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Progress Energy

Writer's Direct Dial No. 727-820-5184

JOHN T. BURNETT
Associate General Counsel - Florida

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VIA HAND DELIVERY

January 20, 2006

Blanca S. Bayó
Director, Division of Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Blvd.
Tallahassee, Florida 32399-0850

Re: Progress Energy Florida's Petition for approval of modifications to Demand-Side Management programs; Docket No. 060048-EG

Dear Ms. Bayó:

Pursuant to Rule 25-17.015(4), F.A.C., enclosed for filing on behalf of Progress Energy Florida, Inc., (PEF) are the original and seven (7) copies of its petition for approval of modifications to certain Demand-Side Management programs.

Please acknowledge your receipt and filing of the above on the enclosed copy of this letter and return same to me. Thank you for your assistance in this matter.

Sincerely,

John T. Burnett LMS

John T. Burnett

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JTB:lms
Enclosures

Progress Energy Florida, Inc.
106 E. College Avenue
Suite 800
Tallahassee, FL 32301

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Petition of Progress Energy Florida for Approval of Modifications to Certain Demand Side Management Programs

Docket No. 060048-EG

Submitted for filing:
Date: January 20, 2006

PETITION

Progress Energy Florida, Inc. ("PEF" or "the Company"), pursuant to Rule 25-17.015(4), F.A.C., hereby petitions the Florida Public Service Commission ("the Commission") for approval of modifications to the following Demand-Side Management ("DSM") programs:

- Home Energy Improvement
- Residential New Construction
- Low Income Weatherization
- Better Business
- Commercial/Industrial New Construction.

In support hereof, PEF states as follows:

Introduction

1. PEF is a public utility subject to the regulatory jurisdiction of the Commission pursuant to Chapter 366, Florida Statutes. The Company's principal place of business is located at 100 Central Avenue, St. Petersburg, Florida 33701.

2. All notices, pleadings, and correspondence required to be served on the petitioner should be directed to:

John T. Burnett, Esquire
Post Office Box 14042
St. Petersburg, FL 33733-4042
Facsimile: (727) 820-5249

Email: john.burnett@pgnmail.com

For express private courier deliveries, the street address and zip code in paragraph 1 above should be used.

3. By Order No. PSC-04-0769-PAA-EG, issued August 9, 2004 in Docket No. 040031-EG, the Commission approved the Company's DSM Plan for meeting its conservation goals established in that docket. The Plan consists of a portfolio of individual DSM programs which include:

RESIDENTIAL PROGRAMS	COMMERCIAL/INDUSTRIAL PROGRAMS
Home Energy Improvement	Better Business
New Construction	C/I New Construction
Low Income Weatherization Assistance	

4. Changing conditions and new information available to PEF since these programs were approved have led the Company to develop the modifications proposed by this petition as a means to increase participation in these programs. PEF would like to test the potential to grow participation by increasing incentives for measures in the above programs. Additionally, PEF is researching additional measures and new program offerings that will further increase participation and interest in DSM programs. Summaries of the modifications that PEF is proposing in this Petition are contained in the paragraphs that follow.

Residential Home Energy Improvement Program

5. PEF's Home Energy Improvement Program is designed to increase the energy efficiency of existing homes. Under PEF's current program, however,

incentives have not increased in over five years, while material and labor costs have risen significantly. PEF proposes to modify the Residential Home Energy Improvement Program to increase the incentives for the duct and insulation measures to enhance participation levels. Additionally, PEF intends to market the duct repair measure by providing additional incentives in the off-season to further motivate participation while improving customer satisfaction.

6. As consumers are faced with rising costs in practically every area of their lives, it is necessary to increase customer motivation to make energy improvements under plans such as PEF's Home Energy Improvement Program. Accordingly, the changes proposed to this program will help PEF meet the DSM goals stated in its DSM Plan that has previously been approved by this Commission.

Residential New Construction Program

7. The Residential New Construction Program provides incentives and education designed to encourage builders to exceed building codes in ways that increase energy efficiency. PEF proposes to modify the Residential New Construction Program by increasing the incentives for Level 2 attainment. New codes, SEER ratings, and efficiency requirements are expected to impact this segment as building costs continue to increase. As builders are faced with rising construction costs, it is necessary to increase their motivation to include efficiency enhancements when building a new home for this program to be

successful. Specifically, incentives for these measures have not increased in over five years, while material and labor costs have risen significantly. The proposed changes to this program should increase builder participation and further PEF's goal of increasing participation in its DSM programs.

Residential Low Income Weatherization Assistance Plan (LIWAP)

8. The Residential Low Income Weatherization Plan ("LIWAP") provides incentives for measures designed to increase the energy efficiency of low-income homes. PEF proposes to modify the LIWAP Program by increasing the incentives for duct and insulation measures to enhance participation levels. Similar to the Home Energy Improvement Program discussed above, incentives for these measures have not increased in over five years while material and labor costs have risen significantly. Additional motivation is needed to ensure continued participation in this important DSM program.

Better Business Program

9. The Better Business Program is an umbrella program that provides incentives for measures designed to increase the efficiency of existing commercial and industrial facilities. PEF proposes to modify the Better Business Program by increasing the incentives for most measures covered by the program to grow participation levels. Like the other programs discussed herein, incentives for the majority of the measures included in this program have not increased in over five years while material and labor costs have risen

significantly. Given that this segment of PEF's customer base has historically been the least motivated to participate in DSM programs due to nature of ownership of their facilities, additional motivational incentives are needed to encourage the implementation of these energy efficiency measures.

Commercial/Industrial New Construction Program

10. The Commercial/Industrial New Construction Program provides incentives to promote the design and construction of energy efficient commercial facilities. The principal proposed modification to the Commercial/Industrial New Construction Program is the increase of incentives for most measures covered by the program to grow participation levels. Incentives for the majority of the measures included in this program have not increased in over five years while material and labor costs have risen significantly. As with the other important DSM programs discussed in this Petition, additional incentives are needed to ensure implementation of these measures during the construction phase of new commercial and industrial facilities.

Other Proposed Changes to DSM Programs

11. In addition to the requested modifications to the programs discussed above, PEF proposes to modify its Program Participation Standards to match certain Heating, Ventilation and Air Conditioning (HVAC) regulation changes that will take effect on July 1, 2006. These standards match the expected program changes as outlined and approved in the Company's current

DSM Plan.

12. PEF has also made proposed language refinements related to the Residential New Construction Program that clarify the eligibility of an existing home in the program when a customer renovates more than two thirds of the existing conditioned space. Within the Home Energy Improvement Program, language has also been added to clarify the handling of additions to an existing home and duct test requirements. Language refinements were also included in the Better Business and Commercial/Industrial New Construction Programs to clarify the eligibility standards of scroll and/or centrifugal chillers. The actual language of the changes noted within this subsection is set forth in full and in legislative format in Composite Exhibit B to this Petition.

13. PEF has performed cost-effectiveness calculations for the proposed modifications under the Rate Impact Measurement Test ("RIM"); the Total Resource Cost Test ("TRC"), and the Participant Test. These calculations show that the proposed modifications to the DSM programs discussed herein are both cost-effective and beneficial to PEF and its ratepayers. The detailed results of these calculations are included with this Petition as Exhibit A.

14. The proposed modifications to the DSM programs discussed in this Petition are both cost-effective and beneficial to PEF and its ratepayers. WHEREFORE, Progress Energy respectfully requests that the Commission grant this petition and approve the modifications to the Company's DSM programs as

discussed more specifically herein.

Respectfully submitted,

John T. Burnett
Associate General Counsel
Progress Energy Service Company, LLC
Post Office Box 14042
St. Petersburg, Florida 33733-4042
Telephone: 727-820-5184
Facsimile: 727-820-5249
Email: john.burnett@pgnmail.com

Attorney for
PROGRESS ENERGY FLORIDA, INC.

EXHIBIT A

PROGRAM
COST-EFFECTIVENESS CALCULATIONS

Rate Impact Measure (RIM) Test

PROGRAM: Home Energy Improvement Program

	BENEFITS					COSTS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	TOTAL FUEL & O&M SAVINGS	AVOIDED T&D CAP. COSTS	AVOIDED GEN. CAP. COSTS	REVENUE GAINS	**TOTAL BENEFITS**	TOTAL FUEL & O&M INCREASE	INCREASED T&D CAP. COSTS	INCREASED GEN. CAP. COSTS	UTILITY PROGRAM COSTS	INCENTIVE PAYMENTS	REVENUE LOSSES	**TOTAL COSTS**	**NET BENEFITS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	1,054	391	0	0	1,446	0	0	0	934	5,040	1,604	7,577	-6,132
2007	1,496	547	0	0	2,043	0	0	0	380	1,971	2,241	4,591	-2,547
2008	1,745	714	0	0	2,459	0	0	0	400	2,099	2,724	5,223	-2,764
2009	3,561	896	1,955	0	6,412	0	0	0	431	2,295	3,434	6,160	252
2010	3,930	1,094	1,884	0	6,908	0	0	0	463	2,497	4,139	7,099	-191
2011	4,102	1,318	3,366	0	8,785	0	0	0	514	2,822	5,190	8,526	259
2012	4,580	1,541	3,505	0	9,626	0	0	0	518	2,848	6,284	9,650	-24
2013	6,520	1,758	3,018	0	11,295	0	0	0	503	2,763	7,393	10,659	637
2014	0	1,974	10,455	0	12,430	5,888	0	0	503	2,762	8,341	17,494	-5,064
2015	0	1,974	13,949	0	15,923	9,964	0	0	0	0	8,704	18,668	-2,745
2016	7,269	1,974	3,449	0	12,692	0	0	0	0	0	8,593	8,593	4,098
2017	6,140	1,974	5,163	0	13,278	0	0	0	0	0	8,537	8,537	4,740
2018	8,069	1,974	4,487	0	14,531	0	0	0	0	0	8,522	8,522	6,008
2019	7,963	1,974	4,053	0	13,990	0	0	0	0	0	8,539	8,539	5,451
2020	8,643	1,974	4,710	0	15,327	0	0	0	0	0	8,441	8,441	6,886
2021	8,594	1,974	4,505	0	15,073	0	0	0	0	0	8,564	8,564	6,509
2022	8,689	1,974	4,284	0	14,948	0	0	0	0	0	8,691	8,691	6,257
2023	6,703	1,974	8,327	0	17,005	0	0	0	0	0	8,819	8,819	8,186
2024	5,926	1,974	7,459	0	15,359	0	0	0	0	0	8,951	8,951	6,408
2025	5,662	1,974	6,540	0	14,176	0	0	0	0	0	9,087	9,087	5,089
2026	5,811	1,974	6,918	0	14,704	0	0	0	0	0	9,226	9,226	5,478
2027	5,779	1,974	6,983	0	14,736	0	0	0	0	0	9,368	9,368	5,368
2028	5,870	1,974	6,775	0	14,619	0	0	0	0	0	9,514	9,514	5,105
2029	5,939	1,974	7,313	0	15,226	0	0	0	0	0	9,663	9,663	5,563
2030	6,065	1,974	7,414	0	15,453	0	0	0	0	0	9,816	9,816	5,637
2031	6,100	1,974	7,507	0	15,581	0	0	0	0	0	9,974	9,974	5,608
2032	6,217	1,974	7,889	0	16,080	0	0	0	0	0	10,134	10,134	5,946
2033	6,277	1,974	7,664	0	15,915	0	0	0	0	0	10,299	10,299	5,616
2034	6,433	1,974	8,429	0	16,836	0	0	0	0	0	10,467	10,467	6,369
NOMINAL	155,132	49,723	158,002	0	362,858	15,852	0	0	4,644	25,096	225,261	270,853	92,005
NPV	47,138	15,617	44,025	0	106,781	7,362	0	0	3,250	17,516	67,496	95,625	11,156

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.117

Total Resource Cost (TRC) Test

PROGRAM: Home Energy Improvement Program

	BENEFITS					COSTS						
YEAR	(1) TOTAL FUEL & O&M SAVINGS $(000)	(2) AVOIDED T&D CAP. COSTS $(000)	(3) AVOIDED GEN. CAP. COSTS $(000)	(4) OTHER PARTICIPANT BENEFITS $(000)	(5) **TOTAL BENEFITS** $(000)	(6) PARTICIPANT'S COST $(000)	(7) TOTAL FUEL & O&M INCREASE $(000)	(8) INCREASED T&D CAP. COSTS $(000)	(9) INCREASED GEN. CAP. COSTS $(000)	(10) UTILITY PROGRAM COSTS $(000)	(11) **TOTAL COSTS** $(000)	(12) **NET BENEFITS** $(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	1,054	391	0	0	1,446	8,665	0	0	0	934	9,599	-8,153
2007	1,496	547	0	0	2,043	3,597	0	0	0	380	3,977	-1,933
2008	1,745	714	0	0	2,459	3,760	0	0	0	400	4,159	-1,701
2009	3,561	896	1,955	0	6,412	4,006	0	0	0	431	4,437	1,976
2010	3,930	1,094	1,884	0	6,908	4,259	0	0	0	463	4,721	2,187
2011	4,102	1,318	3,366	0	8,785	4,669	0	0	0	514	5,183	3,602
2012	4,580	1,541	3,505	0	9,626	4,695	0	0	0	518	5,213	4,413
2013	6,520	1,758	3,018	0	11,295	4,591	0	0	0	503	5,093	6,202
2014	0	1,974	10,455	0	12,430	4,590	5,888	0	0	503	10,980	1,450
2015	0	1,974	13,949	0	15,923	0	9,964	0	0	0	9,964	5,959
2016	7,269	1,974	3,449	0	12,692	0	0	0	0	0	0	12,692
2017	6,140	1,974	5,163	0	13,278	0	0	0	0	0	0	13,278
2018	8,069	1,974	4,487	0	14,531	0	0	0	0	0	0	14,531
2019	7,963	1,974	4,053	0	13,990	0	0	0	0	0	0	13,990
2020	8,643	1,974	4,710	0	15,327	0	0	0	0	0	0	15,327
2021	8,594	1,974	4,505	0	15,073	0	0	0	0	0	0	15,073
2022	8,689	1,974	4,284	0	14,948	0	0	0	0	0	0	14,948
2023	6,703	1,974	8,327	0	17,005	0	0	0	0	0	0	17,005
2024	5,926	1,974	7,459	0	15,359	0	0	0	0	0	0	15,359
2025	5,662	1,974	6,540	0	14,176	0	0	0	0	0	0	14,176
2026	5,811	1,974	6,918	0	14,704	0	0	0	0	0	0	14,704
2027	5,779	1,974	6,983	0	14,736	0	0	0	0	0	0	14,736
2028	5,870	1,974	6,775	0	14,619	0	0	0	0	0	0	14,619
2029	5,939	1,974	7,313	0	15,226	0	0	0	0	0	0	15,226
2030	6,065	1,974	7,414	0	15,453	0	0	0	0	0	0	15,453
2031	6,100	1,974	7,507	0	15,581	0	0	0	0	0	0	15,581
2032	6,217	1,974	7,889	0	16,080	0	0	0	0	0	0	16,080
2033	6,277	1,974	7,664	0	15,915	0	0	0	0	0	0	15,915
2034	6,433	1,974	8,429	0	16,836	0	0	0	0	0	0	16,836
NOMINAL	155,132	49,723	158,002	0	362,858	42,830	15,852	0	0	4,644	63,326	299,532
NPV	47,138	15,617	44,025	0	106,781	30,043	7,362	0	0	3,250	40,655	66,125

Utility Discount Rate = 8.30

Benefit Cost Ratio = 2.626

Participant Test

PROGRAM: Home Energy Improvement Program

	BENEFITS				COSTS			
	(1) SAVINGS IN PARTICIPANT'S BILL	(2) INCENTIVE PAYMENTS	(3) OTHER PARTICIPANT'S BENEFITS	(4) **TOTAL BENEFITS**	(5) PARTICIPANT'S COST	(6) PARTICIPANT'S BILL INCREASE	(7) **TOTAL COSTS**	(8) **NET BENEFITS TO PARTICIPANTS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0
2006	1,604	5,040	0	6,643	8,665	0	8,665	-2,022
2007	2,241	1,971	0	4,211	3,597	0	3,597	614
2008	2,724	2,099	0	4,823	3,760	0	3,760	1,064
2009	3,434	2,295	0	5,729	4,006	0	4,006	1,723
2010	4,139	2,497	0	6,636	4,259	0	4,259	2,377
2011	5,190	2,822	0	8,012	4,669	0	4,669	3,343
2012	6,284	2,848	0	9,132	4,695	0	4,695	4,437
2013	7,393	2,763	0	10,156	4,591	0	4,591	5,566
2014	8,341	2,762	0	11,104	4,590	0	4,590	6,514
2015	8,704	0	0	8,704	0	0	0	8,704
2016	8,593	0	0	8,593	0	0	0	8,593
2017	8,537	0	0	8,537	0	0	0	8,537
2018	8,522	0	0	8,522	0	0	0	8,522
2019	8,539	0	0	8,539	0	0	0	8,539
2020	8,441	0	0	8,441	0	0	0	8,441
2021	8,564	0	0	8,564	0	0	0	8,564
2022	8,691	0	0	8,691	0	0	0	8,691
2023	8,819	0	0	8,819	0	0	0	8,819
2024	8,951	0	0	8,951	0	0	0	8,951
2025	9,087	0	0	9,087	0	0	0	9,087
2026	9,226	0	0	9,226	0	0	0	9,226
2027	9,368	0	0	9,368	0	0	0	9,368
2028	9,514	0	0	9,514	0	0	0	9,514
2029	9,663	0	0	9,663	0	0	0	9,663
2030	9,816	0	0	9,816	0	0	0	9,816
2031	9,974	0	0	9,974	0	0	0	9,974
2032	10,134	0	0	10,134	0	0	0	10,134
2033	10,299	0	0	10,299	0	0	0	10,299
2034	10,467	0	0	10,467	0	0	0	10,467
NOMINAL	214,794	25,096	0	239,890	42,830	0	42,830	197,060
NPV	67,496	17,516	0	85,013	30,043	0	30,043	54,970

Utility Discount Rate = 8.30

Benefit Cost Ratio = 2.830

Rate Impact Measure (RIM) Test

PROGRAM: **Residential New Construction Program**

	BENEFITS					COSTS							
YEAR	(1) TOTAL FUEL & O&M SAVINGS $(000)	(2) AVOIDED T&D CAP. COSTS $(000)	(3) AVOIDED GEN. CAP. COSTS $(000)	(4) REVENUE GAINS $(000)	(5) **TOTAL BENEFITS** $(000)	(6) TOTAL FUEL & O&M INCREASE $(000)	(7) INCREASED T&D CAP. COSTS $(000)	(8) INCREASED GEN. CAP. COSTS $(000)	(9) UTILITY PROGRAM COSTS $(000)	(10) INCENTIVE PAYMENTS $(000)	(11) REVENUE LOSSES $(000)	(12) **TOTAL COSTS** $(000)	(13) **NET BENEFITS** $(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	247	115	0	0	362	0	0	0	602	247	311	1,160	-798
2007	495	231	0	0	726	0	0	0	602	248	629	1,478	-753
2008	658	346	0	0	1,004	0	0	0	602	248	882	1,733	-729
2009	1,522	462	933	0	2,916	0	0	0	602	249	1,179	2,030	886
2010	1,750	577	998	0	3,325	0	0	0	603	249	1,449	2,301	1,024
2011	1,745	692	1,918	0	4,356	0	0	0	603	250	1,795	2,648	1,708
2012	1,879	808	1,920	0	4,606	0	0	0	603	250	2,156	3,009	1,597
2013	2,810	923	1,625	0	5,358	0	0	0	603	250	2,534	3,387	1,971
2014	0	1,038	6,656	0	7,694	4,894	0	0	603	250	2,857	8,604	-909
2015	0	1,038	7,402	0	8,440	5,937	0	0	0	0	2,982	8,918	-478
2016	3,156	1,038	1,885	0	6,079	0	0	0	0	0	2,944	2,944	3,135
2017	2,508	1,038	2,730	0	6,277	0	0	0	0	0	2,924	2,924	3,353
2018	3,503	1,038	2,392	0	6,933	0	0	0	0	0	2,919	2,919	4,014
2019	3,393	1,038	2,137	0	6,568	0	0	0	0	0	2,924	2,924	3,644
2020	3,720	1,038	2,494	0	7,252	0	0	0	0	0	2,891	2,891	4,361
2021	3,636	1,038	2,331	0	7,006	0	0	0	0	0	2,933	2,933	4,073
2022	3,673	1,038	2,259	0	6,971	0	0	0	0	0	2,976	2,976	3,994
2023	2,620	1,038	4,202	0	7,860	0	0	0	0	0	3,020	3,020	4,840
2024	2,222	1,038	3,656	0	6,916	0	0	0	0	0	3,065	3,065	3,851
2025	2,037	1,038	3,344	0	6,419	0	0	0	0	0	3,112	3,112	3,307
2026	2,097	1,038	3,541	0	6,676	0	0	0	0	0	3,159	3,159	3,516
2027	2,049	1,038	3,595	0	6,682	0	0	0	0	0	3,208	3,208	3,474
2028	2,050	1,038	3,556	0	6,644	0	0	0	0	0	3,258	3,258	3,386
2029	2,092	1,038	3,713	0	6,843	0	0	0	0	0	3,309	3,309	3,534
2030	2,128	1,038	3,801	0	6,968	0	0	0	0	0	3,362	3,362	3,606
2031	2,117	1,038	3,846	0	7,002	0	0	0	0	0	3,415	3,415	3,586
2032	2,155	1,038	4,042	0	7,235	0	0	0	0	0	3,470	3,470	3,765
2033	2,132	1,038	4,001	0	7,171	0	0	0	0	0	3,527	3,527	3,644
2034	2,216	1,038	4,314	0	7,568	0	0	0	0	0	3,585	3,585	3,983
NOMINAL	60,605	25,961	83,292	0	169,858	10,831	0	0	5,423	2,241	76,776	95,271	74,587
NPV	18,970	8,050	23,657	0	50,677	5,062	0	0	3,717	1,535	22,775	33,090	17,587

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.531

Total Resource Cost (TRC) Test

PROGRAM: Residential New Construction Program

	BENEFITS					COSTS						
YEAR	(1) TOTAL FUEL & O&M SAVINGS $(000)	(2) AVOIDED T&D CAP. COSTS $(000)	(3) AVOIDED GEN. CAP. COSTS $(000)	(4) OTHER PARTICIPANT BENEFITS $(000)	(5) **TOTAL BENEFITS** $(000)	(6) PARTICIPANT'S COST $(000)	(7) TOTAL FUEL & O&M INCREASE $(000)	(8) INCREASED T&D CAP. COSTS $(000)	(9) INCREASED GEN. CAP. COSTS $(000)	(10) UTILITY PROGRAM COSTS $(000)	(11) **TOTAL COSTS** $(000)	(12) **NET BENEFITS** $(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	247	115	0	0	362	1,892	0	0	0	602	2,494	-2,131
2007	495	231	0	0	726	1,893	0	0	0	602	2,495	-1,769
2008	658	346	0	0	1,004	1,894	0	0	0	602	2,496	-1,493
2009	1,522	462	933	0	2,916	1,895	0	0	0	602	2,498	419
2010	1,750	577	998	0	3,325	1,896	0	0	0	603	2,499	826
2011	1,745	692	1,918	0	4,356	1,897	0	0	0	603	2,499	1,857
2012	1,879	808	1,920	0	4,606	1,897	0	0	0	603	2,500	2,106
2013	2,810	923	1,625	0	5,358	1,898	0	0	0	603	2,500	2,858
2014	0	1,038	6,656	0	7,694	1,898	4,894	0	0	603	7,394	300
2015	0	1,038	7,402	0	8,440	0	5,937	0	0	0	5,937	2,503
2016	3,156	1,038	1,885	0	6,079	0	0	0	0	0	0	6,079
2017	2,508	1,038	2,730	0	6,277	0	0	0	0	0	0	6,277
2018	3,503	1,038	2,392	0	6,933	0	0	0	0	0	0	6,933
2019	3,393	1,038	2,137	0	6,568	0	0	0	0	0	0	6,568
2020	3,720	1,038	2,494	0	7,252	0	0	0	0	0	0	7,252
2021	3,636	1,038	2,331	0	7,006	0	0	0	0	0	0	7,006
2022	3,673	1,038	2,259	0	6,971	0	0	0	0	0	0	6,971
2023	2,620	1,038	4,202	0	7,860	0	0	0	0	0	0	7,860
2024	2,222	1,038	3,656	0	6,916	0	0	0	0	0	0	6,916
2025	2,037	1,038	3,344	0	6,419	0	0	0	0	0	0	6,419
2026	2,097	1,038	3,541	0	6,676	0	0	0	0	0	0	6,676
2027	2,049	1,038	3,595	0	6,682	0	0	0	0	0	0	6,682
2028	2,050	1,038	3,556	0	6,644	0	0	0	0	0	0	6,644
2029	2,092	1,038	3,713	0	6,843	0	0	0	0	0	0	6,843
2030	2,128	1,038	3,801	0	6,968	0	0	0	0	0	0	6,968
2031	2,117	1,038	3,846	0	7,002	0	0	0	0	0	0	7,002
2032	2,155	1,038	4,042	0	7,235	0	0	0	0	0	0	7,235
2033	2,132	1,038	4,001	0	7,171	0	0	0	0	0	0	7,171
2034	2,216	1,038	4,314	0	7,568	0	0	0	0	0	0	7,568
NOMINAL	60,605	25,961	83,292	0	169,858	17,059	10,831	0	0	5,423	33,312	136,546
NPV	18,970	8,050	23,657	0	50,677	11,692	5,062	0	0	3,717	20,471	30,206

