

ORIGINAL



# Tampa Electric Company

Docket No. 991791-EG

Ten Year DSM Plan  
2000-2009

December 29, 1999

DOCUMENT NUMBER-DATE

15831-DEC 29 8

FPSC-RECORDS/REPORTING

## **Tampa Electric Company's Ten Year DSM Plan 2000-2009**

In Docket No.971007-EG, Order No. PSC-99-1942-FOF-EG, dated October 1, 1999, the Florida Public Service Commission approved Tampa Electric Company's ten year DSM goals for the period 2000 - 2009. Pursuant to Rule 25-17.0021, Florida Administrative Code, Tampa Electric Company is filing a ten year DSM plan of various programs designed to meet the numeric conservation goals established by the Commission for the company.

Tampa Electric's approach to plan development consisted of the following:

1. a comprehensive review of current programs;
2. modifying appropriate programs to incorporate measures with market potential that were identified through the goals development process;
3. examining research and development (R & D) efforts for measure applications that have reached commercial applicability in the marketplace;
4. developing new residential and commercial programs that will exploit opportunities identified in those sectors;
5. identifying a comprehensive approach to continued R & D in both the residential and commercial sectors;
6. incorporating the specifics of the Commission approved stipulation between Tampa Electric and the Legal Environmental Assistance Foundation (LEAF); and
7. maintaining an active presence with current and future cogeneration opportunities in the service area.

Tampa Electric urges the Commission to adopt this plan as the appropriate action to be taken by the company to meet the DSM goals established for the 2000 - 2009 period.

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**Residential Market Sector Demand and Energy Data**

Year	Projected Summer Demand Savings (MW)		Commission Approved Summer MW Goal (Cum.)	Projected Winter Demand Savings (MW)		Commission Approved Winter MW Goal (Cum.)	Projected Annual Energy Savings (GWH)		Commission Approved Annual GWH Goal (Cum.)
	Incr.	Cum.		Incr.	Cum.		Incr.	Cum.	
2000	7.0	7.0	5.8	16.7	16.7	16.7	16.3	16.3	10.3
2001	6.7	13.7	11.1	15.8	32.5	32.2	15.9	32.2	20.0
2002	6.5	20.3	16.1	15.3	47.8	46.3	15.4	47.6	29.0
2003	6.1	26.4	20.7	14.0	61.8	59.2	14.6	62.3	37.5
2004	5.7	32.1	25.0	12.8	74.6	70.7	13.8	76.1	45.3
2005	5.0	37.1	28.8	10.8	85.4	81.0	10.2	86.3	52.5
2006	4.6	41.7	32.2	9.5	94.9	90.0	9.0	95.2	59.1
2007	4.3	46.0	35.3	8.8	103.7	97.7	8.3	103.6	65.1
2008	4.1	50.1	38.0	8.2	111.9	104.1	7.9	111.4	70.5
2009	3.9	54.0	40.3	7.6	119.5	109.1	7.3	118.7	75.3

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**Commercial / Industrial Market Sector Demand and Energy Data**

Year	Projected Summer Demand Savings (MW)		Commission Approved Summer MW Goal (Cum.)	Projected Winter Demand Savings (MW)		Commission Approved Winter MW Goal (Cum.)	Projected Annual Energy Savings (GWH)		Commission Approved Annual GWH Goal (Cum.)
	Incr.	Cum.		Incr.	Cum.		Incr.	Cum.	
2000	4.3	4.3	3.5	2.0	2.0	1.5	14.4	14.4	12.9
2001	4.3	8.7	6.9	2.0	3.9	3.0	14.4	28.8	25.7
2002	4.3	13.0	10.4	2.0	5.9	4.5	14.4	43.3	38.6
2003	4.2	17.2	13.5	1.9	7.8	5.9	13.8	57.0	50.3
2004	4.0	21.2	16.7	1.9	9.7	7.3	13.1	70.1	61.9
2005	4.0	25.2	19.9	1.9	11.5	8.7	13.0	83.2	73.6
2006	3.7	28.9	22.8	1.7	13.3	10.0	11.6	94.8	84.1
2007	3.7	32.6	25.8	1.7	15.0	11.3	11.6	106.4	94.5
2008	3.0	35.6	28.4	1.2	16.3	12.4	10.1	116.5	104.9
2009	2.8	38.3	30.8	1.2	17.4	13.4	9.4	125.9	114.1

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**Program: Residential Alternate Audit (Free)**

**Program Start Date: May 1981**

**Program Description:**

A conservation program used as an alternate to the Residential Conservation Service (RCS) Audit. This program is offered to all residential customers and is designed to save demand and energy by increasing customer awareness of energy use in their personal residences. Savings are dependent on the customer implementing energy saving recommendations. Recommendations are the same as the RCS Audit but are standardized and include an estimated range of savings.

In an effort to increase low income customer participation in conservation programs, Tampa Electric will accept the NEAT (National Energy Audit Tool) audit (which identifies conservation measures along with cost estimates and paybacks) that is provided by weatherization agencies in our service area. The NEAT audit will be in lieu of an audit performed by Tampa Electric. For each NEAT audit completed, Tampa Electric will provide \$35.00 to the provider agency to further promote the installation of conservation measures (weatherstripping, caulking, water heater wraps, etc.) and to strengthen the partnership between the company and weatherization agencies throughout the service area.

The audit is conducted by a trained analyst who notes only those recommendations which apply to the residence.

Audits are kept on file with the company for three years. There is no charge to the customer for the alternate audit.

**Program Participation Standards:**

1. Any residential customer in Tampa Electric Company's service area is eligible.
2. Program requirements for participation follow guidelines set by Rule 25-17.003, Florida Administrative Code.
3. No technical specifications on equipment eligibility with this program.
4. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

### **Program Savings and Costs:**

The kWh billing histories of customers who received alternate audits were examined in comparison to those of matched unaudited customers. Customers included in the analysis did not participate in any other DSM programs. Matching customers were required to be on the same meter reading route, in the same housing type (detached, multi-family, mobile home), and have consumption closely matched. Consumption before and after the audit was compared for both sets of customers to estimate the impact associated with the audit. Based on load research data, the consumption impacts were extrapolated into corresponding demand impacts.

Using this methodology, the savings per participant are as follows:

Demand:     .09 kW winter  
              .04 kW summer

Energy:     333 kWh annual

Based on historical costs, the cost per audit is estimated to be \$118.00.

### **Program Monitoring and Evaluation:**

Tampa Electric Company 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.

PROGRAM NAME: RESIDENTIAL ALTERNATE AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	487,946	5,500	1.1%	5,500
2001	498,680	498,680	5,425	2.2%	10,925
2002	508,527	508,527	5,350	3.2%	16,275
2003	517,179	517,179	5,200	4.2%	21,475
2004	525,339	525,339	5,000	5.0%	26,475
2005	533,072	533,072	4,800	5.9%	31,275
2006	540,431	540,431	4,250	6.6%	35,525
2007	547,667	547,667	4,000	7.2%	39,525
2008	555,341	555,341	3,750	7.8%	43,275
2009	562,755	562,755	3,500	8.3%	46,775

\* Previous participation levels not included.

PROGRAM NAME: RESIDENTIAL ALTERNATE AUDIT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	333	0.090	0.040	1.832	0.495	0.220
2001	333	0.090	0.040	3.638	0.983	0.437
2002	333	0.090	0.040	5.420	1.465	0.651
2003	333	0.090	0.040	7.151	1.933	0.859
2004	333	0.090	0.040	8.816	2.383	1.059
2005	333	0.090	0.040	10.415	2.815	1.251
2006	333	0.090	0.040	11.830	3.197	1.421
2007	333	0.090	0.040	13.162	3.557	1.581
2008	333	0.090	0.040	14.411	3.895	1.731
2009	333	0.090	0.040	15.576	4.210	1.871

PROGRAM NAME: RESIDENTIAL ALTERNATE AUDIT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	354	0.096	0.043	1.948	0.530	0.236
2001	354	0.096	0.043	3.870	1.053	0.468
2002	354	0.096	0.043	5.766	1.568	0.697
2003	354	0.096	0.043	7.608	2.069	0.920
2004	354	0.096	0.043	9.379	2.551	1.134
2005	354	0.096	0.043	11.079	3.014	1.339
2006	354	0.096	0.043	12.585	3.423	1.521
2007	354	0.096	0.043	14.002	3.809	1.693
2008	354	0.096	0.043	15.330	4.170	1.853
2009	354	0.096	0.043	16.570	4.507	2.003

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INPUT DATA - PART 1  
PROGRAM: Residential Alternate Audit

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.04 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.06 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.8 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	354 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	8.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	333 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	118.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.78%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE .....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.59
(2)* PARTICIPANT NET BENEFITS (NPV) .....	2,340
(3)* RIM TEST - BENEFIT/COST RATIO .....	0.72

**Program: Residential Conservation Service (RCS) Energy Audit**

**Program Start Date: January 1981**

**Program Description:**

A conservation program originally developed in response to the Energy Policy Act (1978) and adopted by Florida under Chapter 366.82 (5) Florida Statutes and Rule 25-17.003 of the Florida Administrative Code. The program is designed to save demand and energy and is offered to all residential customers. Savings are achieved by increasing customer awareness of the energy use in their personal residences. Savings are dependent on customers implementing energy saving recommendations. The audit is performed by a trained analyst who collects specific data about the structure of the home and the customer's lifestyle. The following information is the provided on the applicable energy saving measures:

- Estimated cost for contractor installation
- Estimated cost for do-it-yourself installation
- Payback period for customer investment
- Estimated first year energy savings

Analysts note only those recommendations which apply to the individual residence.

Audit findings are kept on file with the utility for three years. Audit charge to the customer is \$15.00.

**Program Participation Standards:**

1. Any residential customer in Tampa Electric Company's service area is eligible.
2. Program requirements for participation follow guidelines set by Rule 25-17.003, Florida Administrative Code.
3. Customer is charged \$15.00 for RCS Audit.
4. No payment processing for conservation measures with this program.
5. No technical specifications on equipment eligibility with this program.
6. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

Savings for the RCS Audit are assumed to be the same as the Residential Alternate Audit due to the limited number of RCS Audits completed since the last evaluation. Therefore, the savings per participant are as follows:

Demand:     .09 kW winter  
              .04 kW summer

Energy:     333 kWh annual

The estimated cost per audit is \$158.00. There are no rebates or incentives for this program.

**Program Monitoring and Evaluation:**

Tampa Electric Company 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.

PROGRAM NAME: RESIDENTIAL RCS AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	487,946	10	0.0%	10
2001	498,680	498,680	10	0.0%	20
2002	508,527	508,527	10	0.0%	30
2003	517,179	517,179	10	0.0%	40
2004	525,339	525,339	10	0.0%	50
2005	533,072	533,072	10	0.0%	60
2006	540,431	540,431	10	0.0%	70
2007	547,667	547,667	10	0.0%	80
2008	555,341	555,341	10	0.0%	90
2009	562,755	562,755	10	0.0%	100

\* Previous participation levels not included.

