Rebate forms must be filled out completely and correctly to be redeemed. Tampa Electric reserves the right to deny payment to contractors who fail to comply.
11. Tampa Electric will randomly perform full field verifications on a minimum of 10% of the participating homes. Forms not selected for field review will have an office verification to validate information.
12. No payment will be made until Tampa Electric verifies or validates rebate requests.
13. Rebates:

Type One	\$250.00
Type Two	\$100.00
14. The reporting requirements for this program will follow Rule 25-17.0021 (5), F.A.C. Additionally, program expenses will be identified in the ECCR True-Up and Projection Filings.

Program Savings and Costs

Historically, central A/C units with resistance heat and central heat pumps comprise 24% and 76% participation, respectively. Additionally, the analysis from DOE2 simulations of heating and cooling replacement savings for the HVAC systems is as follows:

<u>Type System</u>	<u>Winter Demand (kW)</u>	<u>Summer Demand (kW)</u>	<u>Annual Energy (kWh)</u>
Central A/C with Strip	2.54	0.15	1,347
Central Heat Pump	0.10	0.15	511

By weighting these savings across system types, the following reductions are rendered:

Winter Demand:

Strip heat	(2.54) (0.24)	=	0.609
Heat Pump	(0.10) (0.76)	=	<u>0.076</u>
Average winter demand reduction		=	0.685 kW

Summer Demand:

Straight A/C	(0.15) (0.24)	=	0.036
Heat Pump	(0.15) (0.76)	=	<u>0.114</u>
Average summer demand reduction		=	0.150 kW

Energy:

Straight A/C	(1,347) (0.24)	=	323
Heat Pump	(511) (0.76)	=	<u>388</u>
Average annual energy savings		=	711 kWh

Costs (weighted):

Rebate cost per participant:	\$136.00
Administrative cost per participant:	\$35.00

Program Monitoring and Evaluation

Tampa Electric utilized the engineering estimates and computer modeling from the SRC study for the demand and energy savings of the program. Tampa Electric will monitor and evaluate this program through cost-effective techniques approved in the company's previously filed Demand Side Management Monitoring and Evaluation Plan, Docket No. 941173-EG

**Tampa Electric Company
Exhibit B
Heating & Cooling Program Cost-Effectiveness
Tests**

INPUT DATA - PART 1
PROGRAM TITLE: Heating & Cooling

PSC FORM CE 1.1

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RUN DATE: November 14, 2005

PROGRAM DEMAND SAVINGS & LINE LOSSES

I. (1) CUSTOMER KW REDUCTION AT THE METER	0.685 KW /CUST
I. (2) GENERATOR KW REDUCTION PER CUSTOMER	0.267 KW GEN/CUST
I. (3) KW LINE LOSS PERCENTAGE	6.6 %
I. (4) GENERATION KWH REDUCTION PER CUSTOMER	756 KWH/CUST/YR
I. (5) KWH LINE LOSS PERCENTAGE	6.0 %
I. (6) GROUP LINE LOSS MULTIPLIER	1
I. (7) CUSTOMER KWH PROGRAM INCREASE AT METER	0 KWH/CUST/YR
I. (8)* CUSTOMER KWH REDUCTION AT METER	711 KWH/CUST/YR

ECONOMIC LIFE & K FACTORS

II. (1) STUDY PERIOD FOR CONSERVATION PROGRAM	15 YEARS
II. (2) GENERATOR ECONOMIC LIFE	26 YEARS
II. (3) T & D ECONOMIC LIFE	26 YEARS
II. (4) K FACTOR FOR GENERATION	1.6926
II. (5) K FACTOR FOR T & D	1.6926
II. (6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1)	1

UTILITY & CUSTOMER COSTS

III. (1) UTILITY NONRECURRING COST PER CUSTOMER	35.00 \$/CUST
III. (2) UTILITY RECURRING COST PER CUSTOMER	0.00 \$/CUST/YR
III. (3) UTILITY COST ESCALATION RATE	2.2 %
III. (4) CUSTOMER EQUIPMENT COST	395.00 \$/CUST
III. (5) CUSTOMER EQUIPMENT ESCALATION RATE	2.2 %
III. (6) CUSTOMER O & M COST	0 \$/CUST/YR
III. (7) CUSTOMER O & M ESCALATION RATE	2.2 %
III. (8)* CUSTOMER TAX CREDIT PER INSTALLATION	0 \$/CUST
III. (9)* CUSTOMER TAX CREDIT ESCALATION RATE	0 %
III. (10)* INCREASED SUPPLY COSTS	0 \$/CUST/YR
III. (11)* SUPPLY COSTS ESCALATION RATE	0 %
III. (12)* UTILITY DISCOUNT RATE	0.0909
III. (13)* UTILITY AFUDC RATE	0.0779
III. (14)* UTILITY NON RECURRING REBATE/INCENTIVE	136.00 \$/CUST
III. (15)* UTILITY RECURRING REBATE/INCENTIVE	0.00 \$/CUST/YR
III. (16)* UTILITY REBATE/INCENTIVE ESCAL RATE	0 %