Utility Discount Rate = 8.30

Benefit Cost Ratio = 2.476

Participant Test

PROGRAM: **Residential New Construction Program**

	BENEFITS				COSTS			
YEAR	(1) SAVINGS IN PARTICIPANT'S BILL $(000)	(2) INCENTIVE PAYMENTS $(000)	(3) OTHER PARTICIPANT'S BENEFITS $(000)	(4) **TOTAL BENEFITS** $(000)	(5) PARTICIPANT'S COST $(000)	(6) PARTICIPANT'S BILL INCREASE $(000)	(7) **TOTAL COSTS** $(000)	(8) **NET BENEFITS TO PARTICIPANTS** $(000)
2005	0	0	0	0	0	0	0	0
2006	311	247	0	558	1,892	0	1,892	-1,334
2007	629	248	0	876	1,893	0	1,893	-1,017
2008	882	248	0	1,130	1,894	0	1,894	-764
2009	1,179	249	0	1,428	1,895	0	1,895	-467
2010	1,449	249	0	1,698	1,896	0	1,896	-198
2011	1,795	250	0	2,045	1,897	0	1,897	148
2012	2,156	250	0	2,406	1,897	0	1,897	509
2013	2,534	250	0	2,784	1,898	0	1,898	887
2014	2,857	250	0	3,107	1,898	0	1,898	1,209
2015	2,982	0	0	2,982	0	0	0	2,982
2016	2,944	0	0	2,944	0	0	0	2,944
2017	2,924	0	0	2,924	0	0	0	2,924
2018	2,919	0	0	2,919	0	0	0	2,919
2019	2,924	0	0	2,924	0	0	0	2,924
2020	2,891	0	0	2,891	0	0	0	2,891
2021	2,933	0	0	2,933	0	0	0	2,933
2022	2,976	0	0	2,976	0	0	0	2,976
2023	3,020	0	0	3,020	0	0	0	3,020
2024	3,065	0	0	3,065	0	0	0	3,065
2025	3,112	0	0	3,112	0	0	0	3,112
2026	3,159	0	0	3,159	0	0	0	3,159
2027	3,208	0	0	3,208	0	0	0	3,208
2028	3,258	0	0	3,258	0	0	0	3,258
2029	3,309	0	0	3,309	0	0	0	3,309
2030	3,362	0	0	3,362	0	0	0	3,362
2031	3,415	0	0	3,415	0	0	0	3,415
2032	3,470	0	0	3,470	0	0	0	3,470
2033	3,527	0	0	3,527	0	0	0	3,527
2034	3,585	0	0	3,585	0	0	0	3,585
NOMINAL	73,191	2,241	0	75,433	17,059	0	17,059	58,374
NPV	22,775	1,535	0	24,311	11,692	0	11,692	12,619

Utility Discount Rate = 8.30

Benefit Cost Ratio = 2.079

Rate Impact Measure (RIM) Test

PROGRAM: **Low Income Weatherization Assistance Program**

	BENEFITS					COSTS							
	(1) TOTAL FUEL & O&M SAVINGS	(2) AVOIDED T&D CAP. COSTS	(3) AVOIDED GEN. CAP. COSTS	(4) REVENUE GAINS	(5) **TOTAL BENEFITS**	(6) TOTAL FUEL & O&M INCREASE	(7) INCREASED T&D CAP. COSTS	(8) INCREASED GEN. CAP. COSTS	(9) UTILITY PROGRAM COSTS	(10) INCENTIVE PAYMENTS	(11) REVENUE LOSSES	(12) **TOTAL COSTS**	(13) **NET BENEFITS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	12	8	0	0	19	0	0	0	28	39	17	84	-65
2007	21	15	0	0	36	0	0	0	28	39	33	100	-64
2008	29	23	0	0	52	0	0	0	28	39	48	115	-63
2009	42	30	0	0	72	0	0	0	28	39	64	131	-59
2010	65	38	38	0	140	0	0	0	28	39	84	151	-10
2011	74	45	34	0	152	0	0	0	28	39	103	170	-18
2012	103	53	33	0	188	0	0	0	28	39	123	190	-2
2013	127	60	38	0	226	0	0	0	28	39	154	221	5
2014	111	68	54	0	232	0	0	0	28	39	165	232	1
2015	125	75	71	0	271	0	0	0	28	39	187	254	17
2016	128	75	74	0	276	0	0	0	0	0	192	192	84
2017	133	75	82	0	290	0	0	0	0	0	200	200	90
2018	132	75	80	0	287	0	0	0	0	0	201	201	86
2019	132	75	75	0	282	0	0	0	0	0	206	206	76
2020	134	75	82	0	291	0	0	0	0	0	212	212	80
2021	134	75	79	0	288	0	0	0	0	0	215	215	73
2022	136	75	87	0	298	0	0	0	0	0	220	220	78
2023	142	75	101	0	318	0	0	0	0	0	228	228	90
2024	132	75	90	0	297	0	0	0	0	0	234	234	63
2025	140	75	91	0	306	0	0	0	0	0	239	239	67
2026	145	75	98	0	318	0	0	0	0	0	245	245	73
2027	147	75	99	0	321	0	0	0	0	0	251	251	70
2028	147	75	97	0	319	0	0	0	0	0	258	258	61
2029	151	75	102	0	327	0	0	0	0	0	264	264	63
2030	154	75	105	0	334	0	0	0	0	0	271	271	63
2031	156	75	105	0	336	0	0	0	0	0	276	276	60
2032	157	75	108	0	340	0	0	0	0	0	285	285	55
2033	151	75	110	0	336	0	0	0	0	0	276	276	60
2034	169	75	117	0	361	0	0	0	0	0	299	299	63
NOMINAL	3,425	1,841	2,049	0	7,315	0	0	0	284	387	5,550	6,220	1,095
NPV	1,013	569	530	0	2,112	0	0	0	189	258	1,557	2,003	109

Utility Discount Rate = 8.16

Benefit Cost Ratio = 1.054

Total Resource Cost (TRC) Test

PROGRAM: **Low Income Weatherization Assistance Program**

	BENEFITS					COSTS						
YEAR	(1) TOTAL FUEL & O&M SAVINGS $(000)	(2) AVOIDED T&D CAP. COSTS $(000)	(3) AVOIDED GEN. CAP. COSTS $(000)	(4) OTHER PARTICIPANT BENEFITS $(000)	(5) **TOTAL BENEFITS** $(000)	(6) PARTICIPANT'S COST $(000)	(7) TOTAL FUEL & O&M INCREASE $(000)	(8) INCREASED T&D CAP. COSTS $(000)	(9) INCREASED GEN. CAP. COSTS $(000)	(10) UTILITY PROGRAM COSTS $(000)	(11) **TOTAL COSTS** $(000)	(12) **NET BENEFITS** $(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	12	8	0	0	19	0	0	0	0	28	28	-9
2007	21	15	0	0	36	0	0	0	0	28	28	8
2008	29	23	0	0	52	0	0	0	0	28	28	23
2009	42	30	0	0	72	0	0	0	0	28	28	44
2010	65	38	38	0	140	0	0	0	0	28	28	112
2011	74	45	34	0	152	0	0	0	0	28	28	124
2012	103	53	33	0	188	0	0	0	0	28	28	160
2013	127	60	38	0	226	0	0	0	0	28	28	197
2014	111	68	54	0	232	0	0	0	0	28	28	204
2015	125	75	71	0	271	0	0	0	0	28	28	243
2016	128	75	74	0	276	0	0	0	0	0	0	276
2017	133	75	82	0	290	0	0	0	0	0	0	290
2018	132	75	80	0	287	0	0	0	0	0	0	287
2019	132	75	75	0	282	0	0	0	0	0	0	282
2020	134	75	82	0	291	0	0	0	0	0	0	291
2021	134	75	79	0	288	0	0	0	0	0	0	288
2022	136	75	87	0	298	0	0	0	0	0	0	298
2023	142	75	101	0	318	0	0	0	0	0	0	318
2024	132	75	90	0	297	0	0	0	0	0	0	297
2025	140	75	91	0	306	0	0	0	0	0	0	306
2026	145	75	98	0	318	0	0	0	0	0	0	318
2027	147	75	99	0	321	0	0	0	0	0	0	321
2028	147	75	97	0	319	0	0	0	0	0	0	319
2029	151	75	102	0	327	0	0	0	0	0	0	327
2030	154	75	105	0	334	0	0	0	0	0	0	334
2031	156	75	105	0	336	0	0	0	0	0	0	336
2032	157	75	108	0	340	0	0	0	0	0	0	340
2033	151	75	110	0	336	0	0	0	0	0	0	336
2034	169	75	117	0	361	0	0	0	0	0	0	361
NOMINAL	3,425	1,841	2,049	0	7,315	0	0	0	0	284	284	7,031
NPV	1,013	569	530	0	2,112	0	0	0	0	189	189	1,923

Utility Discount Rate = 8.16

Benefit Cost Ratio = 11.180

Participant Test

PROGRAM: **Low Income Weatherization Assistance Program**

	BENEFITS				COSTS			
YEAR	(1) SAVINGS IN PARTICIPANT'S BILL $(000)	(2) INCENTIVE PAYMENTS $(000)	(3) OTHER PARTICIPANT'S BENEFITS $(000)	(4) **TOTAL BENEFITS** $(000)	(5) PARTICIPANT'S COST $(000)	(6) PARTICIPANT'S BILL INCREASE $(000)	(7) **TOTAL COSTS** $(000)	(8) **NET BENEFITS TO PARTICIPANTS** $(000)
2005	0	0	0	0	0	0	0	0
2006	17	39	0	56	0	0	0	56
2007	33	39	0	71	0	0	0	71
2008	48	39	0	87	0	0	0	87
2009	64	39	0	103	0	0	0	103
2010	84	39	0	122	0	0	0	122
2011	103	39	0	141	0	0	0	141
2012	123	39	0	161	0	0	0	161
2013	154	39	0	193	0	0	0	193
2014	165	39	0	203	0	0	0	203
2015	187	39	0	226	0	0	0	226
2016	192	0	0	192	0	0	0	192
2017	200	0	0	200	0	0	0	200
2018	201	0	0	201	0	0	0	201
2019	206	0	0	206	0	0	0	206
2020	212	0	0	212	0	0	0	212
2021	215	0	0	215	0	0	0	215
2022	220	0	0	220	0	0	0	220
2023	228	0	0	228	0	0	0	228
2024	234	0	0	234	0	0	0	234
2025	239	0	0	239	0	0	0	239
2026	245	0	0	245	0	0	0	245
2027	251	0	0	251	0	0	0	251
2028	258	0	0	258	0	0	0	258
2029	264	0	0	264	0	0	0	264
2030	271	0	0	271	0	0	0	271
2031	276	0	0	276	0	0	0	276
2032	285	0	0	285	0	0	0	285
2033	276	0	0	276	0	0	0	276
2034	299	0	0	299	0	0	0	299
NOMINAL	5,251	387	0	5,638	0	0	0	5,638
NPV	1,557	258	0	1,814	0	0	0	1,814

Utility Discount Rate = 8.16

Benefit Cost Ratio = 9999

Rate Impact Measure (RIM) Test

PROGRAM: **Better Business Program**

	BENEFITS					COSTS							
	(1) TOTAL FUEL & O&M SAVINGS	(2) AVOIDED T&D CAP. COSTS	(3) AVOIDED GEN. CAP. COSTS	(4) REVENUE GAINS	(5) **TOTAL BENEFITS**	(6) TOTAL FUEL & O&M INCREASE	(7) INCREASED T&D CAP. COSTS	(8) INCREASED GEN. CAP. COSTS	(9) UTILITY PROGRAM COSTS	(10) INCENTIVE PAYMENTS	(11) REVENUE LOSSES	(12) **TOTAL COSTS**	(13) **NET BENEFITS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	168	30	0	0	199	0	0	0	35	320	204	559	-360
2007	336	61	0	0	396	0	0	0	35	320	413	768	-372
2008	454	91	0	0	545	0	0	0	35	320	570	924	-380
2009	751	121	215	0	1,088	0	0	0	35	320	760	1,115	-28
2010	926	151	252	0	1,330	0	0	0	35	320	927	1,282	48
2011	1,076	182	582	0	1,839	0	0	0	35	320	1,158	1,513	326
2012	1,197	212	525	0	1,934	0	0	0	35	320	1,396	1,751	184
2013	1,574	242	447	0	2,263	0	0	0	35	320	1,649	2,004	259
2014	0	272	2,208	0	2,481	888	0	0	35	320	1,869	3,111	-631
2015	0	272	1,988	0	2,261	698	0	0	0	0	1,970	2,668	-407
2016	1,795	272	540	0	2,608	0	0	0	0	0	1,943	1,943	665
2017	1,610	272	718	0	2,600	0	0	0	0	0	1,928	1,928	672
2018	1,908	272	642	0	2,822	0	0	0	0	0	1,924	1,924	897
2019	1,913	272	556	0	2,741	0	0	0	0	0	1,929	1,929	812
2020	2,058	272	665	0	2,995	0	0	0	0	0	1,902	1,902	1,094
2021	2,045	272	571	0	2,888	0	0	0	0	0	1,934	1,934	954
2022	2,133	272	616	0	3,022	0	0	0	0	0	1,968	1,968	1,054
2023	1,854	272	1,014	0	3,140	0	0	0	0	0	2,002	2,002	1,138
2024	1,768	272	796	0	2,837	0	0	0	0	0	2,037	2,037	800
2025	1,760	272	847	0	2,878	0	0	0	0	0	2,073	2,073	805
2026	1,803	272	867	0	2,943	0	0	0	0	0	2,110	2,110	832
2027	1,828	272	904	0	3,004	0	0	0	0	0	2,148	2,148	856
2028	1,853	272	946	0	3,071	0	0	0	0	0	2,187	2,187	884
2029	1,902	272	935	0	3,109	0	0	0	0	0	2,227	2,227	883
2030	1,939	272	982	0	3,194	0	0	0	0	0	2,267	2,267	926
2031	1,974	272	997	0	3,243	0	0	0	0	0	2,309	2,309	934
2032	2,028	272	1,001	0	3,301	0	0	0	0	0	2,352	2,352	949
2033	2,056	272	1,029	0	3,358	0	0	0	0	0	2,396	2,396	962
2034	2,114	272	1,057	0	3,443	0	0	0	0	0	2,440	2,440	1,003
NOMINAL	42,820	6,812	21,899	0	71,531	1,585	0	0	311	2,883	50,993	55,771	15,759
NPV	12,157	2,112	6,412	0	20,682	747	0	0	213	1,976	14,998	17,935	2,747

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.153

Total Resource Cost (TRC) Test

PROGRAM: **Better Business Program**

	BENEFITS					COSTS						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	TOTAL FUEL & O&M SAVINGS	AVOIDED T&D CAP. COSTS	AVOIDED GEN. CAP. COSTS	OTHER PARTICIPANT BENEFITS	**TOTAL BENEFITS**	PARTICIPANT'S COST	TOTAL FUEL & O&M INCREASE	INCREASED T&D CAP. COSTS	INCREASED GEN. CAP. COSTS	UTILITY PROGRAM COSTS	**TOTAL COSTS**	**NET BENEFITS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	168	30	0	0	199	1,955	0	0	0	35	1,990	-1,791
2007	336	61	0	0	396	1,955	0	0	0	35	1,990	-1,593
2008	454	91	0	0	545	1,955	0	0	0	35	1,990	-1,445
2009	751	121	215	0	1,088	1,955	0	0	0	35	1,990	-902
2010	926	151	252	0	1,330	1,955	0	0	0	35	1,990	-660
2011	1,076	182	582	0	1,839	1,955	0	0	0	35	1,990	-151
2012	1,197	212	525	0	1,934	1,955	0	0	0	35	1,990	-56
2013	1,574	242	447	0	2,263	1,955	0	0	0	35	1,990	273
2014	0	272	2,208	0	2,481	1,955	888	0	0	35	2,877	-397
2015	0	272	1,988	0	2,261	0	698	0	0	0	698	1,563
2016	1,795	272	540	0	2,608	0	0	0	0	0	0	2,608
2017	1,610	272	718	0	2,600	0	0	0	0	0	0	2,600
2018	1,908	272	642	0	2,822	0	0	0	0	0	0	2,822
2019	1,913	272	556	0	2,741	0	0	0	0	0	0	2,741
2020	2,058	272	665	0	2,995	0	0	0	0	0	0	2,995
2021	2,045	272	571	0	2,888	0	0	0	0	0	0	2,888
2022	2,133	272	616	0	3,022	0	0	0	0	0	0	3,022
2023	1,854	272	1,014	0	3,140	0	0	0	0	0	0	3,140
2024	1,768	272	796	0	2,837	0	0	0	0	0	0	2,837
2025	1,760	272	847	0	2,878	0	0	0	0	0	0	2,878
2026	1,803	272	867	0	2,943	0	0	0	0	0	0	2,943
2027	1,828	272	904	0	3,004	0	0	0	0	0	0	3,004
2028	1,853	272	946	0	3,071	0	0	0	0	0	0	3,071
2029	1,902	272	935	0	3,109	0	0	0	0	0	0	3,109
2030	1,939	272	982	0	3,194	0	0	0	0	0	0	3,194
2031	1,974	272	997	0	3,243	0	0	0	0	0	0	3,243
2032	2,028	272	1,001	0	3,301	0	0	0	0	0	0	3,301
2033	2,056	272	1,029	0	3,358	0	0	0	0	0	0	3,358
2034	2,114	272	1,057	0	3,443	0	0	0	0	0	0	3,443
NOMINAL	42,820	6,812	21,899	0	71,531	17,597	1,585	0	0	311	19,493	52,038
NPV	12,157	2,112	6,412	0	20,682	12,063	747	0	0	213	13,023	7,658

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.588

Participant Test

PROGRAM: **Better Business Program**

	BENEFITS				COSTS			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	SAVINGS IN PARTICIPANT'S BILL	INCENTIVE PAYMENTS	OTHER PARTICIPANT'S BENEFITS	**TOTAL BENEFITS**	PARTICIPANT'S COST	PARTICIPANT'S BILL INCREASE	**TOTAL COSTS**	**NET BENEFITS TO PARTICIPANTS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0
2006	204	320	0	524	1,955	0	1,955	-1,431
2007	413	320	0	733	1,955	0	1,955	-1,222
2008	570	320	0	890	1,955	0	1,955	-1,065
2009	760	320	0	1,081	1,955	0	1,955	-874
2010	927	320	0	1,247	1,955	0	1,955	-708
2011	1,158	320	0	1,478	1,955	0	1,955	-477
2012	1,396	320	0	1,716	1,955	0	1,955	-239
2013	1,649	320	0	1,969	1,955	0	1,955	14
2014	1,869	320	0	2,189	1,955	0	1,955	234
2015	1,970	0	0	1,970	0	0	0	1,970
2016	1,943	0	0	1,943	0	0	0	1,943
2017	1,928	0	0	1,928	0	0	0	1,928
2018	1,924	0	0	1,924	0	0	0	1,924
2019	1,929	0	0	1,929	0	0	0	1,929
2020	1,902	0	0	1,902	0	0	0	1,902
2021	1,934	0	0	1,934	0	0	0	1,934
2022	1,968	0	0	1,968	0	0	0	1,968
2023	2,002	0	0	2,002	0	0	0	2,002
2024	2,037	0	0	2,037	0	0	0	2,037
2025	2,073	0	0	2,073	0	0	0	2,073
2026	2,110	0	0	2,110	0	0	0	2,110
2027	2,148	0	0	2,148	0	0	0	2,148
2028	2,187	0	0	2,187	0	0	0	2,187
2029	2,227	0	0	2,227	0	0	0	2,227
2030	2,267	0	0	2,267	0	0	0	2,267
2031	2,309	0	0	2,309	0	0	0	2,309
2032	2,352	0	0	2,352	0	0	0	2,352
2033	2,396	0	0	2,396	0	0	0	2,396
2034	2,440	0	0	2,440	0	0	0	2,440
NOMINAL	48,552	2,883	0	51,435	17,597	0	17,597	33,838
NPV	14,998	1,976	0	16,975	12,063	0	12,063	4,912

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.407

Rate Impact Measure (RIM) Test

PROGRAM: **Commercial New Construction Program**

	BENEFITS					COSTS							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	TOTAL FUEL & O&M SAVINGS	AVOIDED T&D CAP. COSTS	AVOIDED GEN. CAP. COSTS	REVENUE GAINS	**TOTAL BENEFITS**	TOTAL FUEL & O&M INCREASE	INCREASED T&D CAP. COSTS	INCREASED GEN. CAP. COSTS	UTILITY PROGRAM COSTS	INCENTIVE PAYMENTS	REVENUE LOSSES	**TOTAL COSTS**	**NET BENEFITS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0	0
2006	134	22	0	0	156	0	0	0	19	261	162	443	-286
2007	266	45	0	0	311	0	0	0	19	261	328	608	-298
2008	360	67	0	0	427	0	0	0	19	261	452	733	-305
2009	584	90	152	0	825	0	0	0	19	261	604	884	-59
2010	724	112	183	0	1,019	0	0	0	19	261	736	1,016	3
2011	849	134	441	0	1,425	0	0	0	19	261	919	1,200	225
2012	945	157	389	0	1,491	0	0	0	19	261	1,108	1,388	102
2013	1,235	179	331	0	1,745	0	0	0	19	261	1,309	1,590	156
2014	0	202	1,712	0	1,914	662	0	0	19	261	1,483	2,426	-512
2015	0	202	1,461	0	1,662	428	0	0	0	0	1,564	1,992	-329
2016	1,411	202	404	0	2,016	0	0	0	0	0	1,542	1,542	474
2017	1,271	202	524	0	1,996	0	0	0	0	0	1,530	1,530	466
2018	1,493	202	472	0	2,167	0	0	0	0	0	1,527	1,527	640
2019	1,499	202	405	0	2,105	0	0	0	0	0	1,531	1,531	574
2020	1,611	202	488	0	2,300	0	0	0	0	0	1,509	1,509	791
2021	1,602	202	411	0	2,214	0	0	0	0	0	1,535	1,535	679
2022	1,676	202	455	0	2,333	0	0	0	0	0	1,562	1,562	771
2023	1,470	202	749	0	2,420	0	0	0	0	0	1,589	1,589	831
2024	1,410	202	553	0	2,164	0	0	0	0	0	1,617	1,617	548
2025	1,407	202	614	0	2,222	0	0	0	0	0	1,646	1,646	577
2026	1,447	202	602	0	2,250	0	0	0	0	0	1,675	1,675	575
2027	1,466	202	634	0	2,301	0	0	0	0	0	1,705	1,705	596
2028	1,484	202	698	0	2,383	0	0	0	0	0	1,736	1,736	647
2029	1,523	202	678	0	2,403	0	0	0	0	0	1,767	1,767	636
2030	1,557	202	694	0	2,452	0	0	0	0	0	1,800	1,800	653
2031	1,588	202	700	0	2,489	0	0	0	0	0	1,833	1,833	657
2032	1,627	202	723	0	2,551	0	0	0	0	0	1,867	1,867	684
2033	1,659	202	719	0	2,579	0	0	0	0	0	1,901	1,901	678
2034	1,706	202	733	0	2,640	0	0	0	0	0	1,937	1,937	703
NOMINAL	33,998	5,041	15,923	0	54,961	1,090	0	0	173	2,353	40,472	44,088	10,873
NPV	9,604	1,563	4,722	0	15,889	516	0	0	119	1,613	11,904	14,152	1,737