PROGRAM NAME: RESIDENTIAL RCS AUDIT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	333	0.090	0.040	0.003	0.001	0.000
2001	333	0.090	0.040	0.007	0.002	0.001
2002	333	0.090	0.040	0.010	0.003	0.001
2003	333	0.090	0.040	0.013	0.004	0.002
2004	333	0.090	0.040	0.017	0.005	0.002
2005	333	0.090	0.040	0.020	0.005	0.002
2006	333	0.090	0.040	0.023	0.006	0.003
2007	333	0.090	0.040	0.027	0.007	0.003
2008	333	0.090	0.040	0.030	0.008	0.004
2009	333	0.090	0.040	0.033	0.009	0.004

PROGRAM NAME: RESIDENTIAL RCS AUDIT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	354	0.096	0.043	0.004	0.001	0.000
2001	354	0.096	0.043	0.007	0.002	0.001
2002	354	0.096	0.043	0.011	0.003	0.001
2003	354	0.096	0.043	0.014	0.004	0.002
2004	354	0.096	0.043	0.018	0.005	0.002
2005	354	0.096	0.043	0.021	0.006	0.003
2006	354	0.096	0.043	0.025	0.007	0.003
2007	354	0.096	0.043	0.028	0.008	0.003
2008	354	0.096	0.043	0.032	0.009	0.004
2009	354	0.096	0.043	0.035	0.010	0.004

INPUT DATA -- PART 1  
PROGRAM: Residential RCS Audit

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.04 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.06 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	354 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	6.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	333 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	158.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.16
(2)* PARTICIPANT NET BENEFITS (NPV) .....	9
(3)* RIM TEST - BENEFIT/COST RATIO .....	0.62

**Program: Mail – In Residential Energy Audit**

**Program Start Date: June 1996**

**Program Description:**

A conservation program designed to save demand and energy by increasing customer awareness of energy use in their personal residences. The customer is supplied with a data collection form which the customer completes and returns for analysis. The audit results are then submitted to the customer for review and implementation. The audit recommendations are based on the customers answers to the questions and their actual energy consumption. There is no charge to the customer.

**Program Participation Standards:**

1. Any residential customer in Tampa Electric Company's service area is eligible.
2. The Residential Mail-In Audit will be offered to customers in response to a request for this service, or through direct mailing to customers. However, they will not be offered in lieu of or used as a prerequisite for on-site audits (RCS & Alternate).
3. Upon completion of the audit, the customer is mailed a copy of the results.
4. No payment processing with this program.
5. No technical specifications on equipment eligibility with this program.
6. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

Energy and demand savings are estimated to be 25% less than the Residential Alternate Audit (Free). Therefore, savings per participant are as follows:

Demand:     .068 kW winter  
              .030 kW summer

Energy:     250 kWh annual

Based on historical costs for 1998, the cost per audit is \$28.00. There are no rebates or incentives for this program.

**Program Monitoring and Evaluation:**

**Tampa Electric Company 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.**

PROGRAM NAME: RESIDENTIAL MAIL-IN AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants*	Cumulative Penetration level %	Cumulative Number of Program Participants
2000	487,946	487,946	12,000	2.5%	12,000
2001	498,680	498,680	12,000	4.8%	24,000
2002	508,527	508,527	11,750	7.0%	35,750
2003	517,179	517,179	11,500	9.1%	47,250
2004	525,339	525,339	11,250	11.1%	58,500
2005	533,072	0	0	0.0%	0
2006	540,431	0	0	0.0%	0
2007	547,667	0	0	0.0%	0
2008	555,341	0	0	0.0%	0
2009	562,755	0	0	0.0%	0

\* All eligible customers will have been afforded the opportunity to participate by year end 2004.

PROGRAM NAME: RESIDENTIAL MAIL-IN AUDIT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	250	0.068	0.030	3.000	0.816	0.360
2001	250	0.068	0.030	6.000	1.632	0.720
2002	250	0.068	0.030	8.938	2.431	1.073
2003	250	0.068	0.030	11.813	3.213	1.418
2004	250	0.068	0.030	14.625	3.978	1.755
2005	0	0.000	0.000	0.000	0.000	0.000
2006	0	0.000	0.000	0.000	0.000	0.000
2007	0	0.000	0.000	0.000	0.000	0.000
2008	0	0.000	0.000	0.000	0.000	0.000
2009	0	0.000	0.000	0.000	0.000	0.000

PROGRAM NAME: RESIDENTIAL MAIL-IN AUDIT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	266	0.073	0.032	3.191	0.874	0.383
2001	266	0.073	0.032	6.383	1.747	0.766
2002	266	0.073	0.032	9.508	2.603	1.141
2003	266	0.073	0.032	12.566	3.440	1.508
2004	266	0.073	0.032	15.559	4.259	1.867
2005	0	0.000	0.000	0.000	0.000	0.000
2006	0	0.000	0.000	0.000	0.000	0.000
2007	0	0.000	0.000	0.000	0.000	0.000
2008	0	0.000	0.000	0.000	0.000	0.000
2009	0	0.000	0.000	0.000	0.000	0.000

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.03 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.05 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	266 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	6.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	250 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(7) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	28.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	266.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.906 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	5.03
(2)* PARTICIPANT NET BENEFITS (NPV) .....	3,658
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.05

**Program: Residential Duct Repair**

**Program Start Date: September 1992**

**Program Description:**

A conservation incentive program designed to reduce demand and energy by decreasing the load on residential air conditioning and heating (HVAC) equipment. This program identifies areas of HVAC air distribution losses by inspecting the "air distribution system" (i.e., air handler, air ducts, return plenums, supply plenums, and any connecting structure). A Tampa Electric appointed HVAC contractor will locate and identify air distribution system leaks using a blower door. Upon completion, the customer will receive information on any problems found and, when applicable, an estimate for the repairs will be given. The estimate includes Tampa Electric Company's incentive as partial payment for air distribution system repairs.

**Program Participation Standards:**

1. Residences must not be covered by any new home warranty.
2. Residences must have a central ducted HVAC system with electric heating or air conditioning that is accessible for inspection and repair. Residences with non-electric heating are eligible. Any safety issues will be identified prior to participation.
3. Tampa Electric Company will appoint an HVAC contractor to identify existing problems, determine repair cost and perform repairs. Customers will be charged \$25.00 for duct diagnostics (blower door test).
4. Repair must be performed by a participating HVAC contractor.
5. Repairs will be sealed by mastic techniques (adhesive with fibers embedded or adhesive with fabric reinforced tape). Air handler panels/openings will be sealed with tape or other approved materials. If ducts are replaced, mastic must be used to seal all joints, connections and seams in the air distribution system.
6. HVAC contractor submits duct repair work order to Tampa Electric Company.
7. Tampa Electric Company will randomly perform full inspections on a minimum of 10% of repair work orders submitted by each contractor.
8. Repair work orders not selected for random inspections will have an office review to verify information.

9. No payment will be made until Tampa Electric Company inspects or reviews work orders.
10. Contractor incentive payment is seventy-five percent of the total repair cost up to a maximum incentive of \$200.00 per air distribution system.
11. No technical specifications on equipment eligibility with this program.
12. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. 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 36% and 64% participation, respectively. Additionally, the analysis from the SRC data filed in the goals docket of duct repair savings for the HVAC systems are as follows:

Type System	Winter <u>Demand (kW)</u>	Summer <u>Demand (kW)</u>	Annual <u>Energy (kWh)</u>
Central A/C with Strip	.447	.452	999
Central Heat Pump	.369	.453	991

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

**Winter Demand:**

Strip heat	(.447) (0.36)	=	0.161
Heat Pump	(.369) (0.64)	=	<u>0.236</u>
Average winter demand reduction		=	0.397 kW

**Summer Demand:**

Straight A/C	(.452) (0.36)	=	0.163
Heat Pump	(.453) (0.64)	=	<u>0.290</u>
Average summer demand reduction		=	0.453 kW

**Energy:**

Straight A/C (999) (0.36)	=	360
Heat Pump (991) (0.64)	=	<u>635</u>
Average annual energy savings	=	995 kWh

**Costs:**

Incentive cost per participant:	\$175.00
Administrative cost per participant:	\$170.00

**Program Monitoring and Evaluation:**

Tampa Electric Company utilized the engineering estimates and computer modeling from the SRC study for the demand and energy savings of the program. Tampa Electric Company 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.

PROGRAM NAME: RESIDENTIAL DUCT REPAIR

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	415,632	5,000	1.2%	5,000
2001	498,680	420,536	4,800	2.3%	9,800
2002	508,527	424,837	4,600	3.4%	14,400
2003	517,179	428,259	4,400	4.4%	18,800
2004	525,339	431,435	4,200	5.3%	23,000
2005	533,072	434,426	4,000	6.2%	27,000
2006	540,431	437,379	3,700	7.0%	30,700
2007	547,667	440,420	3,500	7.8%	34,200
2008	555,341	444,057	3,300	8.4%	37,500
2009	562,755	447,660	3,100	9.1%	40,600

\* Previous participation levels not included.

PROGRAM NAME: RESIDENTIAL DUCT REPAIR

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	995	0.397	0.453	4.975	1.985	2.265
2001	995	0.397	0.453	9.751	3.891	4.439
2002	995	0.397	0.453	14.328	5.717	6.523
2003	995	0.397	0.453	18.706	7.464	8.516
2004	995	0.397	0.453	22.885	9.131	10.419
2005	995	0.397	0.453	26.865	10.719	12.231
2006	995	0.397	0.453	30.547	12.188	13.907
2007	995	0.397	0.453	34.029	13.577	15.493
2008	995	0.397	0.453	37.313	14.888	16.988
2009	995	0.397	0.453	40.397	16.118	18.392

PROGRAM NAME: RESIDENTIAL DUCT REPAIR

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	1059	0.425	0.485	5.293	2.125	2.425
2001	1059	0.425	0.485	10.373	4.166	4.753
2002	1059	0.425	0.485	15.243	6.121	6.984
2003	1059	0.425	0.485	19.900	7.991	9.118
2004	1059	0.425	0.485	24.346	9.776	11.155
2005	1059	0.425	0.485	28.580	11.476	13.095
2006	1059	0.425	0.485	32.496	13.049	14.890
2007	1059	0.425	0.485	36.201	14.537	16.587
2008	1059	0.425	0.485	39.694	15.940	18.188
2009	1059	0.425	0.485	42.976	17.257	19.691

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.45 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.48 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	1,059 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	6.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ...	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	995 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	170.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	313.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	175.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	2.15
(2)* PARTICIPANT NET BENEFITS (NPV) .....	6.077
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.25

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**PROGRAM:** Residential New Construction Program:

**PROGRAM START DATE:** June 2000 (estimate)

**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 (EPA) 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 and meets the HERS standards for allowable duct leakage.

<u>Level</u>	<u>Incentive</u>	<u>Requirement</u>
Two	\$100.00	Meet Level One requirements plus installation of a heat pump with a minimum 12 SEER (Seasonal Energy Efficiency Rating) and a minimum 7.2 HSPF (Heating Seasonal Performance Factor). <b>OR</b> Meet Level One requirement plus installation of an air conditioning system that has a minimum 12 SEER and heating source must not be electric resistance heat or fuel oil.
Three	\$200.00	Meet level one and two requirements plus install R-30 ceiling insulation.
Four	\$300.00	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).