AVOIDED GENERATOR, TRANS. & DIST COSTS

IV. (1) BASE YEAR	2006
IV. (2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2009
IV. (3) IN-SERVICE YEAR FOR AVOIDED T & D	2009
IV. (4) BASE YEAR AVOIDED GENERATING UNIT COST	230.56 \$/KW
IV. (5) BASE YEAR AVOIDED TRANSMISSION COST	0 \$/KW
IV. (6) BASE YEAR DISTRIBUTION COST	0 \$/KW
IV. (7) GEN, TRAN, & DIST COST ESCALATION RATE	2.3 %
IV. (8) GENERATOR FIXED O & M COST	2.623 \$/KW/YR
IV. (9) GENERATOR FIXED O&M ESCALATION RATE	2.2 %
IV. (10) TRANSMISSION FIXED O & M COST	0 \$/KW/YR
IV. (11) DISTRIBUTION FIXED O & M COST	0 \$/KW/YR
IV. (12) T&D FIXED O&M ESCALATION RATE	2.2 %
IV. (13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.8394 CENTS/KWH
IV. (14) GENERATOR VARIABLE O&M COST ESCALATION RATE	2.2 %
IV. (15) GENERATOR CAPACITY FACTOR	6.5 %
IV. (16) AVOIDED GENERATING UNIT FUEL COST	8.72 CENTS/KWH
IV. (17) AVOIDED GEN UNIT FUEL ESCALATION RATE	3.2043 %
IV. (18)* AVOIDED PURCHASE CAPACITY COST PER KW	0 \$/KW/YR
IV. (19)* CAPACITY COST ESCALATION RATE	0 %

NON-FUEL ENERGY AND DEMAND CHARGES

V. (1) NON-FUEL COST IN CUSTOMER BILL	4.342 CENTS/KWH
V. (2) NON-FUEL ESCALATION RATE	1 %
V. (3) CUSTOMER DEMAND CHARGE PER KW	0.00 \$/KW/MO
V. (4) DEMAND CHARGE ESCALATION RATE	1 %
V. (5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL	0

CALCULATED BENEFITS AND COSTS

(1)* TRC TEST - BENEFIT/COST RATIO	1.08
(2)* PARTICIPANT NET BENEFITS (NPV)	603
(3)* RIM TEST - BENEFIT/COST RATIO	1.09

TOTAL RESOURCE COST TESTS
PROGRAM: Heating & Cooling

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T & D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2006	0	35	395	0	430	0	0	20	0	20	(410)	(410)
2007	0	31	355	0	387	0	0	50	0	50	(336)	(718)
2008	0	28	314	0	341	0	0	90	0	90	(252)	(930)
2009	0	0	0	0	0	62	0	93	0	155	155	(810)
2010	0	0	0	0	0	63	0	97	0	160	160	(697)
2011	0	0	0	0	0	65	0	89	0	154	154	(597)
2012	0	0	0	0	0	67	0	94	0	161	161	(502)
2013	0	0	0	0	0	69	0	97	0	166	166	(412)
2014	0	0	0	0	0	71	0	94	0	165	165	(330)
2015	0	0	0	0	0	73	0	100	0	173	173	(251)
2016	0	0	0	0	0	75	0	99	0	174	174	(178)
2017	0	0	0	0	0	77	0	110	0	187	187	(106)
2018	0	0	0	0	0	79	0	115	0	194	194	(37)
2019	0	0	0	0	0	81	0	120	0	202	202	28
2020	0	0	0	0	0	84	0	129	0	213	213	91
NOMINAL	0	94	1,064	0	1,158	866	0	1,398	0	2,264	1,106	
NPV:	0	87	984	0	1,071	420	0	742	0	1,162	91	
Discount Rate		0.0909	Benefit/Cost Ratio - [col (11)/col (6)]:				1.08					

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RATE IMPACT TEST
PROGRAM: Heating & Cooling