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.123

Total Resource Cost (TRC) Test

PROGRAM: **Commercial New Construction Program**

	BENEFITS					COSTS						
YEAR	(1) TOTAL FUEL & O&M SAVINGS $(000)	(2) AVOIDED T&D CAP. COSTS $(000)	(3) AVOIDED GEN. CAP. COSTS $(000)	(4) OTHER PARTICIPANT BENEFITS $(000)	(5) **TOTAL BENEFITS** $(000)	(6) PARTICIPANT'S COST $(000)	(7) TOTAL FUEL & O&M INCREASE $(000)	(8) INCREASED T&D CAP. COSTS $(000)	(9) INCREASED GEN. CAP. COSTS $(000)	(10) UTILITY PROGRAM COSTS $(000)	(11) **TOTAL COSTS** $(000)	(12) **NET BENEFITS** $(000)
2005	0	0	0	0	0	0	0	0	0	0	0	0
2006	134	22	0	0	156	1,660	0	0	0	19	1,679	-1,523
2007	266	45	0	0	311	1,660	0	0	0	19	1,679	-1,369
2008	360	67	0	0	427	1,660	0	0	0	19	1,679	-1,252
2009	584	90	152	0	825	1,660	0	0	0	19	1,679	-854
2010	724	112	183	0	1,019	1,660	0	0	0	19	1,679	-660
2011	849	134	441	0	1,425	1,660	0	0	0	19	1,679	-254
2012	945	157	389	0	1,491	1,660	0	0	0	19	1,679	-188
2013	1,235	179	331	0	1,745	1,660	0	0	0	19	1,679	66
2014	0	202	1,712	0	1,914	1,660	662	0	0	19	2,341	-428
2015	0	202	1,461	0	1,662	0	428	0	0	0	428	1,235
2016	1,411	202	404	0	2,016	0	0	0	0	0	0	2,016
2017	1,271	202	524	0	1,996	0	0	0	0	0	0	1,996
2018	1,493	202	472	0	2,167	0	0	0	0	0	0	2,167
2019	1,499	202	405	0	2,105	0	0	0	0	0	0	2,105
2020	1,611	202	488	0	2,300	0	0	0	0	0	0	2,300
2021	1,602	202	411	0	2,214	0	0	0	0	0	0	2,214
2022	1,676	202	455	0	2,333	0	0	0	0	0	0	2,333
2023	1,470	202	749	0	2,420	0	0	0	0	0	0	2,420
2024	1,410	202	553	0	2,164	0	0	0	0	0	0	2,164
2025	1,407	202	614	0	2,222	0	0	0	0	0	0	2,222
2026	1,447	202	602	0	2,250	0	0	0	0	0	0	2,250
2027	1,466	202	634	0	2,301	0	0	0	0	0	0	2,301
2028	1,484	202	698	0	2,383	0	0	0	0	0	0	2,383
2029	1,523	202	678	0	2,403	0	0	0	0	0	0	2,403
2030	1,557	202	694	0	2,452	0	0	0	0	0	0	2,452
2031	1,588	202	700	0	2,489	0	0	0	0	0	0	2,489
2032	1,627	202	723	0	2,551	0	0	0	0	0	0	2,551
2033	1,659	202	719	0	2,579	0	0	0	0	0	0	2,579
2034	1,706	202	733	0	2,640	0	0	0	0	0	0	2,640
NOMINAL	33,998	5,041	15,923	0	54,961	14,939	1,090	0	0	173	16,201	38,760
NPV	9,604	1,563	4,722	0	15,889	10,241	516	0	0	119	10,875	5,014

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.461

Participant Test

PROGRAM: **Commercial New Construction Program**

	BENEFITS				COSTS			
	(1) SAVINGS IN PARTICIPANT'S BILL	(2) INCENTIVE PAYMENTS	(3) OTHER PARTICIPANT'S BENEFITS	(4) **TOTAL BENEFITS**	(5) PARTICIPANT'S COST	(6) PARTICIPANT'S BILL INCREASE	(7) **TOTAL COSTS**	(8) **NET BENEFITS TO PARTICIPANTS**
YEAR	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)	$(000)
2005	0	0	0	0	0	0	0	0
2006	162	261	0	423	1,660	0	1,660	-1,236
2007	328	261	0	589	1,660	0	1,660	-1,071
2008	452	261	0	714	1,660	0	1,660	-946
2009	604	261	0	865	1,660	0	1,660	-795
2010	736	261	0	997	1,660	0	1,660	-663
2011	919	261	0	1,181	1,660	0	1,660	-479
2012	1,108	261	0	1,369	1,660	0	1,660	-291
2013	1,309	261	0	1,570	1,660	0	1,660	-89
2014	1,483	261	0	1,745	1,660	0	1,660	85
2015	1,564	0	0	1,564	0	0	0	1,564
2016	1,542	0	0	1,542	0	0	0	1,542
2017	1,530	0	0	1,530	0	0	0	1,530
2018	1,527	0	0	1,527	0	0	0	1,527
2019	1,531	0	0	1,531	0	0	0	1,531
2020	1,509	0	0	1,509	0	0	0	1,509
2021	1,535	0	0	1,535	0	0	0	1,535
2022	1,562	0	0	1,562	0	0	0	1,562
2023	1,589	0	0	1,589	0	0	0	1,589
2024	1,617	0	0	1,617	0	0	0	1,617
2025	1,646	0	0	1,646	0	0	0	1,646
2026	1,675	0	0	1,675	0	0	0	1,675
2027	1,705	0	0	1,705	0	0	0	1,705
2028	1,736	0	0	1,736	0	0	0	1,736
2029	1,767	0	0	1,767	0	0	0	1,767
2030	1,800	0	0	1,800	0	0	0	1,800
2031	1,833	0	0	1,833	0	0	0	1,833
2032	1,867	0	0	1,867	0	0	0	1,867
2033	1,901	0	0	1,901	0	0	0	1,901
2034	1,937	0	0	1,937	0	0	0	1,937
NOMINAL	38,535	2,353	0	40,889	14,939	0	14,939	25,950
NPV	11,904	1,613	0	13,517	10,241	0	10,241	3,277

Utility Discount Rate = 8.30

Benefit Cost Ratio = 1.320

COMPOSITE EXHIBIT B

FULL AND LEGISLATIVE COPIES OF
PEF'S PROGRAM PARTICIPATION STANDARDS

Progress Energy

PROGRAM PARTICIPATION STANDARDS

DEMAND-SIDE MANAGEMENT PLAN

2005-2014

PROGRESS ENERGY FLORIDA, INC.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

HOME ENERGY IMPROVEMENT PROGRAM

PROGRESS ENERGY FLORIDA, INC.
PROGRAM PARTICIPATION STANDARDS
HOME ENERGY IMPROVEMENT PROGRAM

1. PROGRAM OVERVIEW

The Home Energy Improvement (HEI) Program is an "umbrella" program designed to improve the energy efficiency of existing residential homes. The program seeks to meet the following overall goals:

1. Improve customer comfort levels through energy efficient equipment and home thermal integrity.
2. Obtain energy and demand reductions that are significant, permanent and measurable.
3. Enhance contractor awareness of the capabilities of energy efficient technologies.
4. Educate customers about additional opportunities to upgrade home energy efficiency.
5. Obtain cost-effective resources from the marketplace.
6. Minimize "lost opportunities" in the existing home market.

2. ELIGIBILITY REQUIREMENTS

1. All measures must have been recommended during a PEF energy audit. (***Exception:*** *In emergency cases the customer may have a heat pump installed.*)
2. The residence must be in PEF's service area and be a residential metered customer of PEF.
3. Do-it-yourself installations are not eligible for program participation. PEF participating contractors will be utilized to implement the incentive-based components of the HEI program. A participating licensed contractor who is on PEF's participating contractor list for the specific measure must do all work. (***Exception:*** *The Heating, Ventilation and Air Conditioning (HVAC) portion of this program will not have a participating contractor list.*)
4. All installations must be accessible for verification of HEI program standards by a PEF representative.

5. New construction homes do not qualify under the HEI program.

2.1 CONTRACTOR REQUIREMENTS

1. All contractors must comply with PEF contractor procedures and manufacturers' specifications specific to the portion of the HEI Program for which they are participating. Failure to do so may result in termination of participation in any or all PEF programs.

2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by a PEF representative, and notify the PEF representative of compliance within 30 days.

4. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 (five) working days of incident.

5. The contractor shall indemnify and hold PEF harmless against any and all injuries or damages, claims or costs, whatsoever caused by items furnished or services rendered.

6. The contractor must comply with all Federal, State, and local codes and regulations and have the appropriate license(s) for the work to be performed.

7. The contractor must notify their insurance companies to provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 8 and Section 9 dealing with HVAC contractors is exempt from this provision.*)

    - Workman's Compensation as required by law.
    - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
    - General and Automobile Property Damage Liability: $100,000 per occurrence.
    - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Duct Test	50% of test cost up to $30 for the first unit tested
	50% of test cost up to $20 for each additional unit at same address
Duct Leakage Repair	25% of the repair cost up to a maximum of $50 per unit for homes with non-ducted electric heat (ceiling, baseboard, etc)
	50% of the repair cost up to a maximum of $125 per unit for homes with ducted electric heat Up to an additional $25 may be paid during off-season shoulder months For Multi-Family $100 per unit no test required
Attic Insulation	$75 to bring insulation level up to a minimum of R-19 An additional 5¢ per square foot above 1500 square feet will be paid
	$100 to bring insulation level up to a minimum of R-30 An additional 7¢ per square foot above 1500 square feet will be paid
High Efficiency Heat Pump Replacing Resistance Heat	$250 for minimum cooling efficiency of / 14.0 SEER and minimum heating efficiency of / 7.8 HSPF
	$350 for minimum cooling efficiency of / 15.0 SEER and minimum heating efficiency of / 8 HSPF
High Efficiency Heat Pump Replacing Heat Pump	$100 for minimum cooling efficiency of./ 14.0 SEER and minimum heating efficiency of / 7.8 HSPF
	$150 for minimum cooling efficiency of / 15 SEER and minimum heating efficiency of / 8 HSPF
Supplemental Incentive Bonus	$25 for high efficiency electric heat pump **and** either ceiling insulation **or** duct leakage repair
Supplemental Incentive Bonus	$50 for high efficiency electric heat pump **and** ceiling insulation **and** duct leakage repair

Notes:

1. *A home is eligible to receive an incentive for each heat pump installed based on the efficiency level.*
2. *To qualify for the supplemental bonus, additional measures must be implemented within 90 days from the installation of the heat pump.*
3. *In multi-family structures, PEF reserves the right to request bids from contractors to hold customer costs to a minimum.*

4. INCENTIVE PROCESSING

1. The PEF representative will complete an HEI Program form which will record as a minimum the following information: customer's name, address, account number, measure installed, equipment information (manufacturer, model numbers, SEER or HSPF). For aerosol duct sealing participation, pre and post duct leakage data and a copy of the certificate of completion will be required.

2. The customer will sign and date the PEF form that relates to each applicable measure installed, and retain a copy.

3. If the home is assigned for inspection, an inspection form will be given to the inspector. After the inspection has been successfully completed, the inspector returns the inspection form to PEF for payment processing.

4. A copy of the customer invoice must accompany the incentive application for the insulation upgrade and the duct repair portion of this program.

5. If the home is not assigned for inspection, or after it has passed inspection, contractors' invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the computer system and file a copy of the HEI Program form by customer name.

7. All incentive payments are paid to the contractor with the exception of the supplemental bonus, which is to be posted on the customer's electric bill. (***Exception:*** *The HVAC incentives (high efficiency heat pump,) will be paid as a credit on the customer's bill or a check to the customer.*)

8. If there is no out of pocket cost incurred by the owner, the incentive will go to the state provider/agency that arranged the installation of the measure.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. CEILING INSULATION UPGRADE

6.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.

2. The home must be at least two years old.

3. Eligible residences must have whole house electric air conditioning and/or whole house electric heating.

4. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be less than R-12. Exception: May exclude conditioned area for a recent addition.

5. Any structure that has utilized any of PEF's ceiling insulation programs is not eligible to participate again. However, if the structure, through an act of God, loses the insulation **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from his/her insurance company stating that the insulation was not covered.

6. The total ceiling area to be insulated must be greater than 500 square feet.

7. Mobile homes built after January 1, 1977 will be assumed to have an insulation value in excess of R-11 and will not be eligible to participate in this part of the HEI Program unless documentation is provided to PEF stating that the actual existing insulation value is less than R-12.

8. Any home with "Knob and Tube Wiring" that is energized is not eligible.[1]

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.

2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation shall be added in increments of R-11, R-19, R-22, or R-30.

3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.

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[1] National Electrical Code, Article 324, Section 324-4

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area including knee walls.[2]

7. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

8. Radiant barriers will not be allowed as a substitute in the HEI Program.

9. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts).[3]

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. The contractor will supply to the customer, in writing the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

3. The contractor will attach an R-value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
   - Manufacturer's name
   - Insulation type
   - R-Value of insulation installed
   - Thickness of insulation installed
   - Location of insulation installed
   - Name and address of the contractor installing the insulation
   - Date of installation

4. PEF reserves the right to request background checks of contractors participating in the Home Energy Improvement Program Ceiling Insulation upgrade.

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[2] 2001 Florida Building Code chapter 13 sub chapter 6, Section 604.1.A.1 Walls Considered Ceiling Area
[3] 2001 Florida Building Code chapter 13 sub chapter 6,Section 604.1ABC.1.1 Ceilings With Blown-In Insulation

7. DUCT TEST AND LEAKAGE REPAIR

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.

2. Repair recommendations must have been the result of a PEF-approved duct test. Exception: If during an energy audit, the PEF energy auditor validates the need for duct system replacement, then a duct test is not required.

3. The customer's duct system must be in adequate condition to accommodate the duct test, and not have been previously tested for the present occupant within a 5-year period. Exception: Duct systems altered as a result of remodeled or added conditioned area.

4. The duct must be accessible for repair. (Exception: aerosol sealing method)

5. Homes must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e.: water heater, stove, etc,) then the house must pass a safety test prior to any duct sealing.

6. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

7. A minimum of 60 cfm @25 Pascals of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.

2. For conventional duct repair only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

4. Aerosol procedures must be followed as specified in training or manufacturer's instructions and will include :

    - Complete pre-seal leakage test using approved aerosol software
    - Aerosol sealants shall meet the requirements of UL 723
    - Seal all boot to ceiling and/or floor connections
    - All areas of the duct system will be evaluated and cost-effective leaks will be sealed by conventional (7.2.2) or aerosol method.
    - Complete post-seal leakage test using approved aerosol software

7.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:

    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing
    - Aerosol technicians must successfully complete industry specific training

4. Before any duct repairs can be made on homes with non-space heating combustion appliances the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. In multi-family rental units the contractor shall seal all joints and connections. No duct test is required for multi-family. No combustion appliances (fireplaces, water heating, etc.) are allowed for multi-family due to safety concerns.

6. PEF reserves the right to request background checks of contractors participating in the Home Energy Improvement Program Duct Test and Leakage Repair Program.

7.4 INSPECTION REQUIREMENTS

All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom and laboratory)
- Duct test field applications
- Codes and standards as they relate to duct sealing

8. HIGH EFFICIENCY ELECTRIC HEAT PUMPS

8.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.

2. The customer must have had an audit within the past two years. An exception would be made for emergency heat pump equipment installations.

3. Customer must have electric strip heat or less efficient heat pump.

8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.

2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

3. Both air handler and condensing units must be replaced.

4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.

5. All equipment shall be new and not refurbished or have been previously installed or used.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available.[4]

7. If the unit is sized larger than one ton (12,000 BTU) per 500 square feet of conditioned space, a manual J or ASHRAE approved sizing calculation must be submitted. The contractor must certify that the unit was sized according to manufacturer specifications. (***Exception:*** *Additions with dedicated HVAC systems where conditioned area is less than 500 square feet and manufactured homes are exempted from this requirement.*)

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[4] If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF, except for water source units.

8. The contractor will certify that the unit was sized according to manufacturer specifications.
9. Refrigerant charge and type shall be according to manufacturer's specifications and recommendations for the unit installed. The contractor will certify that the proper charge is installed, that the unit is tested and is leak free.
10. Contractors shall certify that the airflow meets the manufacturer's recommendations and specifications for the system installed.
11. Contractors shall certify that a hard start kit was installed either by the contractor or at the factory for equipment installations with a scroll compressor larger than 36,000 Btu.
12. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.
13. The contractor shall check that the controlling thermostat is properly leveled, that the anticipator is properly set, and the thermometer is correct to within two degrees Fahrenheit.
14. The contractor will be encouraged to use mastic on all new connections.
15. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
16. Heat pump must be all electric.
17. The contractor will be paid $25 for completing the paperwork on each customer's purchase. This incentive is not to exceed the $25 per account regardless of the number of units installed.

8.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.
3. Contractors must demonstrate their capability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.
4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.
5. The contractor shall have 6 months from date of installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

9. HIGH EFFICIENCY ELECTRIC CENTRAL AIR CONDITIONERS

9.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must meet the Participation Requirements outlined in Section 8.1.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Must meet the Equipment and Installation Specifications outlined in Section 8.2.

9.3 CONTRACTOR QUALIFICATION REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. Must meet the Contractor Requirements outlined in Section 8.3.

10. INSTALLMENT BILLING

1. Finance up to a maximum of $500 through installment billing. For each measure, a customer can use installment billing to finance up to 90% of the total installed cost or repair cost.
2. Installment billing allows the customer to spread the cost over 12 months interest free. The installment billing payments will appear as a separate line item on the customer's monthly electric bill from PEF.
3. Installment billing can be used for any combination of the following qualified measures: ceiling insulation upgrade, duct leakage repair, and high efficiency electric heat pump.
4. If the customer installs additional qualified measures, a new installment billing arrangement can be set up only after the initial or current "loan" is paid off.
5. The customer must own the home in which the improvements are being made. The customer shall not have been cut for non-payment, received a credit extension or have any returned checks within the past two years.

11. FINANCING ASSISTANCE

1. Financing Assistance is another alternative to the direct incentive payment. PEF will work with finance companies and attempt to offer eligible program participants a financing option at below market rates. Eligible customers may apply appropriate program incentives to reduce the principle amount or to lower interest rates on installment loans.

2. The finance company will qualify the borrower and arrange for the loan using their normal procedures.

3. PEF will coordinate with HVAC contractors and various finance companies to offer reduced interest loans on mechanical installations.

4. HVAC contractors will be responsible for presenting incentive options to the customer and arranging financing with participating finance companies, as needed.

5. Contractors are required to submit to PEF an invoice for the incentive amount and a copy of the customer invoice itemizing all costs.

6. The finance company will pay the contractor the total amount to be financed minus the incentive amount.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

RESIDENTIAL

NEW CONSTRUCTION PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
NEW CONSTRUCTION PROGRAM

1. PROGRAM OVERVIEW

The New Construction Program is an "umbrella" program designed to improve the energy efficiency in the following three new construction segments:

Section A. Residential Site Built

Section B. Manufactured Homes

Section C. Multi-Family

This program is designed to target major construction markets, so as to minimize lost opportunities. It is the objective of this program to work closely with these different trade allies to build energy efficient housing for Florida's future.

The program seeks to meet the following overall goals:

1. Educate builders about energy efficient new construction building design to create a supply of energy efficient homes.
2. Educate prospective buyers and real estate agents about the benefits of energy efficient home design to increase the demand for energy efficient homes.
3. Obtain energy and demand impacts that are significant, accurate, sustainable and measurable.
4. Evaluate cost-effective measures for the marketplace.
5. Minimize "lost opportunities" in the new construction market.

The program will provide education and information to the design community and the real estate market on energy efficient building design and construction. This program will pay for the cost of duct testing to educate builders, provide financial incentives for energy efficient equipment, issue a certificate which identifies the home as energy efficient, and offer cooperative advertising to Energy Star developers and builders to promote the New Construction Program.

A. RESIDENTIAL NEW CONSTRUCTION

A.1. OVERVIEW

The Residential New Construction single family site-built segment promotes energy efficient home construction. This will provide customers with more efficient mechanical systems to lower energy consumption combined with improved environmental awareness. This program combines the most efficient measures, in equipment and envelope, to produce the most cost-effective energy efficient home.

The Residential New Construction program defines three levels of eligibility and various options within each level with which a homebuilder may comply in order to receive home certification.

A.2. ELIGIBILITY REQUIREMENTS

1. The home must be either single family detached or single family attached (e.g. townhouses, condos, etc.).

2. The home must be new -- additions do not qualify for this Residential New Construction program. An existing home will be eligible if more than 2/3rds of the original air conditioned (AC) floor space is remodeled or reconstructed.

3. A Residential New Construction builder or builder/owner meeting Progress Energy Florida, Inc. (PEF) standards must build the home. The builder must comply with all Federal, State, and local codes.

4. The home must be accessible for verification of Residential New Construction Program standards by a PEF employee or representative.

5. The home must be located in PEF's service area and must be metered by PEF.

6. The heating source must be an all electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat.

A.2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Cooling unit sizing may not exceed the calculated whole house load by 15% or 6,000 Btuh, whichever is larger.

3. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240/94 or by a PEF-recognized engineering standard using sound engineering estimates.

4. Minimum wall insulation is R-4 for masonry and R-11 for frame.

5. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

6. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

7. If the installed equipment uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor or builder shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

8. Attic Radiant Barrier Systems shall have an emissivity rating $\leq$0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

9. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) $\leq$.50 and a U-value $\leq$.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

A.2.2 CONTRACTOR[1] REQUIREMENTS

1. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow manufacturer's recommendations for the unit installed. The contractor will certify that the unit has been tested and is leak free.

3. All participating contractors must comply with PEF contractor procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program.

5. It is the responsibility of the PEF employee or representative to encourage each builder to move up to either Level Two or Level Three.

6. The contractor must correct any deficiency found in the installation or product when advised by a PEF employee or representative, and notify the PEF employee or representative of compliance within 30 days.

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[1] Contractor and Manufacturer are synonymous

7. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

8. Must meet the Residential New Construction technical specifications of either Level One, Level Two, or Level Three.

9. If the builder has a model center, PEF will pay to test the duct system for one home per model center to educate the builder as to why duct leakage is undesirable. If the builder does not have a model center, the builder's residence or the home the builder is currently constructing may be used for demonstration purposes.

10. The builder or his representative and the builder's air conditioning contractor must be present at the time the educational duct test is conducted. If the builder agrees to participate in Level One prior to the educational test and the air conditioning contractor is already participating in the Residential New Construction Program, then no educational test is required. If an educational duct test is required, a PEF employee or representative must be present.

11. The builder must correct any problems discovered during the duct test before that builder may become certified in the Residential New Construction Program.

12. An incentive of $15 will be paid to the builder or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

13. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

A.3. TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

The Residential New Construction Program defines three levels of eligibility and various options within each level that a homebuilder must comply in order to receive home certification.

A.3.1 LEVEL ONE

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems that meet PEF standards specifications (see Section A.2.1, item 6).

A.3.2 LEVEL TWO

Meet Level One requirements, *and* install a high efficiency electric heat pump with a minimum cooling efficiency of 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of - 7.8 HSPF (Heating Season Performance

Factor)., or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER with a minimum heating efficiency of - 8.1 HSPF. *Plus one of the following:*

1. Construct duct system in accordance with Manual D
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system.
3. Install -high performance windows with a Solar Heat Gain Coefficient (SHGC) of $\leq$.50 and a U-Factor of $\leq$.75.

A.3.3 LEVEL THREE

Homes built under this level shall install the following measures:

- Homes must meet Level One and Level Two requirements
- Duct leakage of total air handler rated flow shall be $\leq$ 5% to unconditioned spaces at 25 Pascals.

Homes shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.

* Homes may qualify at Level Three with a 13 SEER and 7.7 HSPF heat pump greater efficiencies, but will not be eligible for equipment incentives.

A.3.4 Cooperative Advertising

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials.

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

A.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Home must have a centrally ducted heat pump system and meet PEF duct sealing specifications				
Level Two	Incentive from Level One Plus	$ 125	Level One and a high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R19 attic insulation with radiant barrier system		14	7.8	
		$ 325	Level One and a high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R 19 attic insulation with radiant barrier system		16	8.1	
		$350	Level I and high performance windows	**U – Factor**		**Solar Heat Gain Coefficient**	
				≤.75		≤.50	
Level Three	Incentive from Levels One & Two, plus PEF will match on a 50/50 basis up to $50 per qualified home/account for Co-Op advertising		Home must meet all Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to A.3.3)				

A.5. INCENTIVE PROCESSING

1. The PEF employee, builder or HVAC contractor will complete an Residential New Construction Program form which will record as a minimum the following information: builder's name, subdivision, address or lot and block of certified home, Level number, equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC)

2. The Residential New Construction program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. The builder or HVAC contractor will sign and date the form, and retain a copy.

4. If the home is assigned for inspection, the original Residential New Construction Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

5. If the home is not assigned for inspection, or after it has passed inspection, builder's invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the customer database and file a copy of the program forms by builder.

A.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

B. RESIDENTIAL MANUFACTURED NEW HOME

B.1. OVERVIEW

The Residential Manufactured New Home segment promotes energy efficient manufactured home construction. This will provide customers with more efficient mechanical systems to lower energy consumption combined with improved environmental awareness. PEF will work closely with this market segment to educate manufacturers and developers about energy efficient new construction building design to create a supply of energy efficient manufactured homes.

B.2. ELIGIBILITY REQUIREMENTS

1. The home must be either single family manufactured detached or single family manufactured attached.

2. The home must be new -- additions do not qualify for this Residential Manufactured New Home program.

3. A Residential Manufactured New Home manufacturer meeting PEF standards must build the home. Manufacturer must comply with all HUD or DCA requirements. Developers or retailers must follow all procedures to ensure proper installation of high efficiency equipment.

4. The home must be accessible for verification of Residential Manufactured New Home Program standards by a PEF employee or representative.

5. The home must be located in PEF's service area and must be metered by PEF.

6. The heating source must be an electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat.

B.2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturer's instructions and specifications. Any HVAC contractor failing to meet HVAC manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards or by a PEF-recognized engineering standard using sound engineering estimates.

3. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

4. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place

while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

5. If the equipment installed uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor, manufacturer or developer shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

6. Attic Radiant Barrier Systems shall have an emissivity rating of $\leq$0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

7. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) $\leq$.50 and a U-value $\leq$.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

B.2.2 MANUFACTURER[2] REQUIREMENTS

1. Manufacturers shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow HVAC manufacturer's recommendations for the unit installed. The manufacturer, developer or HVAC Contractor will certify that the unit has been tested and is leak free.

3. All participating manufacturers or developers must comply with PEF manufacturer procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program

5. It is the responsibility of the PEF employee or representative to encourage each manufacturer, or interested party to move up to Level Two or Level Three.

6. The manufacturer, HVAC contractor or developer must correct any deficiency found in the installation or product when advised by a PEF employee or representative and notify the PEF employee or representative of compliance within 30 days.