2. For installations in the first three levels, a maximum of \$200.00 is available to the home buyer. For installation of all levels, a maximum of \$300.00 is available to the home buyer
3. The home must be single family detached. Structure must be ducted.
4. The home and equipment must be accessible during construction and after construction for verification of program standards.
5. The home must be located in Tampa Electric Company's service area and be metered by Tampa Electric Company to receive incentives.
6. Equipment specifications shall be according to Air Conditioning and Refrigeration Institute (ARI) and the Gas Appliance Manufacturers Association (GAMA) standards (where applicable). Heat recovery water heaters must be equipped with a circulating pump and must be Association of Refrigeration Desuperheater Manufacturers (ARDM) certified.
7. The certification of new home construction that meets or exceeds the standards used in the Environmental Protection Agency's (EPA) Energy Star Program will follow the Guidelines for Uniformity, Voluntary Procedures for Home Energy Ratings, Version 2.0, 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. The standards for allowable duct leakage will follow the procedures set by the Department of Community Affairs (DCA) 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 building contractor will be responsible for installation of qualifying equipment and will be responsible for correcting any problems in duct installation that does not meet the HERS standards. Home buyer will not receive incentive payments until corrections have been made.
10. Tampa Electric will randomly perform full inspection on a minimum of 10% of the participating homes. No payment will be made until an inspection or review of contractor work has occurred.
11. To determine eligibility for participation, homes must receive a certificate of occupancy subsequent to FPSC approval of the program and it's participation standards.

**PROGRAM SAVINGS and COSTS:**

Tampa Electric Company used the data from Synergic Resources Corporation (SRC) to determine the savings for new construction. The savings for the levels of customer participation are as follows:

Savings:

<b>Level One</b>	<b>Summer KW</b>	<b>Winter KW</b>	<b>Annual KWh</b>
Electric	0.341	0.278	744
Gas	0.341	0.000	558
<b>Level Two</b>			
Electric	0.632	0.575	1169
Gas	0.631	0.000	877
<b>Level Three</b>			
Electric	0.700	0.664	1313
Gas	0.700	0.000	985
<b>Level Four</b>			
Electric	0.891	0.664	1863
<b>Composite</b>			
	0.47	0.35	940

Composite cost estimates are as follows:

Administrative costs per participant:	\$98.00
Incentive costs per participant:	\$64.00

**PROGRAM MONITORING and EVALUATION:**

Tampa Electric Company utilized the engineering estimates and computer modeling from the aforementioned SRC Study for the demand and energy savings. Tampa Electric Company 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.

PROGRAM NAME: NEW HOME PROGRAM

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants
2000	4,575	4,575	300	6.6%	300
2001	9,092	4,517	375	8.3%	675
2002	13,256	4,164	450	10.8%	1,125
2003	17,271	4,015	500	12.5%	1,625
2004	21,460	4,189	550	13.1%	2,175
2005	25,772	4,312	600	13.9%	2,775
2006	30,142	4,370	650	14.9%	3,425
2007	34,597	4,455	700	15.7%	4,125
2008	39,298	4,701	750	16.0%	4,875
2009	44,083	4,785	800	16.7%	5,675

\* Previous participation levels not included.

PROGRAM NAME: NEW HOME PROGRAM

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	940	0.350	0.470	0.282	0.105	0.141
2001	940	0.350	0.470	0.635	0.236	0.317
2002	940	0.350	0.470	1.058	0.394	0.529
2003	940	0.350	0.470	1.528	0.569	0.764
2004	940	0.350	0.470	2.045	0.761	1.022
2005	940	0.350	0.470	2.609	0.971	1.304
2006	940	0.350	0.470	3.220	1.199	1.610
2007	940	0.350	0.470	3.878	1.444	1.939
2008	940	0.350	0.470	4.583	1.706	2.291
2009	940	0.350	0.470	5.335	1.986	2.667

PROGRAM NAME: NEW HOME PROGRAM

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	1000	0.375	0.503	0.300	0.112	0.151
2001	1000	0.375	0.503	0.675	0.253	0.340
2002	1000	0.375	0.503	1.125	0.422	0.566
2003	1000	0.375	0.503	1.625	0.609	0.818
2004	1000	0.375	0.503	2.175	0.815	1.094
2005	1000	0.375	0.503	2.775	1.040	1.396
2006	1000	0.375	0.503	3.425	1.283	1.724
2007	1000	0.375	0.503	4.125	1.546	2.076
2008	1000	0.375	0.503	4.875	1.827	2.453
2009	1000	0.375	0.503	5.675	2.127	2.856

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.47 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.48 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	8.8 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	1,000 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	8.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	940 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	15 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	98.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	444.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	64.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.38 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ...	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.21
(2)* PARTICIPANT NET BENEFITS (NPV) .....	95
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.30

35

**Program: Residential Heating & Cooling**

**Program Start Date: January 1981**

**Program Description:**

A conservation program that uses an incentive for 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 (1) heat pump replacing resistance heat and Type two (2) heat pump replacing heat pump. Both types of equipment replacement have a threshold for qualification of 12.0 SEER.

**Program Participation Standards:**

1. The residential dwelling must be an existing single family detached structure (no mobile homes or multi - family units) in Tampa Electric Company's service area.
2. The system must be ducted.
3. Minimum qualifying efficiency rating (ARI rating only) is 12.0 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 Company and a gas company), Tampa Electric will not pay its rebate so that a double payment is avoided.
8. HVAC contractor or customer submits rebate request form to Tampa Electric Company. The form will be signed certifying that the equipment installed is in accordance with the manufacturer's specifications for sizing, air flow, refrigerant type and charge.
9. Tampa Electric Company will randomly perform full inspections on a minimum of 10% of rebate requests submitted by each contractor and 100% of rebate requests submitted by customers.

10. Forms not selected for random inspections will have an office review to verify information.
11. No payment will be made until Tampa Electric inspects or reviews rebate requests.
12. Rebates and incentives:

	<u>Customer rebate</u>	<u>Dealer incentive</u>
Type One	\$250.00	\$75.00
Type Two	\$100.00	\$25.00

13. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. 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 55% and 45% participation, respectively. Additionally, the analysis from the SRC data of heating and cooling replacement savings for the HVAC systems are 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	2.363	.291	1197
Central Heat Pump	.223	.291	568

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

**Winter Demand:**

Strip heat	(2.363) (0.55)	=	1.30
Heat Pump	(.223) (0.45)	=	<u>0.10</u>
Average winter demand reduction		=	1.40 kW

**Summer Demand:**

Straight A/C	(.291) (0.55)	=	0.160
Heat Pump	(.291) (0.45)	=	<u>0.131</u>
Average summer demand reduction		=	0.291 kW

**Energy:**

Straight A/C (1197) (0.55)	=	658
Heat Pump (568) (0.45)	=	<u>256</u>
Average annual energy savings	=	914 kWh

**Costs (weighted):**

Incentive cost per participant:	\$183.00
Administrative cost per participant:	\$93.00

**Program Monitoring and Evaluation:**

Tampa Electric Company utilized the engineering estimates and computer modeling from the SRC study for the demand and energy savings of the program. Tampa Electric Company 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.

**PROGRAM NAME: RESIDENTIAL HEATING AND COOLING**

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	162,411	3,500	2.2%	3,500
2001	498,680	142,635	3,200	4.7%	6,700
2002	508,527	139,377	3,000	7.0%	9,700
2003	517,179	136,531	2,500	8.9%	12,200
2004	525,339	134,388	2,000	10.6%	14,200
2005	533,072	132,764	1,500	11.8%	15,700
2006	540,431	131,656	1,000	12.7%	16,700
2007	547,667	130,820	800	13.4%	17,500
2008	555,341	130,297	650	13.9%	18,150
2009	562,755	129,722	500	14.4%	18,650

\* Previous participation levels not included.

Notes: Mobile home and multi-family structures not included in eligible customer count.  
 New construction growth estimated at five percent for non heat pump structures.

PROGRAM NAME: RESIDENTIAL HEATING AND COOLING

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	914	1.400	0.291	3.199	4.900	1.019
2001	914	1.400	0.291	6.124	9.380	1.950
2002	914	1.400	0.291	8.866	13.580	2.823
2003	914	1.400	0.291	11.151	17.080	3.550
2004	914	1.400	0.291	12.979	19.880	4.132
2005	914	1.400	0.291	14.350	21.980	4.569
2006	914	1.400	0.291	15.264	23.380	4.860
2007	914	1.400	0.291	15.995	24.500	5.093
2008	914	1.400	0.291	16.589	25.410	5.282
2009	914	1.400	0.291	17.046	26.110	5.427

PROGRAM NAME: RESIDENTIAL HEATING AND COOLING

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	972	1.499	0.312	3.403	5.246	1.090
2001	972	1.499	0.312	6.515	10.043	2.087
2002	972	1.499	0.312	9.432	14.540	3.022
2003	972	1.499	0.312	11.863	18.287	3.801
2004	972	1.499	0.312	13.807	21.285	4.424
2005	972	1.499	0.312	15.266	23.533	4.892
2006	972	1.499	0.312	16.238	25.032	5.203
2007	972	1.499	0.312	17.016	26.231	5.452
2008	972	1.499	0.312	17.648	27.206	5.655
2009	972	1.499	0.312	18.134	27.955	5.811

INPUT DATA - PART 1  
PROGRAM: Heating & Cooling

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.29 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.69 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	972 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	6.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	914 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	15 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	93.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	820.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE .....	183.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	298.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE .....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.906 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.01
(2)* PARTICIPANT NET BENEFITS (NPV) .....	491
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.19

42

**Program: Residential Ceiling Insulation**

**Program Start Date: November 1982**

**Program Description:**

A conservation program designed to reduce demand and energy by decreasing the load on residential air conditioning and heating equipment. Qualifying residential structures are eligible for an incentive in the amount of \$100.00 which is in the form of a certificate. Customers use the certificate as partial payment for the ceiling insulation installed.

**Program Participation Standards:**

1. Homes must not be covered by a new home warranty.
2. Homes must have electric whole house air conditioning or heating. Residences with non-electric heating are eligible provided they have electric whole house air conditioning.
3. Customers must add a minimum insulation value of R-11 based on a manufacturer's specification card. Resulting total R-values achieved will range from R-23 to R-29. Where roof pitch limits accessibility, an R-11 must be added.
4. Customers are required to sign off on the number of bags of insulation installed.
5. Insulation certificates will be issued through either energy audits or by direct evaluation of existing levels of insulation.
6. Insulation contractor or customer submits insulation certificate to Tampa Electric Company.
7. Tampa Electric Company will randomly perform full inspections on a minimum of 10% of rebate requests submitted by each contractor and 100% of rebate requests submitted by customers.
8. Certificates not selected for random inspections will have an office review to verify information.
9. No payment will be made until Tampa Electric Company inspects or reviews incentive certificates.
10. Contractor/customer incentive payment is \$100.00 per residence.

11. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. 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 heat pumps comprise a 36% and 64% participation, respectively. Additionally, participants have the following characteristics:

Conditioned space: 1265 sq.ft.  
 Present R-value: R-7  
 Desired R-value: R-26

Savings were obtained from using computerized, building simulation models. The analysis yielded the following:

<u>Type System</u>	<u>Winter Demand (kW)</u>	<u>Summer Demand (kW)</u>	<u>Annual Energy (kWh)</u>
Central A/C with Strip	1.3	0.2	552
Central Heat Pump	0.6	0.2	521

By weighting these savings across the system types and diversity (savings X diversity, when applicable X weighting), the following reductions are rendered:

**Winter Demand:**

Strip heat	(1.3) (0.5) (0.36)	=	0.234
Heat Pump	(0.6) (.75) (0.64)	=	<u>0.288</u>
Average winter demand reduction		=	0.522 kW

**Summer Demand:**

Average summer demand reduction	(0.2) (0.6)	=	. 12 kW
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**Energy:**

Strip heat	(552) (0.36)	=	199
Heat Pump	(521) (0.64)	=	<u>333</u>
Average annual energy savings		=	532 kWh

**Program Costs:**

Incentive cost per participant:	\$100.00
Administrative cost per participant:	\$ 7.00

**Program Monitoring and Evaluation:**

Tampa Electric Company will continue to 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.