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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	INCREASED SUPPLY COSTS	UTILITY PROGRAM COSTS	INCENTIVES	REVENUE LOSSES	OTHER COSTS	TOTAL COSTS	AVOIDED GEN UNIT UNIT & FUEL BENEFITS	AVOIDED T & D BENEFITS	REVENUE GAINS	OTHER BENEFITS	TOTAL BENEFITS	NET BENEFITS TO ALL CUSTOMERS	CUMULATIVE DISCOUNTED NET BENEFIT
YEAR	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)	\$(000)
2006	0	35	136	15	0	186	20	0	0	0	20	(166)	(166)
2007	0	31	120	45	0	196	50	0	0	0	50	(146)	(300)
2008	0	28	103	71	0	202	90	0	0	0	90	(113)	(394)
2009	0	0	0	84	0	84	155	0	0	0	155	71	(340)
2010	0	0	0	85	0	85	160	0	0	0	160	76	(287)
2011	0	0	0	86	0	86	154	0	0	0	154	69	(242)
2012	0	0	0	87	0	87	161	0	0	0	161	74	(198)
2013	0	0	0	87	0	87	166	0	0	0	166	79	(155)
2014	0	0	0	88	0	88	165	0	0	0	165	76	(117)
2015	0	0	0	89	0	89	173	0	0	0	173	84	(79)
2016	0	0	0	90	0	90	174	0	0	0	174	84	(44)
2017	0	0	0	91	0	91	187	0	0	0	187	96	(7)
2018	0	0	0	92	0	92	194	0	0	0	194	102	29
2019	0	0	0	93	0	93	202	0	0	0	202	109	64
2020	0	0	0	94	0	94	213	0	0	0	213	119	100
NOMINAL	0	94	359	1,196	0	1,650	2,264	0	0	0	2,264	614	
NPV:	0	87	333	643	0	1,062	1,162	0	0	0	1,162	100	
Discount rate:			0.0909				Benefit/Cost Ratio - [col (12)/col (7)]:		1.09				

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**Tampa Electric Company
Exhibit C
Residential New Construction Program
Description**

Program: Residential New Construction Program

Program Start Date: July 2000

Program Description

Residential New Construction is a conservation program designed to reduce the growth of peak demand and energy in the residential new construction market through the installation of high efficiency equipment and building envelope options. The program utilizes incentives to encourage the construction of new homes to be above the minimum energy efficiency levels required in the State of Florida Energy Efficiency Code for New Construction. This will be achieved through the actions listed below.

1. The certification of new home construction that meets or exceeds the standards used in the Environmental Protection Agency's Energy Star Program.
2. Promoting the construction and purchase of energy efficient housing by educating builders (for profit and not-for-profit), trade groups, architects, realtors, lenders and home buyers in a manner designed to transform the residential new construction market by influencing decisions toward energy efficiency in building techniques and practices.
3. Placing an emphasis on securing participation by affordable housing builders and buyers through educational efforts, coordinated through affordable housing financiers and affordable housing builders.
4. Encouraging the use of environmentally friendly building techniques.

Program Participation Standards

1. Incentives for qualifying levels will be offered to the home buyer for the following installations:

<u>Level</u>	<u>Incentive</u>	<u>Requirement</u>
One	\$00.00	Duct closure with mastic that meets Tampa Electric guidelines for allowable duct leakage.

<u>Level</u>	<u>Incentive</u>	<u>Requirement</u>
Two	\$100.00 (per unit)	Meet Level One requirements plus installation of a heat pump with a minimum 14.0 SEER and a minimum 7.7 HSPF. OR Meet Level One requirement plus installation of an air conditioning system that has a minimum 14.0 SEER and heating source must not be electric resistance heat or fuel oil.
Three	\$100.00	Meet level One and Two requirements plus install R-30 ceiling insulation.
Four	\$100.00 (per unit)	Meet level One, Two, and Three requirements plus installation of heat recovery unit or a heat pump water heater (applicable only when used with an electric water heater).

The SEER values above are effective May 1, 2006.