7. The manufacturer or developer shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

8. Must meet the Residential Manufactured New Home technical specifications of either Level One, Level Two, or Level Three.

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[2] Contractor and manufacturer are synonymous.

9. If the manufacturer or developer has a model center, PEF will pay to test the duct system for one home per model center to educate the manufacturer or developer as to why duct leakage is undesirable. If the manufacturer or developer does not have a model center, the manufacturer or developer shall supply a home to be used for testing and educational purposes.

10. The manufacturer or developer or his representative and the manufacturer's air conditioning contractor must be present at the time the educational duct test is conducted. If the manufacturer or developer agrees to participate in Level One prior to the educational test, and the air conditioning contractor is familiar with the Residential Manufactured New Home Program requirements, then no test is required. If an educational duct test is required, a PEF employee or representative must be present.

11. The manufacturer or developer must correct any problems discovered during the duct test before that manufacturer or developer may become certified in the Residential Manufactured New Home Program.

12. An incentive of $15 will be paid to the retailer, developer or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

13. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

B.3. TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

The Residential Manufactured New Home Program defines three levels of eligibility and various options within each level with which a home manufacturer or developer may comply in order to receive home certification.

B.3.1 LEVEL ONE

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems which meet PEF standards. (See Section B.2.1, item 4)

B.3.2 LEVEL TWO

Meet Level One requirements, and install a high efficiency heat pump with a minimum cooling efficiency of 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of 7.8 HSPF (Heating Season Performance Factor), or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER, with a minimum heating efficiency of 8.1 HSPF. *Plus one of the following:*

1. Construct duct system in accordance with Manual D.
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system.
3. High performance windows with a Solar Heat Gain Coefficient of $\leq$.50 and a U-Factor of $\leq$.75.

B.3.3 LEVEL THREE

Manufactured homes built under this level shall install the following measures: Homes must meet Level One and Level Two requirements

- Duct leakage of total air handler rated flow shall be $\leq$5% to unconditioned spaces at 25 Pascals.
- Homes shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.

*Homes may qualify at Level Three with 13 SEER and 7.7 HSPF heat pump or greater efficiencies, but will not be eligible for equipment incentives.

B.3.4 COOPERATIVE ADVERTISING

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

B.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Residency/unit must have centrally ducted heat pump system and meet PEF duct sealing specifications				
Level Two	Incentive from Level One Plus	$ 125	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		14	7.8	
		$ 325	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation, or R 19 attic insulation with radiant barrier system		16	8.1	
		$350	Level One and High Performance Windows	**U-Factor**		**Solar Heat Gain Coefficient**	
				≤.75		≤.50	
Level Three	Incentive from Levels One & Two, plus PEF will match on a 50/50 basis up to $50 per home/account for Co-Op advertising		Home(s)must meet Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to B.3.3)				

B.5. INCENTIVE PROCESSING

1. The PEF employee or representative, manufacturer, HVAC contractor, or park owner will complete a Residential Manufactured New Home Program form which will record as a minimum the following information: manufacturer's name, subdivision, address or lot and block of certified home, Level number, equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC).

2. The Residential New Construction Program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. The manufacturer, developer, retailer or park owner will sign and date the form, and retain a copy.

4. If the home is assigned for inspection, the original Residential Manufactured New Home Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

5. If the home is not assigned for inspection, or after it has passed inspection, builder's invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the customer database and file a copy of the program forms by manufacturer.

B.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

C. MULTI-FAMILY NEW CONSTRUCTION

C.1. OVERVIEW

The Multi-Family New Construction segment promotes energy efficient new building construction in order to ensure that energy efficient rental apartments are available for customers.

It is PEF's objective to educate developers and property Management Companies about energy efficient new construction building design to create a supply of efficient multi-family rental apartments. In addition, educate customers and leasing agents about the benefits of energy efficient unit design to create the demand for energy efficient multi-family rental homes.

C.2. ELIGIBILITY REQUIREMENTS

1. The residency/unit must be multi-family rental, where multi-family is defined as any residential dwelling unit that is attached to another unit by a common wall, ceiling or floor. Any multi-family residential dwellings that are mastered metered (referred to as "Domestic/Commercial") shall be eligible to participate in this program.

2. The residency/unit must be new -- additions do not qualify for this Multi-Family New Construction program.

3. An existing residency/unit that is remodeling or reconstructing more than 2/3rds of the original air conditioned (AC) floor space will be eligible.

4. An Multi-Family New Construction builder, owner or agency meeting PEF standards must build the residency/unit. The builder must be a licensed building contractor and must comply with all Federal, State, and local codes.

5. The residency/unit must be accessible for verification of Multi-Family New Construction Program standards by a PEF employee or representative.

6. The residency/unit must be located in PEF's service area and must be metered by PEF.

7. The heating source must be an electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat. (***Exception:*** *If the Building is over three stories in height, electric strip is allowed if a heat pump is not cost effective to install.*)

C.2.1 Equipment and Installation Specifications

1. All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240/94 or by a PEF-recognized engineering standard using sound engineering estimates.

3. Minimum wall insulation is R-4 for masonry and R-11 for frame.

4. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

5. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

6. If the equipment installed uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor or builder shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

7. Attic Radiant Barrier Systems shall have an emissivity rating of $\leq$0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

8. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) $\leq$.50 and a U-value $\leq$.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

C.2.2 Contractor Requirements

1. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow manufacturer's recommendations for the equipment installed. The contractor will certify that the equipment has been tested and is leak free.

3. All participating contractors must comply with PEF contractor procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program

5. The contractor must correct any deficiency found in the installation or product when advised by a PEF employee or representative and notify the PEF employee or representative of compliance within 30 days.

6. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

7. Must meet the Multi-Family New Construction technical specifications of either Level One, Level Two, or Level Three.

8. If the builder has a model apartment, PEF will pay to test the duct system for one residency/unit per model center to educate the builder as to why duct leakage is undesirable. If the builder does not have a model apartment or the residency/unit the builder is currently constructing may be used for demonstration purposes.

9. The builder or his representative and the builder's air conditioning contractor must be present at the time the educational duct test is conducted. If the builder agrees to participate in Level One prior to the educational test and the air conditioning contractor is already participating in the Multi-Family New Construction Program, then no educational test is required. If an educational duct test is required, a PEF employee or representative must be present.

10. The builder must correct any problems discovered during the duct test before that builder may become certified in the Multi-Family New Construction Program.

11. An incentive of $15 will be paid to the builder or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

12. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

C.3. TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

The Multi-Family New Construction Program defines three levels of eligibility and various options within each level which a builder may comply in order to receive a building certification.

C.3.1 LEVEL ONE

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems, which meet PEF specifications (see Section C.2.1, item 5).

C.3.2 LEVEL TWO

Meet Level One requirements, and install a high efficiency heat pump with a minimum cooling efficiency of 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of 7.8 HSPF (Heating Season Performance Factor), or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER, with a minimum heating efficiency of 8.1 HSPF. *Plus one of the following:*

1. Construct duct system in accordance with Manual D
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system. (Top floor only, all units).
3. High performance windows with a Solar Heat Gain Coefficient of $\leq$.50 and a U-Factor of $\leq$.75.

C.3.3 LEVEL THREE

Residency/units built under this level shall install the following measures:

- Residency/units must meet Level One and Level Two requirements.
- Duct leakage of total air handler rated flow shall be $\leq$5% to unconditioned spaces at 25 Pascals
- Units shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.* Homes may qualify at Level Three with 13 SEER and 7.7 HSPF heat pump or greater efficiencies, but will not be eligible for equipment incentives.

C.3.4 COOPERATIVE ADVERTISING

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials.

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

C.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Residency/unit must have centrally ducted system and meet PEF duct sealing specifications				
		$ 125	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		14	7.8	
Level Two	Incentive from Level One Plus						
		$ 325	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		16	8.1	
		$350	Level One and high performance windows	**U-Factor**		**Solar Heat Gain Coefficient**	
				≤.75		≤.50	
Level Three	Incentive from Levels One & Two, Plus PEF will match on a 50/50 basis up to $50 in co-op advertising per unit		Residency/unit must install Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to section C.3.3)				

C.5. INCENTIVE PROCESSING

1. The PEF employee, builder or HVAC contractor will complete a Multi-Family New Construction Program form which will record as a minimum the following information: builder's name, name of complex, address(s) or apartment numbers of certified residency/unit. Level Number (i.e.: 1, 2, 3), equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC).

2. The Residential New Construction Program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. If payment is to be made to someone other than the builder, then the following information is required: Payee's name, address, Relationship to complex (Owner, Manager), name of complex, address(s) or apartment numbers of certified residency/unit. Level Number (i.e.: 1, 2, 3), equipment information (manufacturer, model numbers, SEER or HSPF).

4. The builder/owner or HVAC contractor will sign and date the form, and retain a copy.

5. When the complex is assigned for inspection, the original Multi-Family New Construction Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

6. PEF will then input "work completed" and "amount paid" to the customer database and file copies of the program form by builder.

C.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

1. PROGRAM OVERVIEW

Progress Energy Florida, Inc.'s (PEF) Low-income Weatherization Assistance Program (LIWAP) is a custom energy conservation program. It is designed to develop a working relationship with weatherization providers. The LIWAP seeks to achieve the following goals:

1. Integrate PEF's LIWAP procedures with the Department of Community Affairs (DCA) and local weatherization providers to deliver energy efficiency measures to low-income families.

2. Identify and educate agencies and low income customers about energy saving opportunities to upgrade home energy efficiency.

3. Increase low-income families' participation in PEF's DSM programs.

4. Minimize "lost opportunities" in the existing marketplace.

2. ELIGIBILITY REQUIREMENTS

Low-income will be defined as DCA's requirements for participation in the Weatherization Assistance Program for Low Income. The DCA is responsible for providing annual updates to participating providers. Additional requirements are as follows:

- The residence must be in PEF's service area and a residential metered customer.

- Must meet Florida's weatherization low-income criteria in addition to income requirements stated above.

- All installations must be accessible for verification by a PEF representative.

- Homes must be greater than two years old.

- Homes having previously received PEF incentives for listed measures are not eligible for the same measure.

- A Florida approved provider or their approved contractors must perform all work. Participating PEF contractors may be used.

2.1 CONTRACTOR REQUIREMENTS

The Department of Community Affairs and local weatherization providers are responsible for all work performed. Local providers may also use PEF participating contractors for attic insulation and duct testing/repair.

1. Local providers must have appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.

2. All work performed must follow manufacturers' and PEF's specifications where applicable.

3. Local providers and their agents must correct any deficiencies found in the installation or materials identified by PEF.

4. DCA/Providers shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages claims or costs whatsoever caused by items furnished or services rendered.

5. All PEF contractors shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

6. PEF requires a minimum of the following insurance policies be in force by all participating contractors:
    - Workman's Compensation as required by law.
    - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
    - General and Automobile Property Damage Liability: $100,000 per occurrence.
    - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

2.2 EQUIPMENT/MATERIALS AND INSTALLATION SPECIFICATIONS

All materials and installation specifications shall meet or exceed the following guidelines:

- Weatherization Installation Standards of the U.S. Department of Energy.
- Equipment must meet manufacturers' specification and installation procedures.
- All work shall be performed to constitute a finished product.

- Materials shall be free of defects and covered under warranty for at least one year.
- Installation procedures must comply with all federal, state and local codes.
- All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2.3 Local Providers Responsibility

The Department of Community Affairs, through their local weatherization providers, will be responsible for the following:

1. Qualify all participants using federal and state guidelines outlined in Section 2.
2. Conduct the National Energy Audit (NEAT) or any PEF approved energy audit on all eligible low-income weatherization installations.
3. Provide PEF with the following customer information at the time of application:
    - Client information
    - A list of installed measures and, where appropriate, pre-existing conditions
    - Pre and post CFM 50 readings
    - Itemized invoice with a brief description of installed measures (incentive measures only) and program incentive for each weatherized home, or the PEF/LIWAP data information form.
4. Qualify and install measures by PEF's standards and procedures. All installations shall comply with PEF specifications (see Sections 4.2 through 10.2).
5. Provide PEF random access to the weatherized homes for program evaluation and inspection.
6. Deliver energy education to weatherization clients.
7. Invoice PEF for program approved installed measures on monthly basis.

3. INCENTIVES AND ELIGIBLE MEASURES

Progress Energy will provide incentives for the following measures with the stipulation that all requirements and minimum levels are achieved where applicable:

Weatherization Measure	Minimum Measure Requirement	Incentive Amount	Additional Requirements
Attic Insulation	Insulate to at least R-19	$15 per 100 sq ft. up to a max of $75 And an additional 5¢ per square foot above 1500 square feet will be paid	Must be a NEAT recommendation
	Insulate to at least R-30	$20 per 100 sq ft. up to a max of $100. And an additional 7¢ per square foot above 1500 square feet will be paid	
Duct Leakage Test	Centrally ducted cooling system with electric heat	$30 for the first unit tested $20 for each additional unit at the same residence	1. LIWAP inspection 2. Must have electric heat (ducted or non-ducted)
Duct Leakage Repair	Non-Ducted Electric Heat	25% up to $50	1. LIWAP Inspection 2. Completed Duct Test
	Electric Ducted Heat	50% up to $125	
Reduce Air Infiltration	Must demonstrate a minimum reduction of 1500 cfm at 50 pascals in electrically heated homes Not to exceed a minimum of 0.35 ACH	$75	Must be a NEAT recommendation
Electric Hot Water Reduction	Wrap electric water heater and, if needed, lower temperature setting / repair hot water leaks, and replace water heater	$25	LIWAP Inspection
HVAC Maintenance	Centrally ducted Electric Heat and Cooling Systems	$40	LIWAP Inspection
High Efficiency Heat Pump Replacing a Heat Pump	14 SEER and 7.8 HSPF	$100	
	15 SEER and 8 HSPF	$150	
High Efficiency Heat Pump Replacing Electric Resistance Heat	14 SEER and 7.8 HSPF	$250	
	15 SEER and 8 HSPF	$350	
Heat Recovery Unit	Connected to an Electric Water Heater	$100	LIWAP Inspection
Low Flow Showerheads	Maximum of 2.5 gallon per minute flow	$18 per showerhead	Maximum of 2 per home and 1 per shower
Compact Fluorescent Light Bulbs	15 or 18 watt Compact Fluorescent replacing incandescent lamp greater than or equal to 60 watts	$4 per lamp	Maximum of 3 per household
Refrigerator Coil Brush	Clean Refrigerator or Freezer Coils	$7 each	Maximum of 1 per household
Faucet Aerators	Flow Reduction	$2 per Aerator	Maximum of 3 per household

Weatherization Measure	Minimum Measure Requirement	Incentive Amount	Additional Requirements
Dedicated Heat Pump Water Heater		$200	LIWAP Inspection
Supplemental Incentive Bonus	High efficiency electric heat pump **and** either ceiling insulation **or** duct leakage repair	$25	
	High efficiency electric heat pump **and** ceiling insulation **and** duct leakage repair	$50	

Notes:

1. *All non-matching incentives cannot exceed the actual cost of the measure.*
2. *A home is eligible to receive an incentive for each heat pump installed based on the efficiency level.*
3. *To qualify for the supplemental bonus, additional measures must be implemented within 90 days of heat pump installation.*
4. *In multi-family structures, PEF reserves the right to request bids from contractors to hold customer costs to a minimum.*

4. CEILING INSULATION UPGRADE

4.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. The home must be at least two years old.
4. Eligible residences must have whole house electric air conditioning and/or whole house electric heating.
5. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be less than R-12.
6. Any structure that has utilized any of PEF's ceiling insulation programs is not eligible to participate again. However, if the structure, through an act of God, loses the insulation **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from his/her insurance company stating that the insulation was not covered.
7. The total ceiling area to be insulated must be greater than 100 square feet.
8. Mobile homes built after January 1, 1977 will be assumed to have an insulation value in excess of R-11 and will not be eligible to participate in this part of the LIWAP program unless documentation is provided to PEF stating that the actual existing insulation value is less than R-12.
9. Any home with "Knob and Tube Wiring" that is energized is not eligible.[5]

4.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation shall be added in increments of R-11, R-19, R-22, or R-30.

[5] National Electrical Code, Article 324, Section 324-4

3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area including knee walls.[6]

7. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

8. Radiant barriers will not be allowed as a substitute in the LIWAP.

9. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts).[7]

4.3 CONTRACTOR REQUIREMENTS

4. Must meet the Contractor Requirements outlined in Section 2.1.

5. The contractor will supply to the customer, in writing the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

6. The contractor will attach an R-value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:

    - Manufacturer's name
    - Insulation type
    - R-Value of insulation installed

[6] Florida Building Code Chapter 13, sub section 6 Section 604.1.A.1 Walls Considered Ceiling Area

[7] Florida Building Code Chapter 13, sub section 6 Section 604.1ABC.1.1 Ceilings With Blown-In Insulation

- Thickness of insulation installed
- Location of insulation installed
- Name and address of the contractor installing the insulation
- Date of installation

5. DUCT LEAKAGE REPAIR

LIWAP duct repair is designed to train and encourage weatherization providers on the identification and repair procedures associated with duct leakage. Blower door or duct blaster equipment will be used as a diagnostic tool to locate duct leakage and provide quality control. This LIWAP component is available to all residential customers having a centrally ducted system with electric heating and cooling, provided the duct system is easily accessible.

5.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Repair recommendations must have been the result of a PEF-approved duct test.
4. The customer's duct system must be in adequate condition to accommodate the duct test, and not have been previously tested for the present occupant within a 5-year period.
5. The duct must be accessible for repair.
6. Homes must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e., water heater, stove, etc,) then the house must pass a safety test prior to any duct sealing.
7. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

5.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Only mastic and fiber cloth or mastic with imbed fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

5.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:

    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing

4. Before any duct repairs can be made on homes with non-space heating combustion appliances the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. A list of PEF contractors will be furnished to local weatherization providers for duct testing and repair. Providers will contract directly with PEF duct repair contractors for all repair work.

5.4. INSPECTION REQUIREMENTS

All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom and laboratory)
- Duct test field applications

- Codes and standards as they relate to duct sealing

6. HIGH EFFICIENCY ELECTRIC HEAT PUMPS

Promote the proper sizing and installation of high efficiency Heat Pump systems.

6.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.
3. Both air handler and condensing units must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.
5. All equipment shall be new and not refurbished or have been previously installed or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available.[8]
7. If the unit is sized larger than one ton (12,000 BTU) per 500 square feet of conditioned space, a manual J or ASHRAE approved sizing calculation must be submitted. The contractor must certify that the unit was sized

[4] If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF, except for water source units,.

according to manufacturer specifications. Exception: Manufactured homes are exempted from this requirement.

8. The contractor will certify that the unit was sized according to manufacturer specifications.

9. Refrigerant charge and type shall be according to manufacturer's specifications and recommendations for the unit installed. The contractor will certify that the proper charge is installed, that the unit is tested and is leak free.

10. Contractors shall certify that the airflow meets the manufacturer's recommendations and specifications for the system installed.

11. Contractors shall certify that if the equipment installed has a scroll compressor (36,001 Btu or larger), that a hard start kit was installed either by the contractor or at the factory.

12. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

13. The contractor shall check that the controlling thermostat is properly leveled, that the anticipator is properly set, and the thermometer is correct to within two degrees Fahrenheit.

14. The contractor will be encouraged to use mastic on all new connections.

15. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

16. Heat pump must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet Contractor Requirements in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.

3. Contractors must demonstrate their capability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.

4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.

5. The agency shall have 6 months from date if installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

7. HIGH EFFICIENCY ALTERNATE ELECTRIC WATER HEATING

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have an electric water heater.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All heat recovery units must be installed in accordance with manufacturer's specifications.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.
3. Heat recovery water heaters must be equipped with a circulating pump and must be Association of Refrigerant Desuperheater Manufacturers (ARDM) certified.
4. Heat recovery unit must be installed on an electric water heater.
5. All equipment shall be new and not refurbished, previously installed, or used.

7.3 CONTRACTOR REQUIREMENTS

Must meet the Contractor Requirements outlined in Section 2.1 and 6.3

8. HEATING AND AIR CONDITIONING MAINTENANCE (HAC)

Heating and air conditioning maintenance is designed to increase energy efficiency through proper operation of mechanical equipment. Local providers are encouraged to identify HAC systems that could benefit from service maintenance to avoid future breakdowns.

8.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have centrally ducted electric heating and cooling.

8.2 EQUIPMENT/SERVICE AND INSTALLATION SPECIFICATIONS

The following represents the minimum requirement that must be performed by an approved contractor:

Filter:

- Inspect and clean filters
- Replace up to one inch throw-away filter
- Replace specialty filters if provided by customer

System Controls and Operation:

- Check thermostatic operation
- Cycle all controls
- Inspect for dirt and loose connections; clean and tighten as necessary
- Visually check all connections for refrigerant leaks
- Check refrigerant pressure and add as needed
- Check and record supply and return temperature

Evaporator:

- Inspect coil assembly and drip pan
- Clean coil and pan and flush as necessary

- Check drain line and blow out if necessary
- Apply algae treatment as required

Blower and Blower Drive:

- Oil blower motor if applicable
- Check motor bearings
- Check belt condition and tension; replace if necessary
- Check blower cleanliness; clean if necessary
- Check and record amp draw
- Check drive and pulley alignment
- Check for vibrations

Condenser:

- Lubricate condenser fan motor, if applicable
- Check motor bearings
- Check coil condition for dirt build-up and clean as necessary
- Clean condenser as needed

Compressor:

- Check electrical wire connections; clean and tighten where possible
- Check operation and condition
- Check and record operating amperage

Heating System:

- Check electric heat strips

8.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Sections 2.1 and 6.3.

9. WATER HEATER

It is the intent of this portion of the program to save energy through adding additional insulation to the older water heaters, set back temperatures, insulate pipes and replace older less efficient water heaters, and help defray the cost of a new high efficient water heater.

9.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have an electric water heater.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Sides must be wrapped with a minimum Insulation level equal to R-6 or greater.
2. Top must be insulated to an R-8 or greater.
3. Pipes shall be insulated up to 3-foot minimum.
4. Replacement water heaters must have an EF = 0.88 or higher.

9.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Section 2.3.

10. AIR INFILTRATION REDUCTION

It is the intent of this portion of the program to save energy through reduction of unintended air infiltration in older homes.

10.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must be able to achieve an infiltration reduction of at least 1,500 cfm at 50 pascals.
4. Home must meet ASHRA Standard 90.2 as a minimum air infiltration level when infiltration sealing is completed.

10.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

Contractor must use a blower door and a manometer for precise pressure measurements.

10.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Section 2.3 and 6.3.

11. REFRIGERATOR BRUSH, COMPACT FLUORESCENT BULBS, LOW FLOW SHOWERHEADS, AND FAUCET AERATORS

11.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.

Measure	Participation Requirements	Equipment and Installation Specifications
Low Flow Showerhead	• Electric Water Heater • Current showerhead flow of 3.5 gallon per minute or greater	Must meet manufacturer's specifications
Compact Fluorescent Light Bulb	• 15 or 18 watt compact fluorescent replacing incandescent lamp greater than or equal to 60 watts operating a minimum of 3 hours per day	Must meet manufacturer's specifications • Must not be installed on a dimming circuit • Must not be installed in an enclosed fixture • Must be interior use only
Faucet aerators	• No aerators currently installed	Must meet manufacturer's specifications • Threads must be compatible with existing faucet threads
Refrigerator coil brush	• Refrigerator or Freezer present	Use per manufacturer's recommendation to clean condenser coils

11.2 CONTRACTOR REQUIREMENTS

Must meet the Contractor Requirements outlined in Section 2.1

12. INCENTIVE PROCESSING

Weatherization providers will submit the following information with all invoices by the tenth workday of each month (not to exceed 45 days from the date of installation):

- Client information
- A list of installed measures and, where appropriate, pre-existing conditions
- Pre and post CFM 50 readings
- Itemized invoice with a brief description of installed measures (incentive measures only) and program incentive for each weatherized home, or the PEF/LIWAP data information form.

If the home is not selected for inspection, or after it has passed inspection, invoices will be processed for payment. PEF will input installed measures and paid incentives to a data base system. Submitted reports and invoices will be maintained on file.

13. REPORTING REQUIREMENTS

PEF will follow the reporting requirements consistent with Rule 25-17.0021(5), Florida Administrative Code.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

BETTER BUSINESS PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
BETTER BUSINESS PROGRAM

1. PROGRAM OVERVIEW

The Better Business Program is the "umbrella" efficiency program designed to improve the energy efficiency of existing commercial facilities. The program seeks to meet the following overall goals:

1. Improve customer comfort levels through energy efficient equipment.
2. Obtain energy and demand reductions that are significant, permanent and measurable.
3. Enhance contractor awareness of the capabilities of energy efficient technologies.
4. Educate customers about additional opportunities to upgrade facility energy efficiency.
5. Obtain cost-effective resources from the marketplace.
6. Minimize "lost opportunities" in the existing commercial market.

2. ELIGIBILITY REQUIREMENTS

1. All measures must have been recommended during a PEF energy audit which must have been done within the past 2 years. (***Exceptions**: In emergency cases, the customer may have HVAC equipment installed.)*
2. Equipment and measures must be installed in facilities that are located in the PEF service territory and served by a metered PEF account.
3. ***Commercial multi-family*** is defined as commercially metered accounts of multi-family residential apartments or condominiums, or commercially metered accounts of assisted living residential apartment units (with a minimum of 500 square feet of conditioned space). Any multi-family residential dwellings that are mastered metered (referred to as "Domestic/Commercial") shall be eligible to participate in this program.
4. PEF must be permitted to inspect the installation of all measures and equipment prior to issuing any incentive payments.