PROGRAM NAME: RESIDENTIAL CEILING INSULATION

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	388,323	5,750	1.5%	5,750
2001	498,680	392,377	5,650	2.9%	11,400
2002	508,527	395,728	5,550	4.3%	16,950
2003	517,179	398,100	5,450	5.6%	22,400
2004	525,339	400,226	5,250	6.9%	27,650
2005	533,072	402,217	5,000	8.1%	32,650
2006	540,431	404,470	4,400	9.2%	37,050
2007	547,667	407,011	4,000	10.1%	41,050
2008	555,341	410,148	3,800	10.9%	44,850
2009	562,755	413,451	3,400	11.7%	48,250

\* Previous participation levels not included.

PROGRAM NAME: RESIDENTIAL CEILING INSULATION

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	532	0.522	0.120	3.059	3.002	0.690
2001	532	0.522	0.120	6.065	5.951	1.368
2002	532	0.522	0.120	9.017	8.848	2.034
2003	532	0.522	0.120	11.917	11.693	2.688
2004	532	0.522	0.120	14.710	14.433	3.318
2005	532	0.522	0.120	17.370	17.043	3.918
2006	532	0.522	0.120	19.711	19.340	4.446
2007	532	0.522	0.120	21.839	21.428	4.926
2008	532	0.522	0.120	23.860	23.412	5.382
2009	532	0.522	0.120	25.669	25.187	5.790

PROGRAM NAME: RESIDENTIAL CEILING INSULATION

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	566	0.559	0.128	3.254	3.214	0.739
2001	566	0.559	0.128	6.452	6.371	1.465
2002	566	0.559	0.128	9.593	9.473	2.178
2003	566	0.559	0.128	12.677	12.519	2.878
2004	566	0.559	0.128	15.649	15.453	3.552
2005	566	0.559	0.128	18.479	18.248	4.195
2006	566	0.559	0.128	20.969	20.707	4.760
2007	566	0.559	0.128	23.233	22.942	5.274
2008	566	0.559	0.128	25.383	25.066	5.762
2009	566	0.559	0.128	27.307	26.966	6.199

INPUT DATA - PART 1  
PROGRAM: Ceiling Insulation

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.12 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.27 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	566 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	8.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	532 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	7.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	325.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	8.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	100.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.51
(2)* PARTICIPANT NET BENEFITS (NPV) .....	2,105
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.37

**Program: Prime Time Load Management**

**Program Start Date: January 1981**

**Program Description:**

Tampa Electric's "Prime Time" is a residential load management program designed to alter our system load curve by reducing summer and winter demand peaks.

Residential load such as heating, air conditioning, water heaters and pool pumps are controlled from a radio signal initiated by Tampa Electric's Energy Control Center. This signal operates radio control switches located on individual customer homes and wired directly to the controlled appliances. Customers participating in Prime Time receive monthly incentive credits on their electric bill. Except during emergencies, appliances are interrupted only when needed during peak hours.

**Program Participation Standards:**

1. Applicable to any customer located in Tampa Electric's service area and served under rate schedule RS.
2. The customer must use a minimum amount of energy (kWh) in order to receive full credit. Total credit cannot exceed 40% of the non-fuel energy charges actually incurred during a billing period. The initial monthly credit is determined by the date of the installation.

**Maximum Credit Per Option Per Month:**

Year round Water Heater:	\$4.00 per month; interruptions not to exceed 5 hours per day
Year round Pool Pump:	\$3.00 per month; interruptions not to exceed 5 hours per day
Winter central HVAC unit (continuous):	\$12.00 per month; interruptions not to exceed 3 hours per day
Summer central HVAC unit (cyclic):	\$6.00 per month; cyclic interruptions with a cumulative off time not to exceed 3 hours per day

Summer central HVAC unit  
(continuous):

\$12.00 per month; interruptions not to  
exceed 3 hours per day

3. Winter is November through March. Summer is April through October.
4. The company's prime use periods for normal control are as follows:  
Winter - 6:00 A.M. to 11:00 A.M. and 6:00 P.M. to 10:00 P.M.  
Summer - 2:00 P.M. to 10:00 P.M.
5. Appliance must be operational during installation of load management control equipment.
6. All appliances controlled must be electric.
7. All initial credits have an office review for verification.
8. Tampa Electric Company will randomly perform inspections on at least 10% of all credit related work orders submitted by the contractors.
9. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

#### **Program Savings and Costs:**

Demand reduction is calculated from a load reduction algorithm on a per customer appliance basis. The overall load reduction estimate is the sum of the individual appliance loads, discounted by a Master Discount Multiplier (MDM). The MDM accounts for the equipment malfunction, suspense customers, losses, etc. This factor is determined through a field-conducted reliability survey.

Demand:

The average demand reduction is as follows:

Summer (At 17:00 hrs; Month of June): 1.29 kW per customer

Winter (At 08:00 hrs; Month of January): 2.98 kW per customer

Energy:

Annual energy savings from the Prime Time program are negligible.

**Costs:**

**Prime Time program costs (average per customer):**

Admin, Dep & Ret, Adver, Install:	\$354.00
Maintenance (yr.):	\$11.00
Incentives (yr.):	\$125.00

**Program Monitoring and Evaluation:**

Tampa Electric Company 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.

PROGRAM NAME: RESIDENTIAL LOAD MANAGEMENT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	487,946	371,817	1,800	0.5%	1,800
2001	498,680	379,993	1,700	0.9%	3,500
2002	508,527	387,402	1,650	1.3%	5,150
2003	517,179	393,862	1,500	1.7%	6,650
2004	525,339	399,969	1,400	2.0%	8,050
2005	533,072	405,783	1,300	2.3%	9,350
2006	540,431	411,304	1,250	2.6%	10,600
2007	547,667	416,761	1,200	2.8%	11,800
2008	555,341	422,671	1,150	3.1%	12,950
2009	562,755	428,392	1,100	3.3%	14,050

\* Previous participation levels not included.

92% of the participants assumed to have all - electric homes

PROGRAM NAME: RESIDENTIAL LOAD MANAGEMENT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	2.980	1.290	0.000	5.364	2.322
2001	0	2.980	1.290	0.000	10.430	4.515
2002	0	2.980	1.290	0.000	15.347	6.644
2003	0	2.980	1.290	0.000	19.817	8.579
2004	0	2.980	1.290	0.000	23.989	10.385
2005	0	2.980	1.290	0.000	27.863	12.062
2006	0	2.980	1.290	0.000	31.588	13.674
2007	0	2.980	1.290	0.000	35.164	15.222
2008	0	2.980	1.290	0.000	38.591	16.706
2009	0	2.980	1.290	0.000	41.869	18.125

PROGRAM NAME: RESIDENTIAL LOAD MANAGEMENT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	3.191	1.381	0.000	5.743	2.486
2001	0	3.191	1.381	0.000	11.167	4.834
2002	0	3.191	1.381	0.000	16.431	7.113
2003	0	3.191	1.381	0.000	21.217	9.185
2004	0	3.191	1.381	0.000	25.684	11.118
2005	0	3.191	1.381	0.000	29.832	12.914
2006	0	3.191	1.381	0.000	33.820	14.640
2007	0	3.191	1.381	0.000	37.649	16.298
2008	0	3.191	1.381	0.000	41.318	17.886
2009	0	3.191	1.381	0.000	44.828	19.405

INPUT DATA - PART 1  
PROGRAM: Prime Time

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	1.29 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	1.99 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.6 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	0 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	6.0 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	0 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	354.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	11.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	125.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	0.00 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.00 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	4.342 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	0.00 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	4.40
(2)* PARTICIPANT NET BENEFITS (NPV) .....	4.337
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.24

56

**Program: Commercial/Industrial Audit (Free)**

**Program Start Date: July 1983**

**Program Description:**

A conservation program designed to reduce demand and energy consumption by increasing customer awareness of energy use in their facilities. The savings are dependent upon customer implementation of audit recommendations. Recommendations are based on the replacement of less efficient equipment and systems or modifications to operations to enhance the customer's overall efficiency. Recommendations are primarily standardized and encourage the customer to implement measures that, if cost-effective, move the customer beyond the efficiency level typically installed in the marketplace.

**Program Participation Standards:**

1. All commercial/industrial customers on firm rates within Tampa Electric Company's service area are eligible for an audit.
2. Program requirements for participation follow guidelines set by Rule 25-17.003, Florida Administrative Code.
3. When applicable, customers are also qualified for participation in all current commercial programs. Cost effectiveness for these programs is generally determined while at the customer's facility.
4. No payment processing with this program.
5. No technical specifications on equipment eligibility with this program.
6. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

The kWh billing histories of customers who received alternate audits were examined in comparison to those matched unaudited customers. Matching customers were required to be on the same meter reading route and rate, and have consumption closely matched during the 12 months preceding the audit. Consumption before and after the audit was compared for both sets of customers to estimate the impact associated with the audit. Based on load research data, the consumption impacts were extrapolated into corresponding demand impacts.

Using this methodology, the savings per participant are as follows:

Demand: 0.06 kW winter  
0.08 kW summer

Energy: 341 kWh annual

Based on historical costs for 1998, the cost per audit is estimated to be \$438.00. There are no rebates or incentives for this program.

**Program Monitoring and Evaluation:**

Tampa Electric Company 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.

PROGRAM NAME: FREE C/I AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	62,563	275	0.4%	275
2001	63,417	63,417	250	0.8%	525
2002	64,387	64,387	225	1.2%	750
2003	64,975	64,975	200	1.5%	950
2004	66,084	66,084	175	1.7%	1,125
2005	67,134	67,134	150	1.9%	1,275
2006	68,134	68,134	125	2.1%	1,400
2007	69,118	69,118	100	2.2%	1,500
2008	70,160	70,160	75	2.2%	1,575
2009	71,168	71,168	50	2.3%	1,625

\* Previous participation levels not included.