2. The home must be single family detached. The HVAC system must be ducted.
3. The home and equipment must be accessible during construction and after construction for verification of program standards.
4. The home must be located in Tampa Electric's service area and be metered by Tampa Electric to receive incentives.
5. Only one incentive payment will be issued per home. The payment will be based on equipment or measures purchased prior to the certificate of occupancy.
6. Equipment specifications shall be according to Air Conditioning and Refrigeration Institute ("ARI") and the Gas Appliance Manufacturers Association standards (where applicable). Heat recovery water heaters must be equipped with a circulating pump and must be certified by the Association of Refrigeration Desuperheater Manufacturers.
7. The certification of new home construction that meets or exceeds the standards used in the EPA's Energy Star Program will follow the Guidelines for Uniformity, Voluntary Procedures for Home Energy Ratings, prepared by the Home Energy Rating Systems ("HERS") Council and the Florida Addendum to the National HERS Council Guidelines, December

1998. Certification will be provided at no cost to participating builders or homeowners.

8. Tampa Electric guidelines for allowable duct leakage are based on the procedures set by the Department of Community Affairs used to measure acceptable HERS duct leakage standards. Mastic approved by the State of Florida Energy Efficiency Code for New Construction must be used on all duct closures.
9. The homebuyer will be responsible for installation of qualifying equipment or measures as well as the correction of any items necessary to meet the program standards. The homebuyer will receive the incentive payment when program standards have been met.
10. The builder or homebuyer submits a rebate request form to Tampa Electric. The builder will sign the form certifying that the equipment or measures installed are in accordance with the program standards. The homebuyer will sign the form verifying that the equipment and upgrades were installed and the incentive recipient's name and mailing address are correct.
11. Tampa Electric will randomly perform full field verification on a minimum of 10% of the participating homes. Forms not selected for field review will have an office verification to validate information.
12. All applications will receive either field verification or office validation prior to payment being made.
13. To determine eligibility for participation, building permits must be dated subsequent to program implementation.
14. The reporting requirements for this program will follow Rule 25-17.0021 (5), F.A.C. Additionally, program expenses will be identified in the ECCR True-Up and Projection Filings.

Program Savings and Costs

Tampa Electric used the data from SRC to determine the savings for new construction. The savings for the levels of customer participation are as follows:

Savings:

Level One

	Summer kW	Winter kW	Annual kWh
Electric	0.341	0.278	691
Gas	0.341	0.000	518

Level Two

	Summer kW	Winter kW	Annual kWh
Electric	0.491	0.378	1,156
Gas	0.491	0.000	814

Level Three

Electric	0.559	0.467	1,300
Gas	0.559	0.000	914

Level Four

Electric	0.750	0.467	1,850
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Composite	0.669	0.467	1,614
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Composite cost estimates are as follows:

Administrative costs per participant:	\$166.00
Incentive costs per participant:	\$257.00

Program Monitoring and Evaluation

Tampa Electric utilized the engineering estimates and computer modeling from the SRC Study for the demand and energy savings. Tampa Electric will monitor and evaluate this program through cost-effective techniques approved in the company's previously filed Demand Side Management Monitoring and Evaluation Plan, Docket No. 941173-EG.

**Tampa Electric Company
Exhibit D
Residential New Construction Program Cost-
Effectiveness Tests**

INPUT DATA - PART 1
PROGRAM TITLE: Residential New Construction

PSC FORM CE 1.1

PAGE 1 OF 1

RUN DATE: November 14, 2005

PROGRAM DEMAND SAVINGS & LINE LOSSES

I. (1) CUSTOMER KW REDUCTION AT THE METER	0.669 KW /CUST
I. (2) GENERATOR KW REDUCTION PER CUSTOMER	0.703 KW GEN/CUST
I. (3) KW LINE LOSS PERCENTAGE	6.6 %
I. (4) GENERATION KWH REDUCTION PER CUSTOMER	1717 KWH/CUST/YR
I. (5) KWH LINE LOSS PERCENTAGE	6.0 %
I. (6) GROUP LINE LOSS MULTIPLIER	1
I. (7) CUSTOMER KWH PROGRAM INCREASE AT METER	0 KWH/CUST/YR
I. (8)* CUSTOMER KWH REDUCTION AT METER	1614 KWH/CUST/YR

ECONOMIC LIFE & K FACTORS

II. (1) STUDY PERIOD FOR CONSERVATION PROGRAM	15 YEARS
II. (2) GENERATOR ECONOMIC LIFE	26 YEARS
II. (3) T & D ECONOMIC LIFE	26 YEARS
II. (4) K FACTOR FOR GENERATION	1.6926
II. (5) K FACTOR FOR T & D	1.6926
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1)	1