2.1 CONTRACTOR REQUIREMENTS

1. All participating contractors must comply with PEF contractor procedures specific to the program component in which they are participating. Failure to do so may result in termination of participation in any or all PEF Programs.

2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by an PEF representative and notify PEF of compliance within 30 days.

4. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.

5. The contractor must comply with all Federal, State and local codes and regulations and have the appropriate license(s) for the work to be performed.

6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all PEF programs.

7. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 working days of incident.

8. The contractor must provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 6 dealing with HVAC contractors is exempt from this provision.*)
   - Workers' Compensation as required by law.
   - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
   - General and Automobile Property Damage Liability: $100,000 per occurrence.
   - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

9. PEF reserves the right to request background checks of contractors participating in the Better Business Program.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Heat Pumps less than or equal to 65,000 Btu/h replacing electric resistance heat	$250 for minimum cooling efficiency of 14.0 SEER and minimum heating efficiency of 7.8 HSPF
	$350 for minimum cooling efficiency of 15.0 SEER and minimum heating efficiency of 8 HSPF
Heat pumps less than or equal to 65,000 Btu/h replacing heat pump	$100 for minimum cooling efficiency of 14 SEER and minimum heating efficiency of 7.8 HSPF
	$150 for minimum cooling efficiency of 15 SEER and minimum heating efficiency of 8 HSPF
Package Terminal Heat Pumps (PTHPs)	$150 per kW reduced from baseline efficiency
Unitary A/C and Heat Pumps greater than 65,000 Btu/h	$150 per kW reduced from baseline efficiency
Air-Cooled and Water-Cooled Electric Chillers	$150 per kW reduced from baseline efficiency, with a maximum of $75,000 per project
Energy Recovery Ventilation	$1.00per CFM, minimum 450 CFM unit >65% winter effectiveness per ARI 1060-2000 with a maximum of $5,000 per building
Cool Roof	Energy Star Roof Product with .65 or greater solar reflectance per ASTM E 903 or ASTM C 1549; $.10 per square-foot installed with maximum of $5,000 per building
Ceiling Insulation Upgrade	$75 to bring insulation level up to a minimum of R-19 *An additional 5¢ per square foot above 1500 square feet will be paid
	$100 to bring insulation level up to a minimum of R-30 *An additional 7¢ per square foot above 1500 square feet will be paid
	Commercial multi-family units count on a per unit basis
Duct Test	50% of test cost up to $30 for first unit tested
	50% of test cost up to $20 for each additional unit tested
Duct Repair	25% of the repair cost up to a maximum of $50 per unit for facilities with non-ducted electric heat
	50% of the repair cost up to a maximum of $125 per unit for facilities with ducted electric heat. Up to an additional $25 may be paid during off-season shoulder months Commercial multi-family units count on a per unit basis, receive $100 and no duct test is required[1]

[1] Top floor only on multi-story buildings.

4. INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.

2. A PEF inspector will complete a Better Business Program form which will record as a minimum the following information: customer's name, address and account number. In addition, equipment information (manufacturer, model numbers, SEER or HSPF) will be gathered at that time. For aerosol duct sealing participation, pre and post duct leakage data and a copy of the certificate of completion will be required.

3. The customer will sign and date the PEF form that relates to each applicable measure installed.

4. In addition, project-supporting documents will be reviewed for program compliance.

5. After the inspection has been successfully completed, the PEF inspector will return the original form to PEF for payment processing.

6. Incentives will not be paid until the review (and inspection when required) is/are completed.

7. A copy of the customer's invoice must accompany the incentive application for all measures completed.

8. PEF will then input the completed paperwork into the computer system and file a copy of the Better Business form.

9. The customer has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. If a check is requested, the auditor will need to obtain the customer's Tax ID#. Any customer receiving over $600 total during a year will receive an IRS 1099 form from PEF reporting to the customer and the IRS the total amount of the rebates received from PEF for that year.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. HVAC Equipment

6.1 Participation Requirements

1. The customer must provide proof of HVAC project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices or purchase orders.

2. Air Conditioning and Refrigeration Institute (ARI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form.

3. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

6.2 Equipment and Installation Specifications

Small Heat Pumps (≤ 65,000 Btu/h)

1. Installed equipment must be complete systems (i.e. both air handler and outdoor condensing units must be replaced in order to qualify for an incentive) including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. All equipment installations must meet manufacturers' instructions and specifications.

3. All equipment shall be new and not refurbished, previously installed, or used.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and the heating minimum efficiency requirements described in Section 6.4.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF.

7. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

8. Contractors shall certify that a "hard start" kit has been installed to manage starting current on all scroll compressor units over 36,000 Btu/h.

9. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

10. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

11. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

12. The contractor will be encouraged to use mastic on all new connections.

13. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

14. Heat pump must be all electric.

Package Terminal Heat Pumps (PTHPs)

1. Packaged terminal heat pump heating and cooling efficiencies (at ARI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 6.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air conditioners that use only electric resistance elements for heating.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating

certified to be in compliance with an approved DOE or ARI rating procedure.

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

6. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

7. Package Terminal Heat pump must be all electric.

Unitary A/C and Heat Pumps (> 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure (ARI 210/240-94 for less than 135,000 btu/h and ARI 340/360 for units greater than 135,000 btu/h).

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

8. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

9. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

10. The contractor will be encouraged to use mastic on all new connections.

11. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

12. HVAC equipment must be all electric.

Air-Cooled and Water-Cooled Electric Chillers

1. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure.

2. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

3. All equipment installations shall meet manufacturer's instructions and specifications.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

6. HVAC equipment must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

3. Contractors must demonstrate their ability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.

4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.

6.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

Small Heat Pumps (≤ 65,000 Btu/h)

MINIMUM COOLING EFFICIENCY	MINIMUM HEATING EFFICIENCY	INCENTIVE per Heat Pump (HP)
SEER	HSPF	
14.0	7.8	$100 HP to HP $250 Strip to HP
15.0	8	$150 Strip to HP $350 Strip to HP

Packaged Terminal Heat Pumps (PTHPs) (ARI 310/380 Test Standards)

Cooling Capacity (Btu/h)	Heating Efficiency (COP)		Cooling Efficiency (EER)	
	Baseline Efficiency	Minimum Efficiency Eligible for Incentive	Baseline Efficiency	Minimum Efficiency Eligible for Incentive
≤7,000	1.0	3	9.3	10.5
7,001-8,000	1.0	3	9.3	10.3
8,001-9,000	1.0	3	9.1	10.3
9,001-10,000	1.0	3	8.9	10.3
10,001-11,000	1.0	2.9	8.7	10.0
11,001-12,000	1.0	2.9	8.5	10.0
12,001-13,000	1.0	2.9	8.2	10.0
13,001-14,000	1.0	2.9	8.0	9.5
14,001-15,000	1.0	2.9	7.8	9.3
>15,000	1.0	2.9	7.6	9.0

Unitary AC and Heat Pumps > 65,000 Btu/h

Equipment Type and Size Range	2006State Energy Code Standard	Minimum Efficiency Eligible for Incentive
Air-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	10.3 EER	11.5 EER
135,001 Btu/h – 240,000	9.7 EER	10.1 EER
240,001 – 760,000 Btu/h	9.5 EER	10.8 EER
Over 760,000 Btu/h	9.2 EER	10.5 EER
Water-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	11.5 EER[a]	13 EER[a]
over 135,000 Btu/h	11 EER[a]	12.5 EER[a]

[a] Water-cooled EER is at Standard Rating of 85° F entering water

Air-cooled and Water-cooled Electric Chillers (ARI 550/590 Test Standards)

Equipment Type and Size Range	2006 State Energy Code Standard	Minimum Efficiency Eligible for Incentive
WATER-COOLED CENTRIFUGALCHILLERS		
under 150 tons	0.70 kW/ton (5 COP)	0.65 kW/ton (5.4 COP)
150-300 tons	0.63 kW/ton (5.5 COP)	0.60 kW/ton (5.9 COP)
over 300 tons	0.58 kW/ton (6.1 COP)	0.56 kW/ton (6.3 COP)
WATER-COOLED SCROLL or SCREW CHILLERS		
under 150 tons	0.79 kW/ton (4.5 COP)	0.72 kW/ton (4.9 COP)
150-300 tons	0.72 kW/ton (4.9 COP)	0.66 kW/ton (5.3 COP)
over 300 tons	0.64 kW/ton (5.5 COP)	0.59 kW/ton (5.9 COP)
AIR-COOLED ELECTRIC CHILLERS		
any size	1.26 kW/ton (2.8 COP)	1.17 kW/ton (3 COP)

7. CEILING INSULATION UPGRADE

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.

2. Building must be at least two years old at the time of the audit. New construction is not eligible to participate in this program.

3. The weighted average R-value of the existing insulation over the total ceiling square footage (above conditioned space) must be less than R-12.

4. Eligible facilities must have whole-facility electric air conditioning and/or whole- facility electric heating.

5. Any structure that has in the past utilized this portion of the program (attic insulation) is not eligible to participate again. However, if that structure, through uncontrollable circumstances, loses the insulation and this loss is not covered by insurance, then the structure would be eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from their insurance company stating that the insulation loss was not covered by insurance.

6. Total square footage of the area to be insulated must be greater than 500 square feet.

7. Any facility with "Knob and Tube Wiring" that is energized is not eligible. *(National Electrical Code 1990, Article 324, Section 324-4).*

8. ***Commercial multi-family*** units will be qualified as individual units for incentive purposes. Multi-family units greater than one story in height may only have the top floor eligible for incentive purposes.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.

2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation will be added in increments of either R-11, R-19, R-22 or R-30.

3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to proposed R-value.

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area.

7. The insulation must not cover existing soffits or any other type of ventilation.

8. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

9. Radiant barriers will not be allowed as a substitute for insulation in this program.

10. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches, and where obstructions to blown insulation exist (such as air-conditioning ducts). *(Florida "1993 Energy Efficiency Code for Building Construction" Section 604.1 ABC.1.1 Ceilings With Blown-In Insulation).*

7.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlines in Section 2.1.

2. The contractor will supply to the customer, in writing, the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

3. The contractor will attach an R-Value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
   - Manufacturer's name
   - Insulation type
   - R-Value of insulation installed
   - Thickness of insulation installed
   - Location of insulation installed
   - Name and address of the contractor installing the insulation
   - Date of installation

4. PEF reserves the right to request background checks of contractors participating in the Better Business Program Ceiling Insulation upgrades.

8. Duct Test And Leakage Repair

8.1 Participation Requirements

1. Must meet the Eligibility Requirements as outlined in Section 2.

2. Repair recommendations must have been the result of a PEF-approved duct test.

3. The customer's premise must be in adequate condition to accommodate the duct test to be performed and not have been previously tested for the present occupant within a 5-year period.

4. The duct must be easily accessible for repair. (Exception: aerosol sealing method)

5. ***Commercial multi-family*** units will be qualified as individual units for incentive purposes. Multi- family units greater than one story in height may only have the top floor duct systems(s) repaired. No combustion appliances (fireplaces, water heating, etc) are allowed due to safety concerns.

6. All facilities must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist, then the facility must pass a safety test prior to any duct sealing.

7. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

8. A minimum of 60 cfm @25 Pascals of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

8.2 Equipment and Installation Specifications

1. All equipment installations must meet manufacturers' instructions and specifications.

2. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used, the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL 181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

4. Aerosol procedures must be followed as specified in training or manufacturer's instructions and will include :

    - Complete pre-seal leakage test using approved aerosol software
    - Aerosol sealants shall meet the requirements of UL 723
    - Seal all boot to ceiling and/or floor connections
    - All areas of the duct system will be evaluated and cost-effective leaks will be sealed by conventional (7.2.2) or aerosol method
    - Complete post-seal leakage test using approved aerosol software

8.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air-Conditioning contractor in the jurisdiction having authority.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:

    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing
    - Aerosol technicians must successfully complete industry specific training

4. Before any duct repairs can be made on facilities with non-space heating combustion appliances, the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. In ***Commercial multi-family*** units, the contractor shall seal all joints and connections of the duct work, and no duct test is required. Multi- family units greater than one story in height may only have the top floor duct systems(s) repaired. No combustion appliances (fireplaces, water heating, etc.) are allowed for multi-family due to safety concerns.

6. PEF reserves the right to request background checks of contractors participating in the Better Business Program Duct Test and Repair service.

8.4 INSPECTION REQUIREMENTS

1. All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:
    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing

9. ENERGY RECOVERY VENTILATION

9.1 PARTICIPATION REQUIREMENTS

1. The customer must provide proof of energy recovery ventilation project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) 1060 certified efficiency data must be attached to the incentive form.

3. Heating and cooling system must be all electric.

4. Twenty (20) year life with one membrane change out.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. Equipment efficiency ratings shall be obtained from Air Conditioning and Refrigeration Institute (ARI) rating procedure standard 1060-2000.

3. To be eligible for an incentive, the energy recovery ventilation unit ARI 1060 rating must be greater than 65% winter effectiveness.

4. All equipment installations must meet manufacturers' instructions and specifications.

5. All equipment shall be new and not refurbished, previously installed, or used.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. The contractor will be encouraged to use mastic on all new connections.

10. Cool Roof

10.1 Participation Requirements

1. The customer must provide proof of Energy Star approved Roof Products project cost and project contract date. This qualification is typically met by submitting copies of invoices.

2. The "cool roof" product must be an approved Energy Star product. It should be tested using the ASTM E 903 or ASTM C 1549 standards and be certified as having an Initial Solar Reflectance greater than or equal to 0.65 and certification must be attached to the incentive form.

3. Cooling system must be all electric.

10.2 Material and Installation Specifications

1. Installed roofing product must be certified and approved by the Energy Star Roof Products program and shall be listed by the EPA in their approved products listing.

2. Qualified roofing material ratings shall be obtained by the ASTM E 903 or ASTM C 1549 standards test and have an Initial Solar Reflectance greater than or equal to 0.65.

3. All installations must meet manufacturers' instructions and specifications.

11. Installment Billing

1. As an alternative to receiving an incentive payment, customers may opt to finance up to a maximum of $500 through installment billing. For each measure, a customer can use installment billing to finance up to 90% of the total installed cost or repair cost.

2. Installment billing allows the customer to spread the cost over 12 months, interest free. The installment billing payments will appear as a separate line item on the customer's monthly electric bill from PEF.

3. Installment billing can be used for any combination of the following qualified measures: ceiling insulation upgrade, duct leakage repair, and high efficiency HVAC equipment.

4. If the customer installs additional qualified measures, a new installment billing arrangement can be set up only after the initial or current "loan" is paid off.

5. The customer must own the facility in which the improvements are being made. The customer shall not have been cut for non-payment, received a credit extension or have any returned checks within the past two years.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

COMMERCIAL/INDUSTRIAL NEW CONSTRUCTION PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
COMMERCIAL/INDUSTRIAL
NEW CONSTRUCTION PROGRAM

1. PROGRAM OVERVIEW

The Commercial/Industrial New Construction Program is an "umbrella" program designed to encourage the construction of energy efficient commercial buildings.

The program seeks to meet the following overall goals:

1. Educate builders about energy efficient new construction commercial building design to create a supply of energy efficient facilities.

2. Obtain energy and demand impacts that are significant, accurate, sustainable and measurable.

3. Evaluate cost-effective measures for the marketplace.

4. Minimize "lost opportunities" in the new construction market.

2. ELIGIBILITY REQUIREMENTS

1. Equipment and measures must be installed in business facilities that are located in the PEF service territory and are served by a metered PEF account.

2. PEF must be allowed to inspect the installation of all measures and equipment prior to issuing any incentive payments.

3. The commercial facility must be new – additions do not qualify for this program.

2.1 CONTRACTOR REQUIREMENTS

1. All participating contractors must comply with PEF contractor procedures specific to the program component in which they are participating. Failure to do so may result in termination of participation in any or all PEF programs.

2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by a PEF representative and notify PEF of compliance within 30 days.

4. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.

5. The contractor must comply with all Federal, State and local codes and regulations, and have the appropriate license(s) for the work to be performed.

6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all PEF programs.

7. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 working days of incident.

8. The contractors must provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 6 dealing with HVAC contractors is exempt from this provision*).

   - Workers' Compensation as required by law
   - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence
   - General and Automobile Property Damage Liability: $100,000 per occurrence
   - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage

9. PEF reserves the right to request background checks of contractors participating in the Commercial New Construction Program.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Heat Pumps less than or equal to 65,000 Btu/h	$100 for minimum cooling efficiency of 14 SEER and minimum heating efficiency of 7.8 HSPF
	$150 for minimum cooling efficiency of 16 SEER and minimum heating efficiency of 8.1 HSPF
Package Terminal Heat Pumps (PTHPs)	$150 per kW reduced from baseline efficiency
Unitary A/C and Heat Pumps greater than 65,000 Btu/h	$150 per kW reduced from baseline efficiency
Air-Cooled and Water-Cooled Electric Chillers	$150 per kW reduced from baseline efficiency, with a maximum of $75,000 per project
Energy Recovery Ventilation	$1.00 per CFM, minimum 450 CFM unit >65% winter effectiveness per ARI 1060-2000 with a maximum of $5,000 per building
Cool Roof	Energy Star Roof Product with .65 or greater solar reflectance per ASTM E 903 or ASTM C 1549; $.10 per square-foot installed with maximum of $5,000per building

4. INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.

2. A PEF inspector will complete a Commercial New Construction Program form which will record as a minimum the following information: customer's name, address and account number. In addition, equipment information (manufacturer, model numbers, EER or SEER, HSPF or COP) will be gathered at that time.

3. The customer will sign and date the PEF form that relates to each applicable measure installed.

4. In addition, project-supporting documents will be reviewed for program compliance.

5. After the inspection has been successfully completed, the PEF inspector will return the original form to PEF for payment processing.

6. Incentives will not be paid until the review (and inspection when required) is/are completed.

7. A copy of the customer's invoice must accompany the incentive application for all measures completed.

8. PEF will then input the completed paperwork into the computer system and file a copy of the Commercial New Construction form.

9. The customer has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. If a check is requested, the auditor will need to obtain the customers Tax ID#. Any customer receiving over $600 total during a year will receive an IRS 1099 form from PEF reporting to the customer and the IRS the total amount of the rebates received from PEF for that year.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. HVAC EQUIPMENT

6.1 PARTICIPATION REQUIREMENTS

1. The customer must provide proof of HVAC project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form.

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

SMALL HEAT PUMPS (≤ 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. All equipment installations must meet manufacturers' instructions and specifications.

3. All equipment shall be new and not refurbished, previously installed, or used.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and the heating minimum efficiency requirements described in Section 6.4.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF.

7. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

8. Contractors shall certify that a "hard start" kit has been installed to manage starting current on all scroll compressor units over 36,000 Btu/h.

9. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

10. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

11. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

12. The contractor will be encouraged to use mastic on all new connections.

13. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

14. Heat pump must be all electric.

Package Terminal Heat Pumps (PTHPs)

1. Packaged terminal heat pump heating and cooling efficiencies (at ARI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 6.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air conditioners that use only electric resistance elements for heating.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or ARI rating procedure.

3. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

4. All equipment installations shall meet manufacturer's instructions and specifications.

5. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

6. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

7. Package Terminal Heat pump must be all electric.

Unitary A/C and Heat Pumps (> 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure (ARI 210/240-94 for less than 135,000 btu/h and ARI 340/360 for units greater than 135,000 btu/h).

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

8. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

9. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

10. The contractor will be encouraged to use mastic on all new connections.

11. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

12. HVAC equipment must be all electric.

Air-Cooled and Water-Cooled Electric Chillers

1. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure.

2. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

3. All equipment installations shall meet manufacturer's instructions and specifications.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

6. HVAC equipment must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.

3. Contractors must demonstrate their ability to properly calculate heating and cooling loads by ASHRAE or Manual J method and to properly size and specify HVAC equipment.

6.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

Small Heat Pumps (≤ 65,000 Btu/h)

MINIMUM COOLING EFFICIENCY	MINIMUM HEATING EFFICIENCY	INCENTIVE per Heat Pump
SEER	HSPF	
14.0	7.8	$100
16.0	8	$150

Packaged Terminal Heat Pumps (PTHPs) (ARI 310/380 Test Standards)

Cooling Capacity (Btu/h)	Heating Efficiency (COP)		Cooling Efficiency (EER)	
	Baseline Efficiency	Minimum Efficiency Eligible for Incentive	Baseline Efficiency	Minimum Efficiency Eligible for Incentive
≤7,000	1.0	3	10.8	11.1
7,001-8,000	1.0	3	10.8	11.1
8,001-9,000	1.0	3	10.6	11.1
9,001-10,000	1.0	3	10.4	11
10,001-11,000	1.0	2.9	10.2	11
11,001-12,000	1.0	2.9	10	10.8
12,001-13,000	1.0	2.9	9.7	10.6
13,001-14,000	1.0	2.9	9.5	10.2
14,001-15,000	1.0	2.9	9.3	10
>15,000	1.0	2.9	9.1	9.7

Unitary AC and Heat Pumps > 65,000 Btu/h

Equipment Type and Size Range	2006 State Energy Code Standard	Minimum Efficiency Eligible for Incentive
Air-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	10.3 EER	11.5 EER
135,001 – 240,000 Btu/h	9.7 EER	11 EER
240,001 – 760,000 Btu/h	9.5 EER	10.8 EER
over 760,000 Btu/h	9.2 EER	10.5 EER
Water-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	11.5 EER[a]	13 EER[a]
over 135,000 Btu/h	11 EER	12.5 EER

[a] Water-cooled EER is at Standard Rating of 85° F entering water

Air-cooled and Water-cooled Electric Chillers (ARI 550/590 Test Standards)

Equipment Type and Size Range	2006State Energy Code Standard	Minimum Efficiency Eligible for Incentive
WATER-COOLED CENTRIFUGALCHILLERS		
under 150 tons	0.70 kW/ton (5 COP)	0.65 kW/ton (5.4 COP)
150-300 tons	0.63 kW/ton (5.5 COP)	0.60 kW/ton (5.9 COP)
over 300 tons	0.58 kW/ton (6.1 COP)	0.56 kW/ton (6.3 COP)
WATER-COOLED SCROLL or SCREW CHILLERS		
under 150 tons	0.79 kW/ton (4.5 COP)	0.72 kW/ton (4.9 COP)
150-300 tons	0.72 kW/ton (4.9 COP)	0.66 kW/ton (5.3 COP)
over 300 tons	0.64 kW/ton (5.5 COP)	0.59 kW/ton (5.9 COP)
AIR-COOLED ELECTRIC CHILLERS		
any size	1.26 kW/ton (2.8 COP)	1.17 kW/ton (3 COP)

7. ENERGY RECOVERY VENTILATION

7.1 PARTICIPATION REQUIREMENTS

1. The customer must provide proof of energy recovery ventilation project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) 1060 certified efficiency data must be attached to the incentive form.

3. Heating and cooling system must be all electric.

4. Twenty (20) year life with one membrane change out.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. Equipment efficiency ratings shall be obtained from Air Conditioning and Refrigeration Institute (ARI) rating procedure standard 1060-2000.

3. To be eligible for an incentive, the energy recovery ventilation unit ARI 1060 rating must be greater than 65% winter effectiveness.

4. All equipment installations must meet manufacturers' instructions and specifications.

5. All equipment shall be new and not refurbished, previously installed, or used.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. The contractor will be encouraged to use mastic on all new connections.

8. Cool Roof

8.1 Participation Requirements

1. The customer must provide proof of Energy Star approved Roof Products project cost and project contract date. This qualification is typically met by submitting copies of invoices.

2. The "cool roof" product must be an approved Energy Star product. It should be tested using the ASTM E 903 OR ASTM C 1549 standards and be certified as having an Initial Solar Reflectance greater than or equal to 0.65 and certification must be attached to the incentive form.

3. Cooling system must be all electric.

8.2 Material and Installation Specifications

1. Installed roofing product must be certified and approved by the Energy Star Roof Products program and shall be listed by the EPA in their approved products listing

2. Qualified roofing material ratings shall be obtained by the ASTM E 903 or ASTM C 1549 standards test and have an Initial Solar Reflectance greater than or equal to 0.65.

3. All installations must meet manufacturers' instructions and specifications.

9. DESIGN ASSISTANCE

9.1 PARTICIPATION REQUIREMENTS

1. Design assistance may be made available to the building design community (owners/developers, architects, engineers and contractors) through PEF -sponsored workshops, training seminars, advertising or direct marketing approaches.

2. Members in the building design community must perform work in PEF's service territory.

10. DESIGN AWARDS

10.1 PARTICIPATION REQUIREMENTS

1. PEF may give recognition to newly constructed energy efficient buildings through the distribution of energy awards and recognition advertising.

2. Each qualifying building will receive a design award plaque for placement in the building.

3. Facility receiving award must be served by PEF.

4. The design application must exceed the Florida Energy Efficiency Code for Building Construction by a minimum of 15% where applicable. Otherwise, the application must exceed standard practice by 15%.

5. Innovative applications of established technology or of operating schemes will also be considered.

Progress Energy

PROGRAM PARTICIPATION STANDARDS

DEMAND-SIDE MANAGEMENT PLAN

2005-2014

PROGRESS ENERGY FLORIDA, INC.