PROGRAM NAME: FREE C/I AUDIT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	341	0.060	0.080	0.094	0.017	0.022
2001	341	0.060	0.080	0.179	0.032	0.042
2002	341	0.060	0.080	0.256	0.045	0.060
2003	341	0.060	0.080	0.324	0.057	0.076
2004	341	0.060	0.080	0.384	0.068	0.090
2005	341	0.060	0.080	0.435	0.077	0.102
2006	341	0.060	0.080	0.477	0.084	0.112
2007	341	0.060	0.080	0.512	0.090	0.120
2008	341	0.060	0.080	0.537	0.095	0.126
2009	341	0.060	0.080	0.554	0.098	0.130

PROGRAM NAME: FREE C/I AUDIT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	362	0.064	0.086	0.100	0.018	0.024
2001	362	0.064	0.086	0.190	0.034	0.045
2002	362	0.064	0.086	0.271	0.048	0.064
2003	362	0.064	0.086	0.344	0.061	0.081
2004	362	0.064	0.086	0.407	0.072	0.096
2005	362	0.064	0.086	0.462	0.082	0.109
2006	362	0.064	0.086	0.507	0.090	0.120
2007	362	0.064	0.086	0.543	0.096	0.128
2008	362	0.064	0.086	0.570	0.101	0.135
2009	362	0.064	0.086	0.588	0.104	0.139

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.06 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.06 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	362 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	341 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	438.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION ....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.906 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	0.48
(2)* PARTICIPANT NET BENEFITS (NPV) .....	100
(3)* RIM TEST - BENEFIT/COST RATIO .....	0.36

62

**Program: Comprehensive Commercial/Industrial Audit (Paid)**

**Program Start Date: May 1981**

**Program Description:**

A conservation program designed to reduce demand and energy by increasing customer awareness of energy use in their facilities. The paid audit will likely involve monitoring specific equipment within a customer's facility to determine its electric usage with respect to time of operation. Based on the results, we will recommend changes to save energy on equipment and/or operation. Savings are dependent on the customer implementing recommendations.

**Program Participation Standards:**

1. All commercial/industrial customers on firm rates within Tampa Electric Company's service area are eligible for an audit.
2. Program requirements for participation follow guidelines set by Rule 25-17.003, Florida Administrative Code.
3. When applicable, customers are also qualified for participation in all current commercial programs. Cost effectiveness for these programs is generally determined while at the customer's facility.
4. The charge to the customer per audit is as follows:

<u>Rate Class</u>	<u>Charge</u>
GS	\$15.00
GSD	\$45.00
GSLD	\$75.00

5. Should the need for complex monitoring be necessary to evaluate specific equipment operation, the customer will be notified of the incremental testing costs and agree to the procedure and expense before testing starts.
6. Upon completion of the audit, the customer is mailed a copy of the audit and an audit invoice or, upon request, key management personnel are presented with the results of the audit.
7. No payment processing for conservation measures with this program.
8. No technical specifications on equipment eligibility with this program.

9. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

Savings for the Comprehensive C/I Audit are assumed to be the same as the Free C/I Audit due to the limited number of paid audits completed since the last evaluation.

Demand:     0.06 kW winter  
              0.08 kW summer

Energy:     341 kWh annual

Based on experience, the cost per audit is estimated to be \$2,886.00. There are no rebates or incentives for this program.

**Program Monitoring and Evaluation:**

Tampa Electric Company 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.

PROGRAM NAME: COMPREHENSIVE C/I AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	62,563	2	0.0%	2
2001	63,417	63,417	2	0.0%	4
2002	64,387	64,387	2	0.0%	6
2003	64,975	64,975	2	0.0%	8
2004	66,084	66,084	2	0.0%	10
2005	67,134	67,134	2	0.0%	12
2006	68,134	68,134	2	0.0%	14
2007	69,118	69,118	2	0.0%	16
2008	70,160	70,160	2	0.0%	18
2009	71,168	71,168	2	0.0%	20

\* Previous participation levels not included.

PROGRAM NAME: COMPREHENSIVE C/I AUDIT

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	341	0.060	0.080	0.001	0.000	0.000
2001	341	0.060	0.080	0.001	0.000	0.000
2002	341	0.060	0.080	0.002	0.000	0.000
2003	341	0.060	0.080	0.003	0.000	0.001
2004	341	0.060	0.080	0.003	0.001	0.001
2005	341	0.060	0.080	0.004	0.001	0.001
2006	341	0.060	0.080	0.005	0.001	0.001
2007	341	0.060	0.080	0.005	0.001	0.001
2008	341	0.060	0.080	0.006	0.001	0.001
2009	341	0.060	0.080	0.007	0.001	0.002

PROGRAM NAME: COMPREHENSIVE C/I AUDIT

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	362	0.064	0.086	0.001	0.000	0.000
2001	362	0.064	0.086	0.001	0.000	0.000
2002	362	0.064	0.086	0.002	0.000	0.001
2003	362	0.064	0.086	0.003	0.001	0.001
2004	362	0.064	0.086	0.004	0.001	0.001
2005	362	0.064	0.086	0.004	0.001	0.001
2006	362	0.064	0.086	0.005	0.001	0.001
2007	362	0.064	0.086	0.006	0.001	0.001
2008	362	0.064	0.086	0.007	0.001	0.002
2009	362	0.064	0.086	0.007	0.001	0.002

INPUT DATA - PART 1  
PROGRAM: Paid Commercial/Industrial Audit

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.08 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.08 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	362 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	341 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	2,888.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.806 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1,370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	0.06
(2)* PARTICIPANT NET BENEFITS (NPV) .....	1
(3)* RIM TEST - BENEFIT/COST RATIO .....	0.06

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**Program: Commercial Cooling Program**

**Program Start Date: June 2000 (estimate)**

**Program Description:**

A commercial conservation program that uses an incentive for the installation of high efficiency direct expansion (DX) cooling systems in commercial buildings. The program is aimed at reducing the growth of peak demand and energy by encouraging customers to replace worn out, inefficient cooling equipment with high efficiency equipment that exceeds minimum product manufacturing standards.

**Program Participation Standards:**

1. The commercial building must be a new or existing commercial structure in Tampa Electric Company's service area.
2. Minimum qualifying efficiency rating (ARI rating only) is 10.0 EER.
3. The range of sizes for commercial cooling to be eligible will be from 65,000 to 240,000 Btu's.
4. HVAC contractor or customer submits rebate request form to Tampa Electric Company. The form will be signed certifying that the equipment installed is in accordance with the manufacturer's specifications for sizing, air-flow, refrigerant type and charge.
5. Tampa Electric Company will randomly perform full inspections on a minimum of 10% of rebate requests submitted by each contractor and 100% of rebate requests submitted by customers.
6. Forms not selected for random inspections will have an office review to verify information.
7. No payment will be made until Tampa Electric inspects or reviews rebate requests.
8. Customer rebate - \$25.00 per ton (\$0.002083 per btu)
9. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

### **Program Savings and Costs:**

SRC commercial building data was used for computer simulations used to determine cooling replacement savings. HVAC systems savings are as follows:

<u>Type System</u>	<u>Winter Demand (kW)</u>	<u>Summer Demand (kW)</u>	<u>Annual Energy (kWh)</u>
65K to 135K Btu	.00 kW/ton	.096kW/ton	387 kWh/ton
135K to 240K Btu	.00 kW/ton	.136kW/ton	553 kWh/ton

A 10 ton (120K Btu) unit was used as a representative sample for purposes of estimating program savings and costs.

#### **Costs:**

Incentive cost per participant:	\$250.00
Administrative cost per participant:	\$50.00

#### **Program Monitoring and Evaluation:**

Tampa Electric Company utilized the engineering estimates and computer modeling from the SRC study for the demand and energy savings of the program. Tampa Electric Company 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.

PROGRAM NAME: COMMERCIAL COOLING

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants
			25	0.0%	25
2000	62,563	62,563	30	0.1%	55
2001	63,417	63,417	35	0.1%	90
2002	64,387	64,387	45	0.2%	135
2003	64,975	64,975	50	0.3%	185
2004	66,084	66,084	40	0.3%	225
2005	67,134	67,134	30	0.4%	255
2006	68,134	68,134	25	0.4%	280
2007	69,118	69,118	20	0.4%	300
2008	70,160	70,160	20	0.4%	320
2009	71,168	71,168			

PROGRAM NAME: COMMERCIAL COOLING

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	3,870	0.000	0.960	0.097	0.000	0.024
2001	3,870	0.000	0.960	0.213	0.000	0.053
2002	3,870	0.000	0.960	0.348	0.000	0.086
2003	3,870	0.000	0.960	0.522	0.000	0.130
2004	3,870	0.000	0.960	0.716	0.000	0.178
2005	3,870	0.000	0.960	0.871	0.000	0.216
2006	3,870	0.000	0.960	0.987	0.000	0.245
2007	3,870	0.000	0.960	1.084	0.000	0.269
2008	3,870	0.000	0.960	1.161	0.000	0.288
2009	3,870	0.000	0.960	1.238	0.000	0.307

PROGRAM NAME: COMMERCIAL COOLING

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	4,106	0.000	1.027	0.103	0.000	0.026
2001	4,106	0.000	1.027	0.226	0.000	0.056
2002	4,106	0.000	1.027	0.370	0.000	0.092
2003	4,106	0.000	1.027	0.555	0.000	0.139
2004	4,106	0.000	1.027	0.760	0.000	0.190
2005	4,106	0.000	1.027	0.924	0.000	0.231
2006	4,106	0.000	1.027	1.048	0.000	0.262
2007	4,106	0.000	1.027	1.150	0.000	0.287
2008	4,106	0.000	1.027	1.232	0.000	0.308
2009	4,108	0.000	1.027	1.315	0.000	0.329

INPUT DATA -- PART 1  
PROGRAM: Commercial Cooling

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	0.96 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	0.74 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	4,106 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	3,870 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	15 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	50.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	1,350.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE .....	250.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	288.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE .....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.906 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	0.9

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.26
(2)* PARTICIPANT NET BENEFITS (NPV) .....	37
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.26

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**Program: Commercial Indoor Lighting Program**

**Program Start Date: January 1991**

**Program Description:**

An incentive program for existing commercial facilities to encourage investment in more efficient fluorescent lighting technology within conditioned space. Specifically, this program is designed to: 1) affect a significant number of eligible customers 2) recognize the most probable lighting investment opportunities 3) contribute toward weather sensitive peak demand reduction.

**Program Participation Standards:**

1. Any commercial/industrial customer on firm rates meeting the Company's requirements for participation is eligible.
2. A minimum of 1 kW in lighting reduction must be achieved.
3. Reductions in lighting energy caused only by fixture/lamp removal, operational changes, or by "add-on" energy saving devices are not eligible.
4. Retrofit upgrades shall be permanent installations. Due to the lack of permanency, lamp replacements only do not qualify. Delamping installations will require that reflectors be incorporated unless a high output ballast is used in the installation. Delamping / reflector installations will require the removal of spare ballast and lampholders.
5. Only dedicated ballast and lamp systems will be eligible for rebate (i.e., ballast will be designed to operate one specific type and wattage lamp). Ballasts designed to operate multiple wattage lamp types are not eligible.
6. Compact fluorescent lamps and exit sign replacements / retrofits are excluded from this program.
7. Ballasts must have total harmonic distortion levels of less than 20% as tested by ETL Testing Laboratory.
8. Customer submits rebate request form to Tampa Electric Company with invoice(s) of lighting systems purchase(s).
9. Tampa Electric Company will randomly perform field inspections on a minimum of 10% of rebate requests submitted.

10. Forms not selected for field inspections will have an office review to verify pre and post installation consistency. Significant deviations will initiate a field inspection.
11. No payment will be made until Tampa Electric inspects or reviews rebate requests.
12. Customer rebate is \$0.10 per watt reduction for replacing current lighting system with more efficient lighting system within conditioned space.
13. The reporting requirements for this program will follow Rule 25-17.0021 5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

Based on historical participation, savings per customer is estimated at 32.92/10.6 kW for summer and winter respectively and 138,058 kWh per year energy savings based on an average of 430 fixtures. These calculated values include the effects of the lighting reduction on the space cooling and heating equipment.