UTILITY & CUSTOMER COSTS

III. (1) UTILITY NONRECURRING COST PER CUSTOMER	166.00 \$/CUST
III. (2) UTILITY RECURRING COST PER CUSTOMER	0.00 \$/CUST/YR
III. (3) UTILITY COST ESCALATION RATE	2.2 %
III. (4) CUSTOMER EQUIPMENT COST	1021.00 \$/CUST
III. (5) CUSTOMER EQUIPMENT ESCALATION RATE	2.2 %
III. (6) CUSTOMER O & M COST	0 \$/CUST/YR
III. (7) CUSTOMER O & M ESCALATION RATE	2.2 %
III. (8)* CUSTOMER TAX CREDIT PER INSTALLATION	0 \$/CUST
III. (9)* CUSTOMER TAX CREDIT ESCALATION RATE	0 %
III. (10)* INCREASED SUPPLY COSTS	0 \$/CUST/YR
III. (11)* SUPPLY COSTS ESCALATION RATE	0 %
III. (12)* UTILITY DISCOUNT RATE	0.0909
III. (13)* UTILITY AFUDC RATE	0.0779
III. (14)* UTILITY NON RECURRING REBATE/INCENTIVE	257.00 \$/CUST
III. (15)* UTILITY RECURRING REBATE/INCENTIVE	0.00 \$/CUST/YR
III. (16)* UTILITY REBATE/INCENTIVE ESCAL RATE	0 %

AVOIDED GENERATOR, TRANS. & DIST COSTS

IV. (1) BASE YEAR	2006
IV. (2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2009
IV. (3) IN-SERVICE YEAR FOR AVOIDED T & D	2009
IV. (4) BASE YEAR AVOIDED GENERATING UNIT COST	230.56 \$/KW
IV. (5) BASE YEAR AVOIDED TRANSMISSION COST	0 \$/KW
IV. (6) BASE YEAR DISTRIBUTION COST	0 \$/KW
IV. (7) GEN, TRAN, & DIST COST ESCALATION RATE	2.3 %
IV. (8) GENERATOR FIXED O & M COST	2.623 \$/KW/YR
IV. (9) GENERATOR FIXED O&M ESCALATION RATE	2.2 %
IV. (10) TRANSMISSION FIXED O & M COST	0 \$/KW/YR
IV. (11) DISTRIBUTION FIXED O & M COST	0 \$/KW/YR
IV. (12) T&D FIXED O&M ESCALATION RATE	2.2 %
IV. (13) AVOIDED GEN UNIT VARIABLE O & M COSTS	0.8394 CENTS/KWH
IV. (14) GENERATOR VARIABLE O&M COST ESCALATION RATE	2.2 %
IV. (15) GENERATOR CAPACITY FACTOR	6.5 %
IV. (16) AVOIDED GENERATING UNIT FUEL COST	8.72 CENTS/KWH
IV. (17) AVOIDED GEN UNIT FUEL ESCALATION RATE	3.2043 %
IV. (18)* AVOIDED PURCHASE CAPACITY COST PER KW	0 \$/KW/YR
IV. (19)* CAPACITY COST ESCALATION RATE	0 %

NON-FUEL ENERGY AND DEMAND CHARGES

V. (1) NON-FUEL COST IN CUSTOMER BILL	4.342 CENTS/KWH
V. (2) NON-FUEL ESCALATION RATE	1 %
V. (3) CUSTOMER DEMAND CHARGE PER KW	0.00 \$/KW/MO
V. (4) DEMAND CHARGE ESCALATION RATE	1 %
V. (5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL	0

CALCULATED BENEFITS AND COSTS

(1)* TRC TEST - BENEFIT/COST RATIO	1.05
(2)* PARTICIPANT NET BENEFITS (NPV)	16
(3)* RIM TEST - BENEFIT/COST RATIO	1.24

TRC

TOTAL RESOURCE COST TESTS
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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	PARTICIPANT PROGRAM COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT BENEFITS \$(000)	AVOIDED T & D BENEFITS \$(000)	PROGRAM FUEL SAVINGS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2006	0	3	20	0	24	0	0	1	0	1	(23)	(23)
2007	0	3	16	0	18	0	0	2	0	2	(16)	(37)
2008	0	2	11	0	12	0	0	4	0	4	(8)	(44)
2009	0	0	0	0	0	3	0	4	0	7	7	(39)
2010	0	0	0	0	0	3	0	4	0	7	7	(34)
2011	0	0	0	0	0	3	0	4	0	7	7	(29)
2012	0	0	0	0	0	3	0	4	0	7	7	(25)
2013	0	0	0	0	0	3	0	4	0	8	8	(20)
2014	0	0	0	0	0	4	0	4	0	8	8	(17)
2015	0	0	0	0	0	4	0	4	0	8	8	(13)
2016	0	0	0	0	0	4	0	4	0	8	8	(10)
2017	0	0	0	0	0	4	0	5	0	9	9	(6)
2018	0	0	0	0	0	4	0	5	0	9	9	(3)
2019	0	0	0	0	0	4	0	5	0	9	9	(0)
2020	0	0	0	0	0	4	0	6	0	10	10	3
NOMINAL	0	8	47	0	54	43	0	61	0	104	50	
NPV:	0	7	44	0	51	21	0	32	0	53	3	
Discount Rate		0.0909	Benefit/Cost Ratio - [col (11)/col (6)]:				1.05					