PROGRESS ENERGY FLORIDA, INC.
PROGRAM PARTICIPATION STANDARDS
HOME ENERGY IMPROVEMENT PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
HOME ENERGY IMPROVEMENT PROGRAM

1. PROGRAM OVERVIEW

The Home Energy Improvement (HEI) Program is an "umbrella" program designed to improve the energy efficiency of existing residential homes. The program seeks to meet the following overall goals:

1. Improve customer comfort levels through energy efficient equipment and home thermal integrity.
2. Obtain energy and demand reductions that are significant, permanent and measurable.
3. Enhance contractor awareness of the capabilities of energy efficient technologies.
4. Educate customers about additional opportunities to upgrade home energy efficiency.
5. Obtain cost-effective resources from the marketplace.
6. Minimize "lost opportunities" in the existing home market.

2. ELIGIBILITY REQUIREMENTS

1. All measures must have been recommended during a PEF energy audit. (***Exception:*** *In emergency cases the customer may have a heat pump installed.*)
2. The residence must be in PEF's service area and be a residential metered customer of PEF.
3. Do-it-yourself installations are not eligible for program participation. PEF participating contractors will be utilized to implement the incentive-based components of the HEI program. A participating licensed contractor who is on PEF's participating contractor list for the specific measure must do all work. (***Exception:*** *The Heating, Ventilation and Air Conditioning (HVAC) portion of this program will not have a participating contractor list.*)
4. All installations must be accessible for verification of HEI program standards by a PEF representative.

5. New construction homes do not qualify under the HEI program.

2.1 CONTRACTOR REQUIREMENTS

1. All contractors must comply with PEF contractor procedures and manufacturers' specifications specific to the portion of the HEI Program for which they are participating. Failure to do so may result in termination of participation in any or all PEF programs.

2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by a PEF representative, and notify the PEF representative of compliance within 30 days.

4. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 (five) working days of incident.

5. The contractor shall indemnify and hold PEF harmless against any and all injuries or damages, claims or costs, whatsoever caused by items furnished or services rendered.

6. The contractor must comply with all Federal, State, and local codes and regulations and have the appropriate license(s) for the work to be performed.

7. The contractor must notify their insurance companies to provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 8 and Section 9 dealing with HVAC contractors is exempt from this provision.*)

    - Workman's Compensation as required by law.
    - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
    - General and Automobile Property Damage Liability: $100,000 per occurrence.
    - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Duct Test	50% of test cost up to $30 for the first unit tested
	50% of test cost up to $20 for each additional unit at same address
Duct Leakage Repair	25% of the repair cost up to a maximum of $50 per unit for homes with non-ducted electric heat (ceiling, baseboard, etc)
	50% of the repair cost up to a maximum of $125 per unit for homes with ducted electric heat. Up to an additional $25 may be paid during off-season shoulder months. For Multi-Family $100 per unit no test required
Attic Insulation	$75 to bring insulation level up to a minimum of R-19. An additional 5¢ per square foot above 1500 square feet will be paid
	$100 to bring insulation level up to a minimum of R-30. An additional 7¢ per square foot above 1500 square feet will be paid
High Efficiency Heat Pump Replacing Resistance Heat	$250 for minimum cooling efficiency of 14.0 SEER and minimum heating efficiency of 7.8 HSPF
	$350 for minimum cooling efficiency of 15.0 SEER and minimum heating efficiency of 8 HSPF
High Efficiency Heat Pump Replacing Heat Pump	$100 for minimum cooling efficiency of 14.0 SEER and minimum heating efficiency of 7.8 HSPF
	$150 for minimum cooling efficiency of 15 SEER and minimum heating efficiency of 8 HSPF
Supplemental Incentive Bonus	$25 for high efficiency electric heat pump **and** either ceiling insulation **or** duct leakage repair
Supplemental Incentive Bonus	$50 for high efficiency electric heat pump **and** ceiling insulation **and** duct leakage repair

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Notes:

1. *A home is eligible to receive an incentive for each heat pump installed based on the efficiency level.*
2. *To qualify for the supplemental bonus, additional measures must be implemented within 90 days from the installation of the heat pump.*
3. *In multi-family structures, PEF reserves the right to request bids from contractors to hold customer costs to a minimum.*

4. INCENTIVE PROCESSING

1. The PEF representative will complete an HEI Program form which will record as a minimum the following information: customer's name, address, account number, measure installed, equipment information (manufacturer, model numbers, SEER or HSPF). For aerosol duct sealing participation, pre and post duct leakage data and a copy of the certificate of completion will be required.

2. The customer will sign and date the PEF form that relates to each applicable measure installed, and retain a copy.

3. If the home is assigned for inspection, an inspection form will be given to the inspector. After the inspection has been successfully completed, the inspector returns the inspection form to PEF for payment processing.

4. A copy of the customer invoice must accompany the incentive application for the insulation upgrade and the duct repair portion of this program.

5. If the home is not assigned for inspection, or after it has passed inspection, contractors' invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the computer system and file a copy of the HEI Program form by customer name.

7. All incentive payments are paid to the contractor with the exception of the supplemental bonus, which is to be posted on the customer's electric bill. (***Exception:*** *The HVAC incentives (high efficiency heat pump,) will be paid as a credit on the customer's bill or a check to the customer.*)

8. If there is no out of pocket cost incurred by the owner, the incentive will go to the state provider/agency that arranged the installation of the measure.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

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6. CEILING INSULATION UPGRADE

6.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. The home must be at least two years old.
3. Eligible residences must have whole house electric air conditioning and/or whole house electric heating.
4. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be less than R-12. Exception: May exclude conditioned area for a recent addition.
5. Any structure that has utilized any of PEF's ceiling insulation programs is not eligible to participate again. However, if the structure, through an act of God, loses the insulation **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from his/her insurance company stating that the insulation was not covered.
6. The total ceiling area to be insulated must be greater than 500 square feet.
7. Mobile homes built after January 1, 1977 will be assumed to have an insulation value in excess of R-11 and will not be eligible to participate in this part of the HEI Program unless documentation is provided to PEF stating that the actual existing insulation value is less than R-12.
8. Any home with "Knob and Tube Wiring" that is energized is not eligible.[1]

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation shall be added in increments of R-11, R-19, R-22, or R-30.
3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.

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[1] National Electrical Code, Article 324, Section 324-4

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area including knee walls.[2]

7. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

8. Radiant barriers will not be allowed as a substitute in the HEI Program.

9. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts).[3]

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. The contractor will supply to the customer, in writing the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

3. The contractor will attach an R-value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
   - Manufacturer's name
   - Insulation type
   - R-Value of insulation installed
   - Thickness of insulation installed
   - Location of insulation installed
   - Name and address of the contractor installing the insulation
   - Date of installation

4. PEF reserves the right to request background checks of contractors participating in the Home Energy Improvement Program Ceiling Insulation upgrade.

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[2] 2001 Florida Building Code chapter 13 sub chapter 6, Section 604.1.A.1 Walls Considered Ceiling Area
[3] 2001 Florida Building Code chapter 13 sub chapter 6,Section 604.1ABC.1.1 Ceilings With Blown-In Insulation

7. DUCT TEST AND LEAKAGE REPAIR

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.

2. Repair recommendations must have been the result of a PEF-approved duct test. Exception: If during an energy audit, the PEF energy auditor validates the need for duct system replacement, then a duct test is not required.

3. The customer's duct system must be in adequate condition to accommodate the duct test, and not have been previously tested for the present occupant within a 5-year period. Exception: Duct systems altered as a result of remodeled or added conditioned area.

4. The duct must be accessible for repair. (Exception: aerosol sealing method)

5. Homes must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e.: water heater, stove, etc,) then the house must pass a safety test prior to any duct sealing.

6. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

7. A minimum of 60 cfm @25 Pascals of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.

2. For conventional duct repair only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

4. Aerosol procedures must be followed as specified in training or manufacturer's instructions and will include :

    - Complete pre-seal leakage test using approved aerosol software
    - Aerosol sealants shall meet the requirements of UL 723
    - Seal all boot to ceiling and/or floor connections
    - All areas of the duct system will be evaluated and cost-effective leaks will be sealed by conventional (7.2.2) or aerosol method.
    - Complete post-seal leakage test using approved aerosol software

7.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:

    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing
    - Aerosol technicians must successfully complete industry specific training

4. Before any duct repairs can be made on homes with non-space heating combustion appliances the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. In multi-family rental units the contractor shall seal all joints and connections. No duct test is required for multi-family. No combustion appliances (fireplaces, water heating, etc.) are allowed for multi-family due to safety concerns.

6. PEF reserves the right to request background checks of contractors participating in the Home Energy Improvement Program Duct Test and Leakage Repair Program.

7.4 INSPECTION REQUIREMENTS

All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom and laboratory)
- Duct test field applications
- Codes and standards as they relate to duct sealing

8. HIGH EFFICIENCY ELECTRIC HEAT PUMPS

8.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.

2. The customer must have had an audit within the past two years. An exception would be made for emergency heat pump equipment installations.

3. Customer must have electric strip heat or less efficient heat pump.

8.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.

2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

3. Both air handler and condensing units must be replaced.

4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.

5. All equipment shall be new and not refurbished or have been previously installed or used.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available.[4]

7. If the unit is sized larger than one ton (12,000 BTU) per 500 square feet of conditioned space, a manual J or ASHRAE approved sizing calculation must be submitted. The contractor must certify that the unit was sized according to manufacturer specifications. (***Exception:*** *Additions with dedicated HVAC systems where conditioned area is less than 500 square feet and manufactured homes are exempted from this requirement.*)

[4] If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF, except for water source units.

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8. The contractor will certify that the unit was sized according to manufacturer specifications.
9. Refrigerant charge and type shall be according to manufacturer's specifications and recommendations for the unit installed. The contractor will certify that the proper charge is installed, that the unit is tested and is leak free.
10. Contractors shall certify that the airflow meets the manufacturer's recommendations and specifications for the system installed.
11. Contractors shall certify that a hard start kit was installed either by the contractor or at the factory for equipment installations with a scroll compressor larger than 36,000 Btu.
12. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.
13. The contractor shall check that the controlling thermostat is properly leveled, that the anticipator is properly set, and the thermometer is correct to within two degrees Fahrenheit.
14. The contractor will be encouraged to use mastic on all new connections.
15. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.
16. Heat pump must be all electric.
17. The contractor will be paid $25 for completing the paperwork on each customer's purchase. This incentive is not to exceed the $25 per account regardless of the number of units installed.

8.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.
3. Contractors must demonstrate their capability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.
4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.
5. The contractor shall have 6 months from date of installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

9. HIGH EFFICIENCY ELECTRIC CENTRAL AIR CONDITIONERS

9.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must meet the Participation Requirements outlined in Section 8.1.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Must meet the Equipment and Installation Specifications outlined in Section 8.2.

9.3 CONTRACTOR QUALIFICATION REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.
2. Must meet the Contractor Requirements outlined in Section 8.3.

10. INSTALLMENT BILLING

1. Finance up to a maximum of $500 through installment billing. For each measure, a customer can use installment billing to finance up to 90% of the total installed cost or repair cost.
2. Installment billing allows the customer to spread the cost over 12 months interest free. The installment billing payments will appear as a separate line item on the customer's monthly electric bill from PEF.
3. Installment billing can be used for any combination of the following qualified measures: ceiling insulation upgrade, duct leakage repair, and high efficiency electric heat pump.
4. If the customer installs additional qualified measures, a new installment billing arrangement can be set up only after the initial or current "loan" is paid off.
5. The customer must own the home in which the improvements are being made. The customer shall not have been cut for non-payment, received a credit extension or have any returned checks within the past two years.

11. FINANCING ASSISTANCE

1. Financing Assistance is another alternative to the direct incentive payment. PEF will work with finance companies and attempt to offer eligible program participants a financing option at below market rates. Eligible customers may apply appropriate program incentives to reduce the principle amount or to lower interest rates on installment loans.

2. The finance company will qualify the borrower and arrange for the loan using their normal procedures.

3. PEF will coordinate with HVAC contractors and various finance companies to offer reduced interest loans on mechanical installations.

4. HVAC contractors will be responsible for presenting incentive options to the customer and arranging financing with participating finance companies, as needed.

5. Contractors are required to submit to PEF an invoice for the incentive amount and a copy of the customer invoice itemizing all costs.

6. The finance company will pay the contractor the total amount to be financed minus the incentive amount.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

RESIDENTIAL

NEW CONSTRUCTION PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
NEW CONSTRUCTION PROGRAM

1. PROGRAM OVERVIEW

The New Construction Program is an "umbrella" program designed to improve the energy efficiency in the following three new construction segments:

Section A. Residential Site Built

Section B. Manufactured Homes

Section C. Multi-Family

This program is designed to target major construction markets, so as to minimize lost opportunities. It is the objective of this program to work closely with these different trade allies to build energy efficient housing for Florida's future.

The program seeks to meet the following overall goals:

1. Educate builders about energy efficient new construction building design to create a supply of energy efficient homes.
2. Educate prospective buyers and real estate agents about the benefits of energy efficient home design to increase the demand for energy efficient homes.
3. Obtain energy and demand impacts that are significant, accurate, sustainable and measurable.
4. Evaluate cost-effective measures for the marketplace.
5. Minimize "lost opportunities" in the new construction market.

The program will provide education and information to the design community and the real estate market on energy efficient building design and construction. This program will pay for the cost of duct testing to educate builders, provide financial incentives for energy efficient equipment, issue a certificate which identifies the home as energy efficient, and offer cooperative advertising to Energy Star developers and builders to promote the New Construction Program.

A. RESIDENTIAL NEW CONSTRUCTION

A.1. OVERVIEW

The Residential New Construction single family site-built segment promotes energy efficient home construction. This will provide customers with more efficient mechanical systems to lower energy consumption combined with improved environmental awareness. This program combines the most efficient measures, in equipment and envelope, to produce the most cost-effective energy efficient home.

The Residential New Construction program defines three levels of eligibility and various options within each level with which a homebuilder may comply in order to receive home certification.

A.2. ELIGIBILITY REQUIREMENTS

1. The home must be either single family detached or single family attached (e.g. townhouses, condos, etc.).

2. The home must be new -- additions do not qualify for this Residential New Construction program. An existing home will be eligible if more than 2/3rds of the original air conditioned (AC) floor space is remodeled or reconstructed.

3. A Residential New Construction builder or builder/owner meeting Progress Energy Florida, Inc. (PEF) standards must build the home. The builder must comply with all Federal, State, and local codes.

4. The home must be accessible for verification of Residential New Construction Program standards by a PEF employee or representative.

5. The home must be located in PEF's service area and must be metered by PEF.

6. The heating source must be an all electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat.

A.2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Cooling unit sizing may not exceed the calculated whole house load by 15% or 6,000 Btuh, whichever is larger.

3. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240/94 or by a PEF-recognized engineering standard using sound engineering estimates.

4. Minimum wall insulation is R-4 for masonry and R-11 for frame.

5. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

6. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

7. If the installed equipment uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor or builder shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

8. Attic Radiant Barrier Systems shall have an emissivity rating $\leq$0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

9. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) $\leq$.50 and a U-value $\leq$.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

A.2.2 CONTRACTOR[1] REQUIREMENTS

1. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow manufacturer's recommendations for the unit installed. The contractor will certify that the unit has been tested and is leak free.

3. All participating contractors must comply with PEF contractor procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program.

5. It is the responsibility of the PEF employee or representative to encourage each builder to move up to either Level Two or Level Three.

6. The contractor must correct any deficiency found in the installation or product when advised by a PEF employee or representative, and notify the PEF employee or representative of compliance within 30 days.

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[1] Contractor and Manufacturer are synonymous

7. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

8. Must meet the Residential New Construction technical specifications of either Level One, Level Two, or Level Three.

9. If the builder has a model center, PEF will pay to test the duct system for one home per model center to educate the builder as to why duct leakage is undesirable. If the builder does not have a model center, the builder's residence or the home the builder is currently constructing may be used for demonstration purposes.

10. The builder or his representative and the builder's air conditioning contractor must be present at the time the educational duct test is conducted. If the builder agrees to participate in Level One prior to the educational test and the air conditioning contractor is already participating in the Residential New Construction Program, then no educational test is required. If an educational duct test is required, a PEF employee or representative must be present.

11. The builder must correct any problems discovered during the duct test before that builder may become certified in the Residential New Construction Program.

12. An incentive of $15 will be paid to the builder or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

13. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

A.3. Technical Specifications on Equipment Eligibility

The Residential New Construction Program defines three levels of eligibility and various options within each level that a homebuilder must comply in order to receive home certification.

A.3.1 Level One

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems that meet PEF standards specifications (see Section A.2.1, item 6).

A.3.2 Level Two

Meet Level One requirements, *and* install a high efficiency electric heat pump with a minimum cooling efficiency of ≥ 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of ≥ 7.8 HSPF (Heating Season Performance

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Factor)., or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER with a minimum heating efficiency of 8.1 HSPF. *Plus one of the following:*

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1. Construct duct system in accordance with Manual D
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system.
3. Install -high performance windows with a Solar Heat Gain Coefficient (SHGC) of ≤.50 and a U-Factor of ≤.75.

A.3.3 LEVEL THREE

Homes built under this level shall install the following measures:

- Homes must meet Level One and Level Two requirements
- Duct leakage of total air handler rated flow shall be ≤ 5% to unconditioned spaces at 25 Pascals.

Homes shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.

* Homes may qualify at Level Three with a 13 SEER and 7.7 HSPF heat pump greater efficiencies, but will not be eligible for equipment incentives.

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A.3.4 COOPERATIVE ADVERTISING

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials.

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

A.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Home must have a centrally ducted heat pump system and meet PEF duct sealing specifications				
Level Two	Incentive from Level One Plus	$125	Level One and a high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R19 attic insulation with radiant barrier system		14	7.8	
		$325	Level One and a high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R 19 attic insulation with radiant barrier system		16	8.1	
		$350	Level I and high performance windows	U – Factor		Solar Heat Gain Coefficient	
				≤.75		≤.50	
Level Three	Incentive from Levels One & Two, plus PEF will match on a 50/50 basis up to $50 per qualified home/account for Co-Op advertising		Home must meet all Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to A.3.3)				

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A.5. INCENTIVE PROCESSING

1. The PEF employee, builder or HVAC contractor will complete an Residential New Construction Program form which will record as a minimum the following information: builder's name, subdivision, address or lot and block of certified home, Level number, equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC)

2. The Residential New Construction program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. The builder or HVAC contractor will sign and date the form, and retain a copy.

4. If the home is assigned for inspection, the original Residential New Construction Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

5. If the home is not assigned for inspection, or after it has passed inspection, builder's invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the customer database and file a copy of the program forms by builder.

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A.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

B. RESIDENTIAL MANUFACTURED NEW HOME

B.1. OVERVIEW

The Residential Manufactured New Home segment promotes energy efficient manufactured home construction. This will provide customers with more efficient mechanical systems to lower energy consumption combined with improved environmental awareness. PEF will work closely with this market segment to educate manufacturers and developers about energy efficient new construction building design to create a supply of energy efficient manufactured homes.

B.2. ELIGIBILITY REQUIREMENTS

1. The home must be either single family manufactured detached or single family manufactured attached.

2. The home must be new -- additions do not qualify for this Residential Manufactured New Home program.

3. A Residential Manufactured New Home manufacturer meeting PEF standards must build the home. Manufacturer must comply with all HUD or DCA requirements. Developers or retailers must follow all procedures to ensure proper installation of high efficiency equipment.

4. The home must be accessible for verification of Residential Manufactured New Home Program standards by a PEF employee or representative.

5. The home must be located in PEF's service area and must be metered by PEF.

6. The heating source must be an electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat.

B.2.1 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturer's instructions and specifications. Any HVAC contractor failing to meet HVAC manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards or by a PEF-recognized engineering standard using sound engineering estimates.

3. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

4. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place

while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

5. If the equipment installed uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor, manufacturer or developer shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

6. Attic Radiant Barrier Systems shall have an emissivity rating of ≤0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

7. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) ≤.50 and a U-value ≤.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

B.2.2 MANUFACTURER[2] REQUIREMENTS

1. Manufacturers shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow HVAC manufacturer's recommendations for the unit installed. The manufacturer, developer or HVAC Contractor will certify that the unit has been tested and is leak free.

3. All participating manufacturers or developers must comply with PEF manufacturer procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program

5. It is the responsibility of the PEF employee or representative to encourage each manufacturer, or interested party to move up to Level Two or Level Three.

6. The manufacturer, HVAC contractor or developer must correct any deficiency found in the installation or product when advised by a PEF employee or representative and notify the PEF employee or representative of compliance within 30 days.

7. The manufacturer or developer shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

8. Must meet the Residential Manufactured New Home technical specifications of either Level One, Level Two, or Level Three.

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[2] Contractor and manufacturer are synonymous.

9. If the manufacturer or developer has a model center, PEF will pay to test the duct system for one home per model center to educate the manufacturer or developer as to why duct leakage is undesirable. If the manufacturer or developer does not have a model center, the manufacturer or developer shall supply a home to be used for testing and educational purposes.

10. The manufacturer or developer or his representative and the manufacturer's air conditioning contractor must be present at the time the educational duct test is conducted. If the manufacturer or developer agrees to participate in Level One prior to the educational test, and the air conditioning contractor is familiar with the Residential Manufactured New Home Program requirements, then no test is required. If an educational duct test is required, a PEF employee or representative must be present.

11. The manufacturer or developer must correct any problems discovered during the duct test before that manufacturer or developer may become certified in the Residential Manufactured New Home Program.

12. An incentive of $15 will be paid to the retailer, developer or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

13. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

B.3. TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

The Residential Manufactured New Home Program defines three levels of eligibility and various options within each level with which a home manufacturer or developer may comply in order to receive home certification.

B.3.1 LEVEL ONE

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems which meet PEF standards. (See Section B.2.1, item 4)

B.3.2 LEVEL TWO

Meet Level One requirements, and install a high efficiency heat pump with a minimum cooling efficiency of 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of 7.8 HSPF (Heating Season Performance Factor), or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER, with a minimum heating efficiency of 8.1 HSPF. *Plus one of the following:*

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1. Construct duct system in accordance with Manual D.
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system.
3. High performance windows with a Solar Heat Gain Coefficient of ≤.50 and a U-Factor of ≤.75.

B.3.3 LEVEL THREE

Manufactured homes built under this level shall install the following measures: Homes must meet Level One and Level Two requirements

- Duct leakage of total air handler rated flow shall be ≤5% to unconditioned spaces at 25 Pascals.
- Homes shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.

*Homes may qualify at Level Three with 13 SEER and 7.7 HSPF heat pump or greater efficiencies, but will not be eligible for equipment incentives.

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B.3.4 COOPERATIVE ADVERTISING

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

B.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Residency/unit must have centrally ducted heat pump system and meet PEF duct sealing specifications				
Level Two	Incentive from Level One Plus	$125	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		14	7.8	
		$325	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation, or R 19 attic insulation with radiant barrier system		16	8.1	
		$350	Level One and High Performance Windows	U-Factor		Solar Heat Gain Coefficient	
				≤.75		≤.50	
Level Three	Incentive from Levels One & Two, plus PEF will match on a 50/50 basis up to $50 per home/account for Co-Op advertising		Home(s)must meet Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to B.3.3)				

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B.5. INCENTIVE PROCESSING

1. The PEF employee or representative, manufacturer, HVAC contractor, or park owner will complete a Residential Manufactured New Home Program form which will record as a minimum the following information: manufacturer's name, subdivision, address or lot and block of certified home, Level number, equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC).

2. The Residential New Construction Program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. The manufacturer, developer, retailer or park owner will sign and date the form, and retain a copy.

4. If the home is assigned for inspection, the original Residential Manufactured New Home Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

5. If the home is not assigned for inspection, or after it has passed inspection, builder's invoices will be processed for payment.

6. PEF will then input "work completed" and "amount paid" to the customer database and file a copy of the program forms by manufacturer.

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B.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

C. MULTI-FAMILY NEW CONSTRUCTION

C.1. OVERVIEW

The Multi-Family New Construction segment promotes energy efficient new building construction in order to ensure that energy efficient rental apartments are available for customers.

It is PEF's objective to educate developers and property Management Companies about energy efficient new construction building design to create a supply of efficient multi-family rental apartments. In addition, educate customers and leasing agents about the benefits of energy efficient unit design to create the demand for energy efficient multi-family rental homes.

C.2. ELIGIBILITY REQUIREMENTS

1. The residency/unit must be multi-family rental, where multi-family is defined as any residential dwelling unit that is attached to another unit by a common wall, ceiling or floor. Any multi-family residential dwellings that are mastered metered (referred to as "Domestic/Commercial") shall be eligible to participate in this program.

2. The residency/unit must be new -- additions do not qualify for this Multi-Family New Construction program.

3. An existing residency/unit that is remodeling or reconstructing more than 2/3rds of the original air conditioned (AC) floor space will be eligible.

4. An Multi-Family New Construction builder, owner or agency meeting PEF standards must build the residency/unit. The builder must be a licensed building contractor and must comply with all Federal, State, and local codes.

5. The residency/unit must be accessible for verification of Multi-Family New Construction Program standards by a PEF employee or representative.

6. The residency/unit must be located in PEF's service area and must be metered by PEF.

7. The heating source must be an electric heat pump(s). No resistance heat is allowed except as back-up supplemental heat. (***Exception:*** *If the Building is over three stories in height, electric strip is allowed if a heat pump is not cost effective to install.*)

C.2.1 Equipment and Installation Specifications

1. All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2. Equipment specification shall be according to Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240/94 or by a PEF-recognized engineering standard using sound engineering estimates.

3. Minimum wall insulation is R-4 for masonry and R-11 for frame.

4. Equipment information such as model numbers, manufacturers, and Btuh capacity shall be made accessible to the PEF employee or representative.

5. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

6. If the equipment installed uses a scroll compressor larger than 36,000 Btuh, the air conditioning contractor or builder shall certify that a hard start kit was installed by the air conditioning contractor or the factory.

7. Attic Radiant Barrier Systems shall have an emissivity rating of $\leq$0.06 as demonstrated by independent laboratory testing according to ASTM C-1371-97.

8. High performance windows must be labeled by the National Fenestration Rating Council (NFRC) as achieving a Solar Heat Gain Coefficient (SHGC) $\leq$.50 and a U-value $\leq$.75. Decorative glass is exempt provided its total area does not exceed 15% of the total glass area of the home.

C.2.2 Contractor Requirements

1. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

2. Refrigerant charge and type shall follow manufacturer's recommendations for the equipment installed. The contractor will certify that the equipment has been tested and is leak free.

3. All participating contractors must comply with PEF contractor procedures specific to the level for which they are participating.

4. PEF reserves the right to request background checks of contractors participating in the Residential New Construction Program

5. The contractor must correct any deficiency found in the installation or product when advised by a PEF employee or representative and notify the PEF employee or representative of compliance within 30 days.

6. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

7. Must meet the Multi-Family New Construction technical specifications of either Level One, Level Two, or Level Three.

8. If the builder has a model apartment, PEF will pay to test the duct system for one residency/unit per model center to educate the builder as to why duct leakage is undesirable. If the builder does not have a model apartment or the residency/unit the builder is currently constructing may be used for demonstration purposes.

9. The builder or his representative and the builder's air conditioning contractor must be present at the time the educational duct test is conducted. If the builder agrees to participate in Level One prior to the educational test and the air conditioning contractor is already participating in the Multi-Family New Construction Program, then no educational test is required. If an educational duct test is required, a PEF employee or representative must be present.

10. The builder must correct any problems discovered during the duct test before that builder may become certified in the Multi-Family New Construction Program.

11. An incentive of $15 will be paid to the builder or HVAC contractor completing the paperwork required by this program. This incentive is not to exceed $15 regardless of the number of heat pump systems installed at any one PEF account (address).

12. To be eligible for level two incentives, a completed incentive form must be received by the Company within six months of permanent electric service activation for the account.

C.3. Technical Specifications on Equipment Eligibility

The Multi-Family New Construction Program defines three levels of eligibility and various options within each level which a builder may comply in order to receive a building certification.

C.3.1 LEVEL ONE

Must incorporate any changes to the duct system that are indicated by the educational duct test, and construct duct systems, which meet PEF specifications (see Section C.2.1, item 5).

C.3.2 LEVEL TWO

Meet Level One requirements, and install a high efficiency heat pump with a minimum cooling efficiency of 14 SEER (Seasonal Energy Efficiency Rating), with a minimum heating efficiency of 7.8 HSPF (Heating Season Performance Factor), or install a higher efficiency heat pump with a minimum cooling efficiency of 16 SEER, with a minimum heating efficiency of 8.1 HSPF. *Plus one of the following:*

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1. Construct duct system in accordance with Manual D
2. Install a minimum of R-30 attic insulation or R-19 attic insulation with radiant barrier system. (Top floor only, all units).
3. High performance windows with a Solar Heat Gain Coefficient of ≤.50 and a U-Factor of ≤.75.

C.3.3 LEVEL THREE

Residency/units built under this level shall install the following measures:

- Residency/units must meet Level One and Level Two requirements.
- Duct leakage of total air handler rated flow shall be ≤5% to unconditioned spaces at 25 Pascals
- Units shall also meet performance guidelines as defined by the US Environmental Protection Agency's (EPA) Energy Star Program.* Homes may qualify at Level Three with 13 SEER and 7.7 HSPF heat pump or greater efficiencies, but will not be eligible for equipment incentives.

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C.3.4 Cooperative Advertising

The following specifications must be met to be eligible for cooperative advertising:

1. PEF offers co-op incentive funds at the rate of $50 per home/unit built to the Residential New Construction Program level three/Energy Star requirements.

2. Co-op funds are available after construction is completed, electric meters are set, and units pass inspection by PEF.

3. A variety of media may be purchased with co-op funds: TV, radio, daily newspaper, direct mail, point-of-purchase materials, home; apartment and manufactured-housing magazines if mutually agreed upon in advance.

4. PEF will pay 50% of the cost of advertising, not to exceed the total co-op funds earned by the partner.

5. A minimum of 25% of the ad content must promote energy efficiency and the PEF partnership.

6. Partners may choose to incorporate content provided by PEF into their advertising or may choose, instead, to use an ad created by PEF and modified by the partner to include partner's advertising messages.

7. PEF must approve a proof of the final advertising materials prior to production. Two business days are needed to proof and approve the advertising materials.

8. Co-op funds must be used within 6 months of completed construction.

9. Partner is reimbursed for co-op advertising after advertising has run or after printed materials have been produced.

10. For co-op reimbursement, a media invoice or printer's invoice, accompanied by five (5) samples, must be submitted to your PEF Residential New Construction Representative.

11. PEF reserves the right to withhold payment for advertising which it deems to be untruthful or offensive.

C.4. INCENTIVES

The incentive payment structure builds on thermal and mechanical efficiencies as follows:

Level	Incentive		Requirements	Minimum Cooling Efficiency		Minimum Heating Efficiency	
					SEER	HSPF	
Level One	One Free Educational Duct Test and promotional literature		Residency/unit must have centrally ducted system and meet PEF duct sealing specifications				
		$125	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		14	7.8	
Level Two	Incentive from Level One Plus						
		$325	Level One and high efficiency electric heat pump, plus Manual D duct design or R-30 attic insulation or R-19 attic insulation with radiant barrier system		16	8.1	
		$350	Level One and high performance windows	U-Factor ≤.75		Solar Heat Gain Coefficient ≤.50	
Level Three	Incentive from Levels One & Two, Plus PEF will match on a 50/50 basis up to $50 in co-op advertising per unit		Residency/unit must install Level Three qualifying measures and qualify for EPA's Energy Star Program (Refer to section C.3.3)				

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C.5. INCENTIVE PROCESSING

1. The PEF employee, builder or HVAC contractor will complete a Multi-Family New Construction Program form which will record as a minimum the following information: builder's name, name of complex, address(s) or apartment numbers of certified residency/unit. Level Number (i.e.: 1, 2, 3), equipment information (manufacturer, model numbers, SEER or HSPF), and high performance windows information (U-Factor and SHGC).

2. The Residential New Construction Program form must be accompanied by documentation that supports the claimed efficiency ratings. For heat pumps refer to the Air Conditioning and Refrigeration Institute and Department of Energy test standards 210/240 (ARI Guide). For high performance windows refer to the National Fenestration Rating Council (NFRC label).

3. If payment is to be made to someone other than the builder, then the following information is required: Payee's name, address, Relationship to complex (Owner, Manager), name of complex, address(s) or apartment numbers of certified residency/unit. Level Number (i.e.: 1, 2, 3), equipment information (manufacturer, model numbers, SEER or HSPF).

4. The builder/owner or HVAC contractor will sign and date the form, and retain a copy.

5. When the complex is assigned for inspection, the original Multi-Family New Construction Program form is given to the inspector. After the inspection has been successfully completed, the inspector returns the original form to PEF for payment processing.

6. PEF will then input "work completed" and "amount paid" to the customer database and file copies of the program form by builder.

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C.6. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
LOW-INCOME WEATHERIZATION ASSISTANCE PROGRAM

1. PROGRAM OVERVIEW

Progress Energy Florida, Inc.'s (PEF) Low-income Weatherization Assistance Program (LIWAP) is a custom energy conservation program. It is designed to develop a working relationship with weatherization providers. The LIWAP seeks to achieve the following goals:

1. Integrate PEF's LIWAP procedures with the Department of Community Affairs (DCA) and local weatherization providers to deliver energy efficiency measures to low-income families.
2. Identify and educate agencies and low income customers about energy saving opportunities to upgrade home energy efficiency.
3. Increase low-income families' participation in PEF's DSM programs.
4. Minimize "lost opportunities" in the existing marketplace.

2. ELIGIBILITY REQUIREMENTS

Low-income will be defined as DCA's requirements for participation in the Weatherization Assistance Program for Low Income. The DCA is responsible for providing annual updates to participating providers. Additional requirements are as follows:

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- The residence must be in PEF's service area and a residential metered customer.
- Must meet Florida's weatherization low-income criteria in addition to income requirements stated above.
- All installations must be accessible for verification by a PEF representative.
- Homes must be greater than two years old.

- Homes having previously received PEF incentives for listed measures are not eligible for the same measure.
- A Florida approved provider or their approved contractors must perform all work. Participating PEF contractors may be used.

2.1 CONTRACTOR REQUIREMENTS

The Department of Community Affairs and local weatherization providers are responsible for all work performed. Local providers may also use PEF participating contractors for attic insulation and duct testing/repair.

1. Local providers must have appropriate license(s) and comply with all appropriate federal, state, and local building and safety codes for all work performed.

2. All work performed must follow manufacturers' and PEF's specifications where applicable.

3. Local providers and their agents must correct any deficiencies found in the installation or materials identified by PEF.

4. DCA/Providers shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages claims or costs whatsoever caused by items furnished or services rendered.

5. All PEF contractors shall indemnify and hold harmless PEF from any and all losses, liabilities, injuries, damages, claims or costs whatsoever caused by items furnished or services rendered.

6. PEF requires a minimum of the following insurance policies be in force by all participating contractors:
    - Workman's Compensation as required by law.
    - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
    - General and Automobile Property Damage Liability: $100,000 per occurrence.
    - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

2.2 EQUIPMENT/MATERIALS AND INSTALLATION SPECIFICATIONS

All materials and installation specifications shall meet or exceed the following guidelines:

- Weatherization Installation Standards of the U.S. Department of Energy.
- Equipment must meet manufacturers' specification and installation procedures.
- All work shall be performed to constitute a finished product.

- Materials shall be free of defects and covered under warranty for at least one year.
- Installation procedures must comply with all federal, state and local codes.
- All equipment installations must meet manufacturer's instructions and specifications. Any contractor failing to meet manufacturer's specifications and PEF procedures may result in termination of participation in any or all PEF programs.

2.3 Local Providers Responsibility

The Department of Community Affairs, through their local weatherization providers, will be responsible for the following:

1. Qualify all participants using federal and state guidelines outlined in Section 2.
2. Conduct the National Energy Audit (NEAT) or any PEF approved energy audit on all eligible low-income weatherization installations.
3. Provide PEF with the following customer information at the time of application:
    - Client information
    - A list of installed measures and, where appropriate, pre-existing conditions
    - Pre and post CFM 50 readings
    - Itemized invoice with a brief description of installed measures (incentive measures only) and program incentive for each weatherized home, or the PEF/LIWAP data information form.
4. Qualify and install measures by PEF's standards and procedures. All installations shall comply with PEF specifications (see Sections 4.2 through 10.2).
5. Provide PEF random access to the weatherized homes for program evaluation and inspection.
6. Deliver energy education to weatherization clients.
7. Invoice PEF for program approved installed measures on monthly basis.

3. INCENTIVES AND ELIGIBLE MEASURES

Progress Energy will provide incentives for the following measures with the stipulation that all requirements and minimum levels are achieved where applicable:

Weatherization Measure	Minimum Measure Requirement	Incentive Amount	Additional Requirements
Attic Insulation	Insulate to at least R-19	$15 per 100 sq ft. up to a max of $75. And an additional 5¢ per square foot above 1500 square feet will be paid	Must be a NEAT recommendation
	Insulate to at least R-30	$20 per 100 sq ft. up to a max of $100. And an additional 7¢ per square foot above 1500 square feet will be paid	
Duct Leakage Test	Centrally ducted cooling system with electric heat	$30 for the first unit tested $20 for each additional unit at the same residence	1. LIWAP inspection 2. Must have electric heat (ducted or non-ducted)
Duct Leakage Repair	Non-Ducted Electric Heat	25% up to $50	1. LIWAP Inspection 2. Completed Duct Test
	Electric Ducted Heat	50% up to $125	
Reduce Air Infiltration	Must demonstrate a minimum reduction of 1500 cfm at 50 pascals in electrically heated homes Not to exceed a minimum of 0.35 ACH	$75	Must be a NEAT recommendation
Electric Hot Water Reduction	Wrap electric water heater and, if needed, lower temperature setting / repair hot water leaks, and replace water heater	$25	LIWAP Inspection
HVAC Maintenance	Centrally ducted Electric Heat and Cooling Systems	$40	LIWAP Inspection
High Efficiency Heat Pump Replacing a Heat Pump	14 SEER and 7.8 HSPF	$100	
	15 SEER and 8 HSPF	$150	
High Efficiency Heat Pump Replacing Electric Resistance Heat	14 SEER and 7.8 HSPF	$250	
	15 SEER and 8 HSPF	$350	
Heat Recovery Unit	Connected to an Electric Water Heater	$100	LIWAP Inspection
Low Flow Showerheads	Maximum of 2.5 gallon per minute flow	$18 per showerhead	Maximum of 2 per home and 1 per shower
Compact Fluorescent Light Bulbs	15 or 18 watt Compact Fluorescent replacing incandescent lamp greater than or equal to 60 watts	$4 per lamp	Maximum of 3 per household
Refrigerator Coil Brush	Clean Refrigerator or Freezer Coils	$7 each	Maximum of 1 per household
Faucet Aerators	Flow Reduction	$2 per Aerator	Maximum of 3 per household

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Weatherization Measure	Minimum Measure Requirement	Incentive Amount	Additional Requirements
Dedicated Heat Pump Water Heater		$200	LIWAP Inspection
Supplemental Incentive Bonus	High efficiency electric heat pump **and** either ceiling insulation **or** duct leakage repair	$25	
	High efficiency electric heat pump **and** ceiling insulation **and** duct leakage repair	$50	

Notes:

1. *All non-matching incentives cannot exceed the actual cost of the measure.*
2. *A home is eligible to receive an incentive for each heat pump installed based on the efficiency level.*
3. *To qualify for the supplemental bonus, additional measures must be implemented within 90 days of heat pump installation.*
4. *In multi-family structures, PEF reserves the right to request bids from contractors to hold customer costs to a minimum.*

4. CEILING INSULATION UPGRADE

4.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. The home must be at least two years old.
4. Eligible residences must have whole house electric air conditioning and/or whole house electric heating.
5. The weighted average R-value of the existing insulation over the total attic square footage (above conditioned space) must be less than R-12.
6. Any structure that has utilized any of PEF's ceiling insulation programs is not eligible to participate again. However, if the structure, through an act of God, loses the insulation **and** the loss is **not** covered by insurance, the structure is eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from his/her insurance company stating that the insulation was not covered.
7. The total ceiling area to be insulated must be greater than 100 square feet.
8. Mobile homes built after January 1, 1977 will be assumed to have an insulation value in excess of R-11 and will not be eligible to participate in this part of the LIWAP program unless documentation is provided to PEF stating that the actual existing insulation value is less than R-12.
9. Any home with "Knob and Tube Wiring" that is energized is not eligible.[5]

4.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.
2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation shall be added in increments of R-11, R-19, R-22, or R-30.

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[5] National Electrical Code, Article 324, Section 324-4

3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to the recommended R-value.

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area including knee walls.[6]

7. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

8. Radiant barriers will not be allowed as a substitute in the LIWAP.

9. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches and where obstructions to blown insulation exist (such as air conditioning ducts).[7]

4.3 CONTRACTOR REQUIREMENTS

4. Must meet the Contractor Requirements outlined in Section 2.1.

5. The contractor will supply to the customer, in writing the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

6. The contractor will attach an R-value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:

    - Manufacturer's name
    - Insulation type
    - R-Value of insulation installed

[6] Florida Building Code Chapter 13, sub section 6 Section 604.1.A.1 Walls Considered Ceiling Area

[7] Florida Building Code Chapter 13, sub section 6 Section 604.1ABC.1.1 Ceilings With Blown-In Insulation

- Thickness of insulation installed
- Location of insulation installed
- Name and address of the contractor installing the insulation
- Date of installation

5. DUCT LEAKAGE REPAIR

LIWAP duct repair is designed to train and encourage weatherization providers on the identification and repair procedures associated with duct leakage. Blower door or duct blaster equipment will be used as a diagnostic tool to locate duct leakage and provide quality control. This LIWAP component is available to all residential customers having a centrally ducted system with electric heating and cooling, provided the duct system is easily accessible.

5.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Repair recommendations must have been the result of a PEF-approved duct test.
4. The customer's duct system must be in adequate condition to accommodate the duct test, and not have been previously tested for the present occupant within a 5-year period.
5. The duct must be accessible for repair.
6. Homes must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist (i.e., water heater, stove, etc,) then the house must pass a safety test prior to any duct sealing.
7. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

5.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Only mastic and fiber cloth or mastic with imbed fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

5.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:
    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing

4. Before any duct repairs can be made on homes with non-space heating combustion appliances the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. A list of PEF contractors will be furnished to local weatherization providers for duct testing and repair. Providers will contract directly with PEF duct repair contractors for all repair work.

5.4. INSPECTION REQUIREMENTS

All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:

- Training session on Building Science
- Duct test applications (classroom and laboratory)
- Duct test field applications

- Codes and standards as they relate to duct sealing

6. HIGH EFFICIENCY ELECTRIC HEAT PUMPS

Promote the proper sizing and installation of high efficiency Heat Pump systems.

6.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.

6.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. All equipment installations must meet manufacturers' instructions and specifications.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.
3. Both air handler and condensing units must be replaced.
4. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and heating minimum efficiency requirements.
5. All equipment shall be new and not refurbished or have been previously installed or used.
6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available.[8]
7. If the unit is sized larger than one ton (12,000 BTU) per 500 square feet of conditioned space, a manual J or ASHRAE approved sizing calculation must be submitted. The contractor must certify that the unit was sized

[4] If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF, except for water source units,.

according to manufacturer specifications. Exception: Manufactured homes are exempted from this requirement.

8. The contractor will certify that the unit was sized according to manufacturer specifications.

9. Refrigerant charge and type shall be according to manufacturer's specifications and recommendations for the unit installed. The contractor will certify that the proper charge is installed, that the unit is tested and is leak free.

10. Contractors shall certify that the airflow meets the manufacturer's recommendations and specifications for the system installed.

11. Contractors shall certify that if the equipment installed has a scroll compressor (36,001 Btu or larger), that a hard start kit was installed either by the contractor or at the factory.

12. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

13. The contractor shall check that the controlling thermostat is properly leveled, that the anticipator is properly set, and the thermometer is correct to within two degrees Fahrenheit.

14. The contractor will be encouraged to use mastic on all new connections.

15. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

16. Heat pump must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet Contractor Requirements in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning contractor in the jurisdiction having authority.

3. Contractors must demonstrate their capability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.

4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.

5. The agency shall have 6 months from date if installation to submit all "High Efficiency Equipment Forms" after which they will become ineligible for incentive.

7. High Efficiency Alternate Electric Water Heating

7.1 Participation Requirements

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have an electric water heater.

7.2 Equipment and Installation Specifications

1. All heat recovery units must be installed in accordance with manufacturer's specifications.
2. Installed equipment must be complete systems and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.
3. Heat recovery water heaters must be equipped with a circulating pump and must be Association of Refrigerant Desuperheater Manufacturers (ARDM) certified.
4. Heat recovery unit must be installed on an electric water heater.
5. All equipment shall be new and not refurbished, previously installed, or used.

7.3 Contractor Requirements

Must meet the Contractor Requirements outlined in Section 2.1 and 6.3

8. HEATING AND AIR CONDITIONING MAINTENANCE (HAC)

Heating and air conditioning maintenance is designed to increase energy efficiency through proper operation of mechanical equipment. Local providers are encouraged to identify HAC systems that could benefit from service maintenance to avoid future breakdowns.

8.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have centrally ducted electric heating and cooling.

8.2 EQUIPMENT/SERVICE AND INSTALLATION SPECIFICATIONS

The following represents the minimum requirement that must be performed by an approved contractor:

Filter:

- Inspect and clean filters
- Replace up to one inch throw-away filter
- Replace specialty filters if provided by customer

System Controls and Operation:

- Check thermostatic operation
- Cycle all controls
- Inspect for dirt and loose connections; clean and tighten as necessary
- Visually check all connections for refrigerant leaks
- Check refrigerant pressure and add as needed
- Check and record supply and return temperature

Evaporator:

- Inspect coil assembly and drip pan
- Clean coil and pan and flush as necessary

- Check drain line and blow out if necessary
- Apply algae treatment as required

Blower and Blower Drive:

- Oil blower motor if applicable
- Check motor bearings
- Check belt condition and tension; replace if necessary
- Check blower cleanliness; clean if necessary
- Check and record amp draw
- Check drive and pulley alignment
- Check for vibrations

Condenser:

- Lubricate condenser fan motor, if applicable
- Check motor bearings
- Check coil condition for dirt build-up and clean as necessary
- Clean condenser as needed

Compressor:

- Check electrical wire connections; clean and tighten where possible
- Check operation and condition
- Check and record operating amperage

Heating System:

- Check electric heat strips

8.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Sections 2.1 and 6.3.

9. WATER HEATER

It is the intent of this portion of the program to save energy through adding additional insulation to the older water heaters, set back temperatures, insulate pipes and replace older less efficient water heaters, and help defray the cost of a new high efficient water heater.

9.1 PARTICIPATION REQUIREMENTS

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must have an electric water heater.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Sides must be wrapped with a minimum Insulation level equal to R-6 or greater.
2. Top must be insulated to an R-8 or greater.
3. Pipes shall be insulated up to 3-foot minimum.
4. Replacement water heaters must have an EF = 0.88 or higher.

9.3 CONTRACTOR REQUIREMENTS

Must meet Contractor Requirements in Section 2.3.

10. Air Infiltration Reduction

It is the intent of this portion of the program to save energy through reduction of unintended air infiltration in older homes.

10.1 Participation Requirements

1. Must meet Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.
3. Must be able to achieve an infiltration reduction of at least 1,500 cfm at 50 pascals.
4. Home must meet ASHRA Standard 90.2 as a minimum air infiltration level when infiltration sealing is completed.

10.2 Equipment and Installation Specifications

Contractor must use a blower door and a manometer for precise pressure measurements.

10.3 Contractor Requirements

Must meet Contractor Requirements in Section 2.3 and 6.3.

11. REFRIGERATOR BRUSH, COMPACT FLUORESCENT BULBS, LOW FLOW SHOWERHEADS, AND FAUCET AERATORS

11.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements outlined in Section 2.
2. Must be a recommendation from a LIWAP Audit.

Measure	Participation Requirements	Equipment and Installation Specifications
Low Flow Showerhead	• Electric Water Heater • Current showerhead flow of 3.5 gallon per minute or greater	Must meet manufacturer's specifications
Compact Fluorescent Light Bulb	• 15 or 18 watt compact fluorescent replacing incandescent lamp greater than or equal to 60 watts operating a minimum of 3 hours per day	Must meet manufacturer's specifications • Must not be installed on a dimming circuit • Must not be installed in an enclosed fixture • Must be interior use only
Faucet aerators	• No aerators currently installed	Must meet manufacturer's specifications • Threads must be compatible with existing faucet threads
Refrigerator coil brush	• Refrigerator or Freezer present	Use per manufacturer's recommendation to clean condenser coils

11.2 CONTRACTOR REQUIREMENTS

Must meet the Contractor Requirements outlined in Section 2.1

12. INCENTIVE PROCESSING

Weatherization providers will submit the following information with all invoices by the tenth workday of each month (not to exceed 45 days from the date of installation):

- Client information
- A list of installed measures and, where appropriate, pre-existing conditions
- Pre and post CFM 50 readings
- Itemized invoice with a brief description of installed measures (incentive measures only) and program incentive for each weatherized home, or the PEF/LIWAP data information form.

If the home is not selected for inspection, or after it has passed inspection, invoices will be processed for payment. PEF will input installed measures and paid incentives to a data base system. Submitted reports and invoices will be maintained on file.

13. REPORTING REQUIREMENTS

PEF will follow the reporting requirements consistent with Rule 25-17.0021(5), Florida Administrative Code.

PROGRESS ENERGY FLORIDA, INC.
PROGRAM PARTICIPATION STANDARDS
BETTER BUSINESS PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
BETTER BUSINESS PROGRAM

1. PROGRAM OVERVIEW

The Better Business Program is the "umbrella" efficiency program designed to improve the energy efficiency of existing commercial facilities. The program seeks to meet the following overall goals:

1. Improve customer comfort levels through energy efficient equipment.
2. Obtain energy and demand reductions that are significant, permanent and measurable.
3. Enhance contractor awareness of the capabilities of energy efficient technologies.
4. Educate customers about additional opportunities to upgrade facility energy efficiency.
5. Obtain cost-effective resources from the marketplace.
6. Minimize "lost opportunities" in the existing commercial market.

2. ELIGIBILITY REQUIREMENTS

1. All measures must have been recommended during a PEF energy audit which must have been done within the past 2 years. (***Exceptions***: *In emergency cases, the customer may have HVAC equipment installed.)*
2. Equipment and measures must be installed in facilities that are located in the PEF service territory and served by a metered PEF account.
3. ***Commercial multi-family*** is defined as commercially metered accounts of multi-family residential apartments or condominiums, or commercially metered accounts of assisted living residential apartment units (with a minimum of 500 square feet of conditioned space). Any multi-family residential dwellings that are mastered metered (referred to as "Domestic/Commercial") shall be eligible to participate in this program.
4. PEF must be permitted to inspect the installation of all measures and equipment prior to issuing any incentive payments.

2.1 CONTRACTOR REQUIREMENTS

1. All participating contractors must comply with PEF contractor procedures specific to the program component in which they are participating. Failure to do so may result in termination of participation in any or all PEF Programs.

2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by an PEF representative and notify PEF of compliance within 30 days.

4. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.

5. The contractor must comply with all Federal, State and local codes and regulations and have the appropriate license(s) for the work to be performed.

6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all PEF programs.

7. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 working days of incident.

8. The contractor must provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 6 dealing with HVAC contractors is exempt from this provision.*)
   - Workers' Compensation as required by law.
   - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence.
   - General and Automobile Property Damage Liability: $100,000 per occurrence.
   - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage.

9. PEF reserves the right to request background checks of contractors participating in the Better Business Program.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Heat Pumps less than or equal to 65,000 Btu/h replacing electric resistance heat	$250 for minimum cooling efficiency of 14.0 SEER and minimum heating efficiency of 7.8 HSPF
	$350 for minimum cooling efficiency of 15.0 SEER and minimum heating efficiency of 8 HSPF
Heat pumps less than or equal to 65,000 Btu/h replacing heat pump	$100 for minimum cooling efficiency of 14 SEER and minimum heating efficiency of 7.8 HSPF
	$150 for minimum cooling efficiency of 15 SEER and minimum heating efficiency of 8 HSPF
Package Terminal Heat Pumps (PTHPs)	$150 per kW reduced from baseline efficiency
Unitary A/C and Heat Pumps greater than 65,000 Btu/h	$150 per kW reduced from baseline efficiency
Air-Cooled and Water-Cooled Electric Chillers	$150 per kW reduced from baseline efficiency, with a maximum of $75,000 per project
Energy Recovery Ventilation	$1.00per CFM, minimum 450 CFM unit >65% winter effectiveness per ARI 1060-2000 with a maximum of $5,000 per building
Cool Roof	Energy Star Roof Product with .65 or greater solar reflectance per ASTM E 903 or ASTM C 1549; $.10 per square-foot installed with maximum of $5,000 per building
Ceiling Insulation Upgrade	$75 to bring insulation level up to a minimum of R-19 *An additional 5¢ per square foot above 1500 square feet will be paid
	$100 to bring insulation level up to a minimum of R-30 *An additional 7¢ per square foot above 1500 square feet will be paid
	Commercial multi-family units count on a per unit basis
Duct Test	50% of test cost up to $30 for first unit tested
	50% of test cost up to $20 for each additional unit tested
Duct Repair	25% of the repair cost up to a maximum of $50 per unit for facilities with non-ducted electric heat
	50% of the repair cost up to a maximum of $125 per unit for facilities with ducted electric heat. Up to an additional $25 may be paid during off-season shoulder months Commercial multi-family units count on a per unit basis, receive $100 and no duct test is required[1]

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[1] Top floor only on multi-story buildings.

4. INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.

2. A PEF inspector will complete a Better Business Program form which will record as a minimum the following information: customer's name, address and account number. In addition, equipment information (manufacturer, model numbers, SEER or HSPF) will be gathered at that time. For aerosol duct sealing participation, pre and post duct leakage data and a copy of the certificate of completion will be required.

3. The customer will sign and date the PEF form that relates to each applicable measure installed.

4. In addition, project-supporting documents will be reviewed for program compliance.

5. After the inspection has been successfully completed, the PEF inspector will return the original form to PEF for payment processing.

6. Incentives will not be paid until the review (and inspection when required) is/are completed.

7. A copy of the customer's invoice must accompany the incentive application for all measures completed.

8. PEF will then input the completed paperwork into the computer system and file a copy of the Better Business form.

9. The customer has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. If a check is requested, the auditor will need to obtain the customer's Tax ID#. Any customer receiving over $600 total during a year will receive an IRS 1099 form from PEF reporting to the customer and the IRS the total amount of the rebates received from PEF for that year.

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5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. HVAC Equipment

6.1 Participation Requirements

1. The customer must provide proof of HVAC project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices or purchase orders.

2. Air Conditioning and Refrigeration Institute (ARI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form.

3. Cooling and heating load calculations must be performed if the capacity of the high efficiency unit differs from that of the original unit or if the high efficiency unit is adding cooling or heating to previously unconditioned space.

6.2 Equipment and Installation Specifications

Small Heat Pumps (≤ 65,000 Btu/h)

1. Installed equipment must be complete systems (i.e. both air handler and outdoor condensing units must be replaced in order to qualify for an incentive) including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. All equipment installations must meet manufacturers' instructions and specifications.

3. All equipment shall be new and not refurbished, previously installed, or used.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and the heating minimum efficiency requirements described in Section 6.4.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF.

7. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

8. Contractors shall certify that a "hard start" kit has been installed to manage starting current on all scroll compressor units over 36,000 Btu/h.

9. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

10. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

11. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

12. The contractor will be encouraged to use mastic on all new connections.

13. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

14. Heat pump must be all electric.

Package Terminal Heat Pumps (PTHPs)

1. Packaged terminal heat pump heating and cooling efficiencies (at ARI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 6.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air conditioners that use only electric resistance elements for heating.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating

certified to be in compliance with an approved DOE or ARI rating procedure.

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

6. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

7. Package Terminal Heat pump must be all electric.

Unitary A/C and Heat Pumps (> 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure (ARI 210/240-94 for less than 135,000 btu/h and ARI 340/360 for units greater than 135,000 btu/h).

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

8. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

9. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

10. The contractor will be encouraged to use mastic on all new connections.

11. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

12. HVAC equipment must be all electric.

Air-Cooled and Water-Cooled Electric Chillers

1. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure.

2. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

3. All equipment installations shall meet manufacturer's instructions and specifications.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

6. HVAC equipment must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.
3. Contractors must demonstrate their ability to properly calculate heating and cooling loads by the Manual J method and to properly size and specify HVAC equipment.
4. The contractor must notify PEF within 30 days if there was an emergency replacement due to equipment failure.

6.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

Small Heat Pumps (≤ 65,000 Btu/h)

MINIMUM COOLING EFFICIENCY	MINIMUM HEATING EFFICIENCY	INCENTIVE per Heat Pump (HP)
SEER	HSPF	
14.0	7.8	$100 HP to HP $250 Strip to HP
15.0	8	$150 Strip to HP $350 Strip to HP

Packaged Terminal Heat Pumps (PTHPs) (ARI 310/380 Test Standards)

Cooling Capacity (Btu/h)	Heating Efficiency (COP)		Cooling Efficiency (EER)	
	Baseline Efficiency	Minimum Efficiency Eligible for Incentive	Baseline Efficiency	Minimum Efficiency Eligible for Incentive
≤7,000	1.0	3	9.3	10.5
7,001-8,000	1.0	3	9.3	10.3
8,001-9,000	1.0	3	9.1	10.3
9,001-10,000	1.0	3	8.9	10.3
10,001-11,000	1.0	2.9	8.7	10.0
11,001-12,000	1.0	2.9	8.5	10.0
12,001-13,000	1.0	2.9	8.2	10.0
13,001-14,000	1.0	2.9	8.0	9.5
14,001-15,000	1.0	2.9	7.8	9.3
>15,000	1.0	2.9	7.6	9.0

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Unitary AC and Heat Pumps > 65,000 Btu/h

Equipment Type and Size Range	2006 State Energy Code Standard	Minimum Efficiency Eligible for Incentive
Air-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	10.3 EER	11.5 EER
135,001 Btu/h – 240,000	9.7 EER	10.1 EER
240,001 – 760,000 Btu/h	9.5 EER	10.8 EER
Over 760,000 Btu/h	9.2 EER	10.5 EER
Water-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	11.5 EER[a]	13 EER[a]
over 135,000 Btu/h	11 EER[a]	12.5 EER[a]

[a] Water-cooled EER is at Standard Rating of 85° F entering water

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Air-cooled and Water-cooled Electric Chillers (ARI 550/590 Test Standards)

Equipment Type and Size Range	2006 State Energy Code Standard	Minimum Efficiency Eligible for Incentive
WATER-COOLED CENTRIFUGAL CHILLERS		
under 150 tons	0.70 kW/ton (5 COP)	0.65 kW/ton (5.4 COP)
150-300 tons	0.63 kW/ton (5.5 COP)	0.60 kW/ton (5.9 COP)
over 300 tons	0.58 kW/ton (6.1 COP)	0.56 kW/ton (6.3 COP)
WATER-COOLED SCROLL or SCREW CHILLERS		
under 150 tons	0.79 kW/ton (4.5 COP)	0.72 kW/ton (4.9 COP)
150-300 tons	0.72 kW/ton (4.9 COP)	0.66 kW/ton (5.3 COP)
over 300 tons	0.64 kW/ton (5.5 COP)	0.59 kW/ton (5.9 COP)
AIR-COOLED ELECTRIC CHILLERS		
any size	1.26 kW/ton (2.8 COP)	1.17 kW/ton (3 COP)

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7. CEILING INSULATION UPGRADE

7.1 PARTICIPATION REQUIREMENTS

1. Must meet the Eligibility Requirements as outlined in Section 2.

2. Building must be at least two years old at the time of the audit. New construction is not eligible to participate in this program.

3. The weighted average R-value of the existing insulation over the total ceiling square footage (above conditioned space) must be less than R-12.

4. Eligible facilities must have whole-facility electric air conditioning and/or whole- facility electric heating.

5. Any structure that has in the past utilized this portion of the program (attic insulation) is not eligible to participate again. However, if that structure, through uncontrollable circumstances, loses the insulation and this loss is not covered by insurance, then the structure would be eligible to participate a second time. It is the customer's responsibility to provide PEF with a letter from their insurance company stating that the insulation loss was not covered by insurance.

6. Total square footage of the area to be insulated must be greater than 500 square feet.

7. Any facility with "Knob and Tube Wiring" that is energized is not eligible. *(National Electrical Code 1990, Article 324, Section 324-4).*

8. ***Commercial multi-family*** units will be qualified as individual units for incentive purposes. Multi-family units greater than one story in height may only have the top floor eligible for incentive purposes.

7.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. The insulation must be installed in accordance with the manufacturer's recommendations and specifications.

2. All installations must result in an insulation value equal to or greater than R-19 or R-30. Insulation will be added in increments of either R-11, R-19, R-22 or R-30.

3. Flat roofs must have sufficient space to allow a minimum of 3 inches of air space above the insulation after insulation has been installed to proposed R-value.

4. The insulation must be installed in the unconditioned space as a direct application to the attic area over the conditioned space.

5. The insulation must have a minimum clearance around all recessed lighting and gas-fired appliances as required by State, County and local codes.

6. The insulation must be installed uniformly, resulting in a minimum R-19 value throughout the entire area.

7. The insulation must not cover existing soffits or any other type of ventilation.

8. All attic access panels that are located in conditioned space must be insulated with a minimum R-19 batt permanently attached.

9. Radiant barriers will not be allowed as a substitute for insulation in this program.

10. Ceilings with a rise greater than 5 and a run of 12 (5 over 12 pitch) shall not be insulated with blown-in (loose fill) insulation. Blown-in insulation shall not be used in attics where the distance from the top of the bottom chord of the truss or ceiling joist to the underside of the top chord of the trusses at the ridge is less than 30 inches, and where obstructions to blown insulation exist (such as air-conditioning ducts). *(Florida "1993 Energy Efficiency Code for Building Construction" Section 604.1 ABC.1.1 Ceilings With Blown-In Insulation).*

7.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlines in Section 2.1.

2. The contractor will supply to the customer, in writing, the number of bags installed, and leave with the customer an empty bag or manufacturer's literature in order to determine the required density of the insulation.

3. The contractor will attach an R-Value Certification Card signed by the insulation contractor or his representative to the attic joist visible from the attic access. The card shall contain, at a minimum, the following information:
   - Manufacturer's name
   - Insulation type
   - R-Value of insulation installed
   - Thickness of insulation installed
   - Location of insulation installed
   - Name and address of the contractor installing the insulation
   - Date of installation

4. PEF reserves the right to request background checks of contractors participating in the Better Business Program Ceiling Insulation upgrades.

8. Duct Test And Leakage Repair

8.1 Participation Requirements

1. Must meet the Eligibility Requirements as outlined in Section 2.

2. Repair recommendations must have been the result of a PEF-approved duct test.

3. The customer's premise must be in adequate condition to accommodate the duct test to be performed and not have been previously tested for the present occupant within a 5-year period.

4. The duct must be easily accessible for repair. (Exception: aerosol sealing method)

5. ***Commercial multi-family*** units will be qualified as individual units for incentive purposes. Multi- family units greater than one story in height may only have the top floor duct systems(s) repaired. No combustion appliances (fireplaces, water heating, etc) are allowed due to safety concerns.

6. All facilities must have centrally-ducted electric cooling and electric heat. If non-space heating combustion appliances exist, then the facility must pass a safety test prior to any duct sealing.

7. Duct and HVAC systems must be in adequate condition to accommodate duct leakage repair.

8. A minimum of 60 cfm @25 Pascals of leakage per ton of HVAC equipment capacity and a minimum of 60% of the leakage sealed is the baseline for participation in aerosol duct sealing.

8.2 Equipment and Installation Specifications

1. All equipment installations must meet manufacturers' instructions and specifications.

2. Only mastic and fiber cloth or mastic with embedded fiber (mixed) may be used to seal the duct system. Duct tape may be used to hold the duct in place while the mastic is drying. If duct tape is used, the mastic must cover the duct tape completely and extend a minimum of 2" past the width of the duct tape. Mastic must meet UL 181 specifications for the material that the mastic is being applied to.

3. Blower door or duct blaster procedures must be followed as specified in training or manufacturer's instructions, unless otherwise directed by PEF when performing the duct test.

4. Aerosol procedures must be followed as specified in training or manufacturer's instructions and will include :

    - Complete pre-seal leakage test using approved aerosol software
    - Aerosol sealants shall meet the requirements of UL 723
    - Seal all boot to ceiling and/or floor connections
    - All areas of the duct system will be evaluated and cost-effective leaks will be sealed by conventional (7.2.2) or aerosol method
    - Complete post-seal leakage test using approved aerosol software

8.3 CONTRACTOR REQUIREMENTS

1. Must meet the contractor requirements as outlined in Section 2.1.

2. Must be a licensed Mechanical Contractor, Class A, B, or C Air-Conditioning contractor in the jurisdiction having authority.

3. All participating contractors must have attended and successfully completed a PEF-approved duct repair course. At a minimum, the training will consist of:

    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing
    - Aerosol technicians must successfully complete industry specific training

4. Before any duct repairs can be made on facilities with non-space heating combustion appliances, the contractor shall follow the procedures as written in Chapter 4 of the "Duct Doctoring" instruction manual provided by the Florida Solar Energy Center Duct Diagnostics Training Course. The only exception is line 36, which deals with drilling a hole in the customer's vent pipe. This is not required. Instead of this procedure, PEF has adopted the National Fuel Gas Code's "Appendix H: Recommended Procedure for Safety Inspection of an Existing Appliance Installation."

5. In ***Commercial multi-family*** units, the contractor shall seal all joints and connections of the duct work, and no duct test is required. Multi- family units greater than one story in height may only have the top floor duct systems(s) repaired. No combustion appliances (fireplaces, water heating, etc.) are allowed for multi-family due to safety concerns.

6. PEF reserves the right to request background checks of contractors participating in the Better Business Program Duct Test and Repair service.

8.4 INSPECTION REQUIREMENTS

1. All inspectors must be trained in the area for which they are inspecting. If inspecting for the Duct Test and Leakage portion of this program, all inspectors must have attended and successfully completed the training offered by the Florida Solar Energy Center or similar course. At a minimum, the training will consist of:
    - Training session on Building Science
    - Duct test applications (classroom and laboratory)
    - Duct test field applications
    - Codes and standards as they relate to duct sealing

9. ENERGY RECOVERY VENTILATION

9.1 PARTICIPATION REQUIREMENTS

1. The customer must provide proof of energy recovery ventilation project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) 1060 certified efficiency data must be attached to the incentive form.

3. Heating and cooling system must be all electric.

4. Twenty (20) year life with one membrane change out.

9.2 EQUIPMENT AND INSTALLATION SPECIFICATIONS

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. Equipment efficiency ratings shall be obtained from Air Conditioning and Refrigeration Institute (ARI) rating procedure standard 1060-2000.

3. To be eligible for an incentive, the energy recovery ventilation unit ARI 1060 rating must be greater than 65% winter effectiveness.

4. All equipment installations must meet manufacturers' instructions and specifications.

5. All equipment shall be new and not refurbished, previously installed, or used.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. The contractor will be encouraged to use mastic on all new connections.

10. Cool Roof

10.1 Participation Requirements

1. The customer must provide proof of Energy Star approved Roof Products project cost and project contract date. This qualification is typically met by submitting copies of invoices.

2. The "cool roof" product must be an approved Energy Star product. It should be tested using the ASTM E 903 or ASTM C 1549 standards and be certified as having an Initial Solar Reflectance greater than or equal to 0.65 and certification must be attached to the incentive form.

3. Cooling system must be all electric.

10.2 Material and Installation Specifications

1. Installed roofing product must be certified and approved by the Energy Star Roof Products program and shall be listed by the EPA in their approved products listing.

2. Qualified roofing material ratings shall be obtained by the ASTM E 903 or ASTM C 1549 standards test and have an Initial Solar Reflectance greater than or equal to 0.65.

3. All installations must meet manufacturers' instructions and specifications.

11. Installment Billing

1. As an alternative to receiving an incentive payment, customers may opt to finance up to a maximum of $500 through installment billing. For each measure, a customer can use installment billing to finance up to 90% of the total installed cost or repair cost.

2. Installment billing allows the customer to spread the cost over 12 months, interest free. The installment billing payments will appear as a separate line item on the customer's monthly electric bill from PEF.

3. Installment billing can be used for any combination of the following qualified measures: ceiling insulation upgrade, duct leakage repair, and high efficiency HVAC equipment.

4. If the customer installs additional qualified measures, a new installment billing arrangement can be set up only after the initial or current "loan" is paid off.

5. The customer must own the facility in which the improvements are being made. The customer shall not have been cut for non-payment, received a credit extension or have any returned checks within the past two years.

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS

COMMERCIAL/INDUSTRIAL NEW CONSTRUCTION PROGRAM

PROGRESS ENERGY FLORIDA, INC.

PROGRAM PARTICIPATION STANDARDS
COMMERCIAL/INDUSTRIAL
NEW CONSTRUCTION PROGRAM

1. PROGRAM OVERVIEW

The Commercial/Industrial New Construction Program is an "umbrella" program designed to encourage the construction of energy efficient commercial buildings.

The program seeks to meet the following overall goals:

1. Educate builders about energy efficient new construction commercial building design to create a supply of energy efficient facilities.
2. Obtain energy and demand impacts that are significant, accurate, sustainable and measurable.
3. Evaluate cost-effective measures for the marketplace.
4. Minimize "lost opportunities" in the new construction market.

2. ELIGIBILITY REQUIREMENTS

1. Equipment and measures must be installed in business facilities that are located in the PEF service territory and are served by a metered PEF account.
2. PEF must be allowed to inspect the installation of all measures and equipment prior to issuing any incentive payments.
3. The commercial facility must be new – additions do not qualify for this program.

2.1 CONTRACTOR REQUIREMENTS

1. All participating contractors must comply with PEF contractor procedures specific to the program component in which they are participating. Failure to do so may result in termination of participation in any or all PEF programs.
2. The contractor is responsible for the work to be performed, the supervision of their employees and the use of contractor's own equipment to meet the work specifications and completion date.

3. The contractor must correct any deficiency found in the installation or product when advised by a PEF representative and notify PEF of compliance within 30 days.

4. The contractor shall indemnify and hold PEF harmless against any and all injuries, damages, claims or costs, whatsoever, caused by items furnished or services rendered.

5. The contractor must comply with all Federal, State and local codes and regulations, and have the appropriate license(s) for the work to be performed.

6. The contractor must follow manufacturers' specifications and procedures; failure to do so may result in termination of participation in any or all PEF programs.

7. The contractor shall notify PEF of any incident occurring during installation of a conservation measure or any follow-up procedure within 5 working days of incident.

8. The contractors must provide PEF with documentation and maintain in force the following insurance policies: (***Exception:*** *Section 6 dealing with HVAC contractors is exempt from this provision*).

   - Workers' Compensation as required by law
   - General Contractual and Automobile Bodily Injury Liability: $100,000 per person and $300,000 per occurrence
   - General and Automobile Property Damage Liability: $100,000 per occurrence
   - General and Vehicle Liability policies endorsed: $100,000 per occurrence to provide blanket coverage

9. PEF reserves the right to request background checks of contractors participating in the Commercial New Construction Program.

3. INCENTIVES

The incentive payment structure is as follows:

Program Component	Incentive
Heat Pumps less than or equal to 65,000 Btu/h	$100 for minimum cooling efficiency of 14 SEER and minimum heating efficiency of 7.8 HSPF
	$150 for minimum cooling efficiency of 16 SEER and minimum heating efficiency of 8.1 HSPF
Package Terminal Heat Pumps (PTHPs)	$150 per kW reduced from baseline efficiency
Unitary A/C and Heat Pumps greater than 65,000 Btu/h	$150 per kW reduced from baseline efficiency
Air-Cooled and Water-Cooled Electric Chillers	$150 per kW reduced from baseline efficiency, with a maximum of $75,000 per project
Energy Recovery Ventilation	$1.00 per CFM, minimum 450 CFM unit >65% winter effectiveness per ARI 1060-2000 with a maximum of $5,000 per building
Cool Roof	Energy Star Roof Product with .65 or greater solar reflectance per ASTM E 903 or ASTM C 1549; $.10 per square-foot installed with maximum of $5,000per building

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4. INCENTIVE PROCESSING

1. On-site inspections will be performed on at least 10% of the completed projects for each program measure.

2. A PEF inspector will complete a Commercial New Construction Program form which will record as a minimum the following information: customer's name, address and account number. In addition, equipment information (manufacturer, model numbers, EER or SEER, HSPF or COP) will be gathered at that time.

3. The customer will sign and date the PEF form that relates to each applicable measure installed.

4. In addition, project-supporting documents will be reviewed for program compliance.

5. After the inspection has been successfully completed, the PEF inspector will return the original form to PEF for payment processing.

6. Incentives will not be paid until the review (and inspection when required) is/are completed.

7. A copy of the customer's invoice must accompany the incentive application for all measures completed.

8. PEF will then input the completed paperwork into the computer system and file a copy of the Commercial New Construction form.

9. The customer has the option of receiving the incentive in the form of a credit on their account or in the form of a rebate check. If a check is requested, the auditor will need to obtain the customers Tax ID#. Any customer receiving over $600 total during a year will receive an IRS 1099 form from PEF reporting to the customer and the IRS the total amount of the rebates received from PEF for that year.

5. REPORTING REQUIREMENTS

The reporting requirements for this program will follow Rule 25-17.0021(5), Florida Administrative Code.

6. HVAC Equipment

6.1 Participation Requirements

1. The customer must provide proof of HVAC project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) certified efficiency data at Standard Rating Conditions must be attached to the incentive form.

6.2 Equipment and Installation Specifications

Small Heat Pumps (≤ 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. All equipment installations must meet manufacturers' instructions and specifications.

3. All equipment shall be new and not refurbished, previously installed, or used.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. The installed air handler/outdoor condensing unit combination must satisfy both the cooling and the heating minimum efficiency requirements described in Section 6.4.

6. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or Air Conditioning and Refrigeration Institute (ARI) rating procedure (standard 210/240-94). All cooling-mode efficiency ratings eligibility will be based on EER if available. If EER ratings are not available then SEER will be used to determine cooling-mode eligibility. All heating-mode efficiency ratings eligibility will be based on HSPF.

7. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

8. Contractors shall certify that a "hard start" kit has been installed to manage starting current on all scroll compressor units over 36,000 Btu/h.

9. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

10. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

11. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

12. The contractor will be encouraged to use mastic on all new connections.

13. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

14. Heat pump must be all electric.

Package Terminal Heat Pumps (PTHPs)

1. Packaged terminal heat pump heating and cooling efficiencies (at ARI Standard 310/380 Rating Conditions) must meet or exceed the minimum efficiencies listed in Section 6.4. Packaged terminal heat pumps must be sized to handle the heating load at 31 degrees Fahrenheit outdoor air temperature without the use of backup strip heat. No incentive is offered for packaged terminal air conditioners that use only electric resistance elements for heating.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved Department of Energy (DOE) or ARI rating procedure.

3. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

4. All equipment installations shall meet manufacturer's instructions and specifications.

5. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

6. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

7. Package Terminal Heat pump must be all electric.

Unitary A/C and Heat Pumps (> 65,000 Btu/h)

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards, as appropriate.