Incentive costs per customer based on 430 fixtures and \$.10 per watt are \$2,675.00 for replacing a standard fluorescent lighting system with a more efficient fluorescent lighting system. Administrative costs are \$158.00 per customer.

**Program Monitoring and Evaluation:**

Data necessary to substantiate the kW/kWh savings and demand coincidence will be contained on the customer's rebate analysis worksheet that accompanies the rebate application. Sampling with data loggers to confirm operating hours and kWh estimates may be used.

Tampa Electric Company 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.

PROGRAM NAME: COMMERCIAL INDOOR LIGHTING PROGRAM

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	61,699	100	0.2%	100
2001	63,417	62,353	100	0.3%	200
2002	64,387	63,023	100	0.5%	300
2003	64,975	63,216	95	0.6%	395
2004	66,084	63,840	90	0.8%	485
2005	67,134	64,315	90	0.9%	575
2006	68,134	64,660	80	1.0%	655
2007	69,118	64,909	80	1.1%	735
2008	70,160	65,146	70	1.2%	805
2009	71,168	65,284	65	1.3%	870

\* Previous participation levels not included.

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**PROGRAM NAME: COMMERCIAL INDOOR LIGHTING PROGRAM**

<b>AT THE METER</b>						
<b>Year</b>	<b>Per Customer kWh Reduction</b>	<b>Per Customer Winter kW Reduction</b>	<b>Per Customer Summer kW Reduction</b>	<b>Total Annual GWh Reduction</b>	<b>Total Annual Winter mW Reduction</b>	<b>Total Annual Summer mW Reduction</b>
2000	138,058	10.600	32.920	13.806	1.060	3.292
2001	138,058	10.600	32.920	27.612	2.120	6.584
2002	138,058	10.600	32.920	41.417	3.180	9.876
2003	138,058	10.600	32.920	54.533	4.187	13.003
2004	138,058	10.600	32.920	66.958	5.141	15.966
2005	138,058	10.600	32.920	79.383	6.095	18.929
2006	138,058	10.600	32.920	90.428	6.943	21.563
2007	138,058	10.600	32.920	101.473	7.791	24.196
2008	138,058	10.600	32.920	111.137	8.533	26.501
2009	138,058	10.600	32.920	120.110	9.222	28.640

PROGRAM NAME: COMMERCIAL INDOOR LIGHTING PROGRAM

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	146,558	11.337	35.209	14.656	1.134	3.521
2001	146,558	11.337	35.209	29.312	2.267	7.042
2002	146,558	11.337	35.209	43.968	3.401	10.563
2003	146,558	11.337	35.209	57.891	4.478	13.907
2004	146,558	11.337	35.209	71.081	5.498	17.076
2005	146,558	11.337	35.209	84.271	6.519	20.245
2006	146,558	11.337	35.209	95.996	7.426	23.062
2007	146,558	11.337	35.209	107.720	8.333	25.878
2008	146,558	11.337	35.209	117.980	9.126	28.343
2009	146,558	11.337	35.209	127.506	9.863	30.631

INPUT DATA -- PART 1  
PROGRAM: Commercial Indoor Lighting

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	32.82 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	28.03 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	146,558 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER .....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	138,058 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	15 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER .....	158.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	20,210.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	8.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE .....	2,675.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT .....	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE .....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT .....	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.806 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	1.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	2.3
(2)* PARTICIPANT NET BENEFITS (NPV) .....	9,638
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.10

80

**Program: Commercial Load Management**

**Program Start Date: January 1988**

**Program Description:**

Tampa Electric's Commercial Load Management Program is intended to complement the residential Prime Time program and help alter our system load curve by reducing summer and winter demand peaks.

Large loads such as walk-in freezers are interrupted for up to three hours by radio controlled switches similar to those used in the residential program. Commercial air conditioning equipment is cycled during summer control periods. Monthly incentive credits are paid to customers participating in this program.

**Program Participation Standards:**

1. Cyclic air conditioning control is applicable to any customer served under rate schedule GS, GSD, and GSLD located in Tampa Electric's service area who sign a tariff agreement for load management service.
2. Extended control is applicable to any customer under rate schedule GS, GST, GSD, GSDT, GSLD and GSLDT located in Tampa Electric's service area who sign a tariff agreement for load management service.
3. Cyclic incentive is \$1.00 per kW demand per summer month for all appliances on program and is applied to the monthly bill.
4. Extended incentive is \$3.00 per kW demand per month for all appliances on program and is applied to the monthly bill.
5. Winter is November through March. Summer is April through October.
6. The company's prime use periods for normal control are as follows:  
Winter - 6:00 A.M. to 11:00 A.M. and 6:00 P.M. to 10:00 P.M.  
Summer - 2:00 P.M. to 10:00 P.M.
7. The initial credit is determined by the inspection date.
8. Tampa Electric Company will perform inspections on all installations.
9. Cyclic control is available only for the summer season.
10. All appliances controlled must be electric.



**PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - CYCLIC**

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	62,547	2	0.0%	2
2001	63,417	63,399	2	0.0%	4
2002	64,387	64,367	2	0.0%	6
2003	64,975	64,953	2	0.0%	8
2004	66,084	66,060	2	0.0%	10
2005	67,134	67,108	2	0.0%	12
2006	68,134	68,106	2	0.0%	14
2007	69,118	69,088	2	0.0%	16
2008	70,160	70,128	2	0.0%	18
2009	71,168	71,134	2	0.0%	20

\* Previous participation levels not included.

PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - CYCLIC

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	0.000	31.200	0.000	0.000	0.062
2001	0	0.000	31.200	0.000	0.000	0.125
2002	0	0.000	31.200	0.000	0.000	0.187
2003	0	0.000	31.200	0.000	0.000	0.250
2004	0	0.000	31.200	0.000	0.000	0.312
2005	0	0.000	31.200	0.000	0.000	0.374
2006	0	0.000	31.200	0.000	0.000	0.437
2007	0	0.000	31.200	0.000	0.000	0.499
2008	0	0.000	31.200	0.000	0.000	0.562
2009	0	0.000	31.200	0.000	0.000	0.624

PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - CYCLIC

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	0.000	33.369	0.000	0.000	0.067
2001	0	0.000	33.369	0.000	0.000	0.133
2002	0	0.000	33.369	0.000	0.000	0.200
2003	0	0.000	33.369	0.000	0.000	0.267
2004	0	0.000	33.369	0.000	0.000	0.334
2005	0	0.000	33.369	0.000	0.000	0.400
2006	0	0.000	33.369	0.000	0.000	0.467
2007	0	0.000	33.369	0.000	0.000	0.534
2008	0	0.000	33.369	0.000	0.000	0.601
2009	0	0.000	33.369	0.000	0.000	0.667

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	31.20 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	24.18 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	8.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	0 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	0 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(7) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	410.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	13.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	437.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	288.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	0.00 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.00 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.906 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	0.0

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	45.90
(2)* PARTICIPANT NET BENEFITS (NPV) .....	17
(3)* RIM TEST - BENEFIT/COST RATIO .....	5.31

PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - EXTENDED

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	62,559	1	0.0%	1
2001	63,417	63,412	1	0.0%	2
2002	64,387	64,381	1	0.0%	3
2003	64,975	64,968	1	0.0%	4
2004	66,084	66,076	1	0.0%	5
2005	67,134	67,125	1	0.0%	6
2006	68,134	68,124	1	0.0%	7
2007	69,118	69,107	1	0.0%	8
2008	70,160	70,148	1	0.0%	9
2009	71,168	71,155	1	0.0%	10

\* Previous participation levels not included.

PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - EXTENDED

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	59.980	91.610	0.000	0.060	0.092
2001	0	59.980	91.610	0.000	0.120	0.183
2002	0	59.980	91.610	0.000	0.180	0.275
2003	0	59.980	91.610	0.000	0.240	0.366
2004	0	59.980	91.610	0.000	0.300	0.458
2005	0	59.980	91.610	0.000	0.360	0.550
2006	0	59.980	91.610	0.000	0.420	0.641
2007	0	59.980	91.610	0.000	0.480	0.733
2008	0	59.980	91.610	0.000	0.540	0.824
2009	0	59.980	91.610	0.000	0.600	0.916

PROGRAM NAME: COMMERCIAL LOAD MANAGEMENT - EXTENDED

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	0	64.150	97.979	0.000	0.064	0.098
2001	0	64.150	97.979	0.000	0.128	0.196
2002	0	64.150	97.979	0.000	0.192	0.294
2003	0	64.150	97.979	0.000	0.257	0.392
2004	0	64.150	97.979	0.000	0.321	0.490
2005	0	64.150	97.979	0.000	0.385	0.588
2006	0	64.150	97.979	0.000	0.449	0.686
2007	0	64.150	97.979	0.000	0.513	0.784
2008	0	64.150	97.979	0.000	0.577	0.882
2009	0	64.150	97.979	0.000	0.641	0.980

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	91.61 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	90.92 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER ....	0 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	0 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	1,767.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	306.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	2,634.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	266.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	0.00 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.00 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	0.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	17.13
(2)* PARTICIPANT NET BENEFITS (NPV) .....	52
(3)* RIM TEST - BENEFIT/COST RATIO .....	3.07

06

**Program: Commercial Standby Generator**

**Program Start Date: January 1991**

**Program Description:**

This program is designed to utilize the emergency generation capacity of commercial/industrial facilities in order to reduce weather sensitive peak demand. Tampa Electric provides the participating customers a thirty minute notice that their generation will be required. This allows customers time to start generators and arrange for orderly transfer of load. Tampa Electric meters and issues monthly credits for that portion of the generator's output that could serve normal building load after the notification time. Normal building load is defined as load (type, amount, and time duration) that would have been served by Tampa Electric if the emergency generator did not operate. Under no circumstances will the generator deliver power to Tampa Electric's grid.

**Program Participation Standards:**

1. Applicable to any commercial/industrial customer on a firm rate schedule with an on-site emergency generator and in Tampa Electric's service area. The normal building load (standby) that is served (or can be served) by the generator must meet the conditions listed below.
  - Minimum of 25 kW demand
  - Minimum of 50% annual load factor during Tampa Electric's peak hours
  - The generator installation and operation comply with all applicable regulations
2. Customers are responsible for wiring changes and controls related to their generator(s).
3. The monthly incentive is \$3.00 per kW for average transferable demand of a customer's load to a standby generator(s).
4. The initial credit will be determined by Tampa Electric in the field at the customer's site by transferring the customer's normal load to the standby generator(s).
5. The customer response time for load transfer to the generator(s) is a maximum of 30 minutes from time of notification.
6. Winter is November through March. Summer is April through October.

7. The company's prime use periods for normal control are as follows:  
Winter - 6:00 A.M. to 11:00 A.M. and 6:00 P.M. to 10:00 P.M.  
Summer - 2:00 P.M. to 10:00 P.M.
8. Tampa Electric Company will perform inspections on all installations.
9. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

**Program Savings and Costs:**

Demand reduction for this program is achieved through the orderly load transfer to the customer's generator(s). Tampa Electric provides notification equipment and, when necessary, special metering to identify the transferred load. The anticipated generator operation is 100 hours per year. Demand and costs estimates are based on current customer averages. Energy is based on the anticipated generator operation per year.

**Demand:**

The average demand reduction is as follows:

Summer: 368 kW per customer  
Winter: 399 kW per customer

**Energy:**

37,270 kWh per customer

**Costs:**

Costs are based on present per customer averages.

Administration & Installation : \$4,302  
Incentives: \$13,712  
Maintenance: \$942

**Program Monitoring and Evaluation:**

Tampa Electric Company 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.

Continued from Sheet No. 3.201

3. The Company shall not be required to install its equipment if the installation cannot be economically justified. Excessive installation costs, low (below 50%) load factor of transferable load, or inadequate availability factor of standby generator(s) may preclude customers from qualifying for rider.
4. If the Company determines that the customer no longer complies with the minimum program requirements, the Company has the right to remove its equipment and discontinue the credits.
5. If the Company finds tampering with its equipment, the credit may be discontinued and all previous credits may be billed to the customer unless a date of tampering can be established.
6. The Company may refuse or discontinue service if the installation or the operation does not comply with applicable federal, state or local codes and rules; or insurance or bonding carrier requirements.
7. The Company will not call for the transfer of customer load to the standby generator(s) included in this program during "non-prime hours" (as defined in the Notification Schedule) except ~~for emergencies on the Company's system or~~ during statewide power emergencies.
8. The Company shall require a participating customer to execute an agreement which details responsibilities of the customer and Company and other necessary clauses.
9. If the customer fails to participate in the standby generator controls for any three months of a twelve consecutive month period, a one year termination may occur. The one year period would commence in the month subsequent to the third month of failure to transfer load.

ISSUED BY: J. B. Ramil, President

DATE EFFECTIVE: ~~September 22, 1998~~

Continued from Sheet No. 3.201

3. The Company shall not be required to install its equipment if the installation cannot be economically justified. Excessive installation costs, low (below 50%) load factor of transferable load, or inadequate availability factor of standby generator(s) may preclude customers from qualifying for rider.
4. If the Company determines that the customer no longer complies with the minimum program requirements, the Company has the right to remove its equipment and discontinue the credits.
5. If the Company finds tampering with its equipment, the credit may be discontinued and all previous credits may be billed to the customer unless a date of tampering can be established.
6. The Company may refuse or discontinue service if the installation or the operation does not comply with applicable federal, state or local codes and rules; or insurance or bonding carrier requirements.
7. The Company will not call for the transfer of customer load to the standby generator(s) included in this program during "non-prime hours" (as defined in the Notification Schedule) except for emergencies on the Company's system or during statewide power emergencies.
8. The Company shall require a participating customer to execute an agreement which details responsibilities of the customer and Company and other necessary clauses.
9. If the customer fails to participate in the standby generator controls for any three months of a twelve consecutive month period, a one year termination may occur. The one year period would commence in the month subsequent to the third month of failure to transfer load.

**ISSUED BY: J. B. Ramil, President**

**DATE EFFECTIVE:**

PROGRAM NAME: STANDBY GENERATOR

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	253	2	0.8%	2
2001	63,417	255	2	1.6%	4
2002	64,387	258	2	2.3%	6
2003	64,975	259	2	3.1%	8
2004	66,084	262	2	3.8%	10
2005	67,134	265	2	4.5%	12
2006	68,134	268	2	5.2%	14
2007	69,118	270	2	5.9%	16
2008	70,160	274	1	6.2%	17
2009	71,168	278	1	6.5%	18

\* Previous participation levels not included.

PROGRAM NAME: STANDBY GENERATOR

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	37,270	399.000	368.000	0.075	0.798	0.736
2001	37,270	399.000	368.000	0.149	1.596	1.472
2002	37,270	399.000	368.000	0.224	2.394	2.208
2003	37,270	399.000	368.000	0.298	3.192	2.944
2004	37,270	399.000	368.000	0.373	3.990	3.680
2005	37,270	399.000	368.000	0.447	4.788	4.416
2006	37,270	399.000	368.000	0.522	5.586	5.152
2007	37,270	399.000	368.000	0.596	6.384	5.888
2008	37,270	399.000	368.000	0.634	6.783	6.256
2009	37,270	399.000	368.000	0.671	7.182	6.624

PROGRAM NAME: STANDBY GENERATOR

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	39,565	426.738	393.583	0.079	0.853	0.787
2001	39,565	426.738	393.583	0.158	1.707	1.574
2002	39,565	426.738	393.583	0.237	2.560	2.361
2003	39,565	426.738	393.583	0.317	3.414	3.149
2004	39,565	426.738	393.583	0.396	4.267	3.936
2005	39,565	426.738	393.583	0.475	5.121	4.723
2006	39,565	426.738	393.583	0.554	5.974	5.510
2007	39,565	426.738	393.583	0.633	6.828	6.297
2008	39,565	426.738	393.583	0.673	7.255	6.691
2009	39,565	426.738	393.583	0.712	7.681	7.084

INPUT DATA -- PART 1  
PROGRAM: Standby Generator

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	388.00 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	417.73 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	39,565 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	37,270 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	30 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.8033
(5) K FACTOR FOR T & D .....	1.8033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	0

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	4,302.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	942.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	0.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	2,852.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	0.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	13,712.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	288.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	0.00 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.00 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.908 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	0.0

\*\*\*CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	8.76
(2)* PARTICIPANT NET BENEFITS (NPV) .....	480
(3)* RIM TEST - BENEFIT/COST RATIO .....	2.98

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**Program: Conservation Value Program**

**Program Start Date: April 1991**

**Program Description:**

This is an incentive program available for all commercial/industrial customers on firm rates to recognize and encourage investments in demand shifting or demand reduction measures. Measures funded in this program will not be covered under other Tampa Electric commercial/industrial conservation programs. Candidates are identified through the energy audit, or their engineering consultants can submit proposals for funding which offer energy reduction during weather sensitive peak times.

**Program Participation Standards:**

1. All commercial/industrial customers on firm rates within Tampa Electric Company's service area are eligible.
2. Average kW is defined as the total kWh used in the seasonal period peak divided by the total peak hours in the season.
3. An average minimum 5 kW summer and / or winter savings is required.
4. Measures must comply with all applicable codes.
5. For Tampa Electric Company to consider measures for potential program participation, the customer must submit their proposal along with a preliminary engineering analysis with relevant demand and energy calculations prior to measure installation. The engineering analysis may require a professional seal.
6. Measure eligibility:
  - a. **Eligible Measures** - Most commercially available and accepted demand reduction technologies are eligible for consideration including, but not limited to, renewable energy sources, highly efficient chillers (including early HVAC retirement in the context of CFC phase out requirements) and motors, refrigeration measures, thermal energy storage systems in lieu of conventional cooling systems, lighting measures in unconditioned space, water heating measures and other measures not covered by Tampa Electric approved conservation programs.
  - b. **Ineligible Measures** - This would include measures potentially in conflict with environmental regulations (CFCs, water conservation, indoor air quality), on-site generation, emergency generation, and cogeneration. If a measure qualifies for two rebates (Tampa Electric

and another utility company), Tampa Electric will not pay its rebate so that a double payment is avoided. Additionally, customers on non-firm rates and those that make operational (behavioral) modifications are not eligible.

- c. Any measure undergoing R & D evaluations is not eligible.
- 7. The baseline for measure evaluation will be the existing equipment efficiency unless the measure is covered by a minimum product standard or code for efficiency.
- 8. Customers simple payback period including incentives shall not be less than two years.
- 9. Measures producing an average demand reduction of 50 kW or less which have demonstrated 90 days of successful continued operation will be issued a rebate after final inspection.
- 10. Measures producing an average demand reduction greater than 50 kW which have demonstrated 90 days of successful continued operation will receive 50% of the calculated rebate amount after final inspection. The remaining incentive will be dispensed at the end of one year following field inspection for successful operation.
- 11. Incentives - \$200.00/avg. kW reduction is the maximum amount to be paid based on savings from a baseline case. Tampa Electric Company will determine the incentive qualification by using the FPSC cost-effectiveness tests described in Rule 25-17.008, Florida Administrative Code. A benefit-to-cost ratio of at least 1.0 will be used.
  - a. Summer peak is identified as 12-9 PM, M-F, April through October.
  - b. Winter peak is identified as 6-10 AM and 6-10 PM, M-F, November through March.
- 12. The reporting requirements for this program will follow Rule 25-17.0021 (5), Florida Administrative Code. Additionally, program expenses will be identified in the ECCR True-up and Projection filings.

### **Program Savings and Costs:**

Each customer proposal will be evaluated and the rebate adjusted to maintain a benefit to cost ratio greater than 1.0. Applicable rebates and disbursements schedules are defined above. Evaluation and administrative costs vary by measure and are included in the cost-effectiveness analysis.

A specific cost-effectiveness calculation will be unique for each measure a customer implements. However, a representative participation with savings of 36.76 kW on summer peak and 11.56 kW on winter peak was used for this program's cost effectiveness run.

### **Program Monitoring and Evaluation:**

The measures evaluated in this program are specifically unique to each participant. Because of this, every Conservation Value participant is evaluated on a case by case basis, including verification of savings.

Customers and/or their consultants are responsible for demand and energy savings estimates. Tampa Electric Company will advise the customer of any special metering requirements when conservation measure(s) are submitted for review. If the company does require special metering, the customer will include such provision in the design of the measure. The company may choose to furnish and install metering equipment. The customer may also be requested to assist in data collection for complex measures.

PROGRAM NAME: CONSERVATION VALUE

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration level %	Cumulative Number of Program Participants*
2000	62,563	3,128	3	0.1%	3
2001	63,417	3,171	3	0.2%	6
2002	64,387	3,219	3	0.3%	9
2003	64,975	3,249	3	0.4%	12
2004	66,084	3,304	3	0.5%	15
2005	67,134	3,357	3	0.5%	18
2006	68,134	3,407	3	0.6%	21
2007	69,118	3,456	3	0.7%	24
2008	70,160	3,508	3	0.8%	27
2009	71,168	3,558	3	0.8%	30

\* Previous participation levels not included.

PROGRAM NAME: CONSERVATION VALUE

AT THE METER						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	111,887	11.560	36.760	0.336	0.035	0.110
2001	111,887	11.560	36.760	0.671	0.069	0.221
2002	111,887	11.560	36.760	1.007	0.104	0.331
2003	111,887	11.560	36.760	1.343	0.139	0.441
2004	111,887	11.560	36.760	1.678	0.173	0.551
2005	111,887	11.560	36.760	2.014	0.208	0.662
2006	111,887	11.560	36.760	2.350	0.243	0.772
2007	111,887	11.560	36.760	2.685	0.277	0.882
2008	111,887	11.560	36.760	3.021	0.312	0.993
2009	111,887	11.560	36.760	3.357	0.347	1.103

PROGRAM NAME: CONSERVATION VALUE

AT THE GENERATOR						
Year	Per Customer kWh Reduction	Per Customer Winter kW Reduction	Per Customer Summer kW Reduction	Total Annual GWh Reduction	Total Annual Winter mW Reduction	Total Annual Summer mW Reduction
2000	118,776	12.364	39.316	0.356	0.037	0.118
2001	118,776	12.364	39.316	0.713	0.074	0.236
2002	118,776	12.364	39.316	1.069	0.111	0.354
2003	118,776	12.364	39.316	1.425	0.148	0.472
2004	118,776	12.364	39.316	1.782	0.185	0.590
2005	118,776	12.364	39.316	2.138	0.223	0.708
2006	118,776	12.364	39.316	2.494	0.260	0.826
2007	118,776	12.364	39.316	2.851	0.297	0.944
2008	118,776	12.364	39.316	3.207	0.334	1.062
2009	118,776	12.364	39.316	3.563	0.371	1.179

I. PROGRAM DEMAND SAVINGS AND LINE LOSSES

(1) CUSTOMER KW REDUCTION AT THE METER .....	36.76 KW /CUST
(2) GENERATOR KW REDUCTION PER CUSTOMER .....	32.33 KW GEN/CUST
(3) KW LINE LOSS PERCENTAGE .....	6.5 %
(4) GENERATION KWH REDUCTION PER CUSTOMER .....	118,776 KWH/CUST/YR
(5) KWH LINE LOSS PERCENTAGE .....	5.8 %
(6) GROUP LINE LOSS MULTIPLIER .....	1.0000
(7) CUSTOMER KWH PROGRAM INCREASE AT METER ....	0.0 KWH/CUST/YR
(8)* CUSTOMER KWH REDUCTION AT METER .....	111,867 KWH/CUST/YR

II. ECONOMIC LIFE & K FACTORS

(1) STUDY PERIOD FOR CONSERVATION PROGRAM .....	20 YEARS
(2) GENERATOR ECONOMIC LIFE .....	30 YEARS
(3) T & D ECONOMIC LIFE .....	30 YEARS
(4) K FACTOR FOR GENERATION .....	1.6033
(5) K FACTOR FOR T & D .....	1.6033
(6)* SWITCH REV REQ(0) OR VAL-OF-DEF (1) .....	1

III. UTILITY & CUSTOMER COSTS

(1) UTILITY NONRECURRING COST PER CUSTOMER ....	1,200.00 \$/CUST
(2) UTILITY RECURRING COST PER CUSTOMER .....	0.00 \$/CUST/YR
(3) UTILITY COST ESCALATION RATE .....	2.7 %
(4) CUSTOMER EQUIPMENT COST .....	45,050.00 \$/CUST
(5) CUSTOMER EQUIPMENT ESCALATION RATE .....	2.7 %
(6) CUSTOMER O & M COST .....	0.00 \$/CUST/YR
(7) CUSTOMER O & M ESCALATION RATE .....	2.7 %
(8)* CUSTOMER TAX CREDIT PER INSTALLATION .....	0.00 \$/CUST
(9)* CUSTOMER TAX CREDIT ESCALATION RATE .....	0.0 %
(10)* INCREASED SUPPLY COSTS .....	0.00 \$/CUST/YR
(11)* SUPPLY COSTS ESCALATION RATE .....	0.0 %
(12)* UTILITY DISCOUNT RATE .....	9.37%
(13)* UTILITY AFUDC RATE .....	7.79%
(14)* UTILITY NON RECURRING REBATE/INCENTIVE ...	5,250.00 \$/CUST
(15)* UTILITY RECURRING REBATE/INCENTIVE .....	0.00 \$/CUST/YR
(16)* UTILITY REBATE/INCENTIVE ESCAL RATE .....	0.0 %

\* SUPPLEMENTAL INFORMATION NOT SPECIFIED IN WORKBOOK

IV. AVOIDED GENERATOR, TRANS. AND DIST. COSTS

(1) BASE YEAR .....	2000
(2) IN-SERVICE YEAR FOR AVOIDED GENERATING UNIT	2002
(3) IN-SERVICE YEAR FOR AVOIDED T & D .....	2002
(4) BASE YEAR AVOIDED GENERATING UNIT COST .....	286.00 \$/KW
(5) BASE YEAR AVOIDED TRANSMISSION COST .....	5.36 \$/KW
(6) BASE YEAR DISTRIBUTION COST .....	0.00 \$/KW
(7) GEN, TRAN, & DIST COST ESCALATION RATE ....	2.4 %
(8) GENERATOR FIXED O & M COST .....	5.10 \$/KW/YR
(9) GENERATOR FIXED O&M ESCALATION RATE .....	2.7 %
(10) TRANSMISSION FIXED O & M COST .....	0.00 \$/KW/YR
(11) DISTRIBUTION FIXED O & M COST .....	0.01 \$/KW/YR
(12) T&D FIXED O&M ESCALATION RATE .....	2.7 %
(13) AVOIDED GEN UNIT VARIABLE O & M COSTS .....	0.257 CENTS/KWH
(14) GENERATOR VARIABLE O&M COST ESCALATION RAT	2.7 %
(15) GENERATOR CAPACITY FACTOR .....	13.2 %
(16) AVOIDED GENERATING UNIT FUEL COST .....	3.806 CENTS/KWH
(17) AVOIDED GEN UNIT FUEL ESCALATION RATE .....	3.27 %
(18)* AVOIDED PURCHASE CAPACITY COST PER KW .....	0.00 \$/KW/YR
(19)* CAPACITY COST ESCALATION RATE .....	0.0 %

V. NON-FUEL ENERGY AND DEMAND CHARGES

(1) NON-FUEL COST IN CUSTOMER BILL .....	1.370 CENTS/KWH
(2) NON-FUEL ESCALATION RATE .....	1.0 %
(3) CUSTOMER DEMAND CHARGE PER KW .....	7.25 \$/KW/MO
(4) DEMAND CHARGE ESCALATION RATE .....	1.0 %
(5)* DIVERSITY and ANNUAL DEMAND ADJUSTMENT FACTOR FOR CUSTOMER BILL .....	0.9

\*\*\* CALCULATED BENEFITS AND COSTS \*\*\*

(1)* TRC TEST - BENEFIT/COST RATIO .....	1.59
(2)* PARTICIPANT NET BENEFITS (NPV) .....	59
(3)* RIM TEST - BENEFIT/COST RATIO .....	1.48

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**Program: Conservation Research and Development (R&D)**

**Program Start Date: June 2000 (estimate)**

**Program Description:**

This program is in response to Rule-17.001 (5) (f), Florida Administrative Code, requiring that aggressive research and development projects be "... an ongoing part of the practice of every well managed utility's programs." It is also support for FPSC Order No. 22176 dated November 14, 1989, requiring IOU's to "pursue research, development, and demonstration projects designed to promote energy efficiency and conservation." R&D activity will be conducted on proposed measures to determine the impact to the company and its ratepayers and will occur at customer premises, Tampa Electric facilities or at independent test sites. Tampa Electric will report program progress through the annual ECCR True-up filing.

**Program Participation Standards:**

Measures for research and testing can be residential or commercial in nature and may be either new in the market or existing measures which meet the criteria below.

- The proposed measure has the potential to affect Tampa Electric or its ratepayers.
- Sufficient data is not currently available to evaluate the impact of the proposed measure.
- Data on the proposed measure is available, but is not relevant to central Florida climate.

**Eligible Measures:**

Most technology measures are eligible for consideration including renewable and green energy sources, energy efficient construction, heat recovery, space conditioning equipment, refrigeration, cooking, fuel cells, ventilation, pumps and fan efficiency, thermal energy storage systems, water heating, etc.

**Measures currently under consideration for R&D projects are:**

**Residential:**

- Next generation of heat pump water heaters
- Radiant barriers and their effects on duct heat gains
- Residential desiccants

**Commercial:**

- Radiant barriers
- Adaptive water heating controls
- Condenser controls
- Compressed air systems
- Liquid desiccants

In addition, Tampa Electric Company will engage in solar PV research to evaluate one or more of the topics below.

- The development of a thin film solar cell PV construction material designed to maintain PV efficiency while decreasing PV production costs.
- The price point at which a customer would be willing to install PV arrays on a residence.
- Another topic agreeable to both Tampa Electric Company and LEAF as stipulated in their agreement.

**Program Costs:**

Program costs are estimated at \$150,000 per year for a five year period. Expenses for a given year may exceed \$150,000, however, total program cost shall not exceed \$750,000 for the five year period. For individual R&D projects estimated to be greater than \$50,000 in cost, Tampa Electric will seek administrative approval from the FPSC Staff prior to proceeding with the evaluation.

**Program Monitoring and Evaluation:**

Data collected, shall be in support of the FPSC cost effectiveness methodology, specifically, input data for conducting RIM, TRC, and Participant Tests. Positive measure evaluation results will support future ECCR program filings by the company.

**Program: Cogeneration**

**Program Start Date: January 1981**

**Program Description:**

Cogeneration for Tampa Electric Company is a program administered by a professional team experienced in working with cogenerators. The group manages functions related to coordination with QFs including negotiations, agreements and informational requests; functions related to governmental regulatory and legislative bodies; research, development, data acquisition and analysis; economic evaluations of existing and proposed QFs; as well as the preparation of Tampa Electric's Annual Twenty-Year Cogeneration Forecast.

The Cogeneration team leads Tampa Electric's involvement with prospective cogeneration projects that may be developed within our retail service area. This involvement includes: developing and providing interconnection cost estimates; determining appropriate relaying schemes; establishing operation and maintenance procedures; and negotiating purchase power and transmission service agreement when appropriate

**Program Activities:**

A detailed description of the activities conducted under the Cogeneration program is listed below:

- Plan, develop and assist in administering and implementing corporate and FPSC policies and regulations in areas related to cogeneration activities.
- Provide consultation, data and other specific information on a daily basis to cogeneration customers, consultants, industry executives, FPSC and other governmental agencies, developers, other utilities and various media publications regarding cogeneration policies, FPSC rules, avoided cost rates and other related criteria.
- Prepare testimony and represent Tampa Electric at hearings, rulemaking and workshop sessions, and specific tariff activities before the FPSC and other governmental agencies.
- Conduct research and development, data acquisition and economic analyses that provide reliable criteria upon which to evaluate the feasibility of cogeneration and small power production facilities.

- Prepare and issue monthly correspondence to cogeneration customers which includes a payment statement, hour-by-hour energy payment rates for preliminary and final energy payments, identification of hourly differences between preliminary and final energy payments and early capacity payment accrual accounts.
- Obtain appropriate initial and subsequent renewal Certificates of Insurance for each cogeneration customer interconnected with Tampa Electric Company, and for each cogeneration customer under contract with the company, sufficient to cover the customers liability with the company.
- Prepare monthly and quarterly reports of cogeneration activities, avoided costs, etc., for submittal to the FPSC.
- Review monthly O&M bills for a customer's substation and transmission interconnections with the company.
- Determine if each customer's monthly contract standby demand level remains appropriate, and when ratcheted, the new level does not exceed the customer's generator capacity.
- Direct communications and develop the negotiations and final contractual language for interconnection, operating and transmission service agreements with cogeneration and small power production facilities.
- Assist the company's engineering and maintenance personnel with cogeneration maintenance procedures and cost estimates.
- Coordinate all cogeneration-related activities with other company departments.
- Develop the company's forecast of annual sales to cogeneration customers.
- Serve as a resource for budgeting non-fuel revenues from cogeneration customers for transmission service transactions, O&M on interconnected facilities, and standby service from the company.
- Prepare and distribute the company's Twenty-Year Cogeneration Forecast.

**Projected Expenditures:**

Projected recoverable expenses for 2000 are estimated to be \$362,000. The preponderance of these expenses are allocated to payroll and benefits. Tampa electric expects overall program expenses to escalate at three to five percent annually.