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PARTICIPANT COSTS AND BENEFITS
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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
YEAR	SAVINGS IN PARTICIPANTS BILL \$(000)	TAX CREDITS \$(000)	UTILITY REBATES \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	CUSTOMER EQUIPMENT COSTS \$(000)	CUSTOMER O & M COSTS \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	NET BENEFITS \$(000)	CUMULATIVE DISCOUNTED NET BENEFITS \$(000)
2006	1	0	5	0	7	20	0	0	20	(14)	(14)
2007	4	0	4	0	8	16	0	0	16	(8)	(21)
2008	6	0	3	0	8	11	0	0	11	(3)	(23)
2009	6	0	0	0	6	0	0	0	0	6	(19)
2010	6	0	0	0	6	0	0	0	0	6	(14)
2011	6	0	0	0	6	0	0	0	0	6	(10)
2012	7	0	0	0	7	0	0	0	0	7	(6)
2013	6	0	0	0	6	0	0	0	0	6	(2)
2014	7	0	0	0	7	0	0	0	0	7	1
2015	7	0	0	0	7	0	0	0	0	7	4
2016	7	0	0	0	7	0	0	0	0	7	7
2017	7	0	0	0	7	0	0	0	0	7	9
2018	7	0	0	0	7	0	0	0	0	7	12
2019	7	0	0	0	7	0	0	0	0	7	14
2020	8	0	0	0	8	0	0	0	0	8	16
NOMINAL	92	0	12	0	103	47	0	0	47	56	
NPV:	49	0	11	0	60	44	0	0	44	16	
In service year of gen unit:			2004								
Discount rate:			0.0909								

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RATE IMPACT TEST
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(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
YEAR	INCREASED SUPPLY COSTS \$(000)	UTILITY PROGRAM COSTS \$(000)	INCENTIVES \$(000)	REVENUE LOSSES \$(000)	OTHER COSTS \$(000)	TOTAL COSTS \$(000)	AVOIDED GEN UNIT & FUEL BENEFITS \$(000)	AVOIDED T & D BENEFITS \$(000)	REVENUE GAINS \$(000)	OTHER BENEFITS \$(000)	TOTAL BENEFITS \$(000)	NET BENEFITS TO ALL CUSTOMERS \$(000)	CUMULATIVE DISCOUNTED NET BENEFIT \$(000)
2006	0	3	5	1	0	9	1	0	0	0	1	(8)	(8)
2007	0	3	4	2	0	8	2	0	0	0	2	(6)	(14)
2008	0	2	3	3	0	7	4	0	0	0	4	(3)	(16)
2009	0	0	0	3	0	3	7	0	0	0	7	4	(13)
2010	0	0	0	3	0	3	7	0	0	0	7	4	(10)
2011	0	0	0	3	0	3	7	0	0	0	7	4	(8)
2012	0	0	0	3	0	3	7	0	0	0	7	4	(6)
2013	0	0	0	3	0	3	8	0	0	0	8	4	(3)
2014	0	0	0	3	0	3	8	0	0	0	8	4	(1)
2015	0	0	0	3	0	3	8	0	0	0	8	4	1
2016	0	0	0	3	0	3	8	0	0	0	8	5	3
2017	0	0	0	4	0	4	9	0	0	0	9	5	5
2018	0	0	0	4	0	4	9	0	0	0	9	5	7
2019	0	0	0	4	0	4	9	0	0	0	9	6	8
2020	0	0	0	4	0	4	10	0	0	0	10	6	10
NOMINAL	0	8	12	47	0	66	104	0	0	0	104	38	
NPV:	0	7	11	25	0	43	53	0	0	0	53	10	
Discount rate:			0.0909				Benefit/Cost Ratio - [col (12)/col (7)]:			1.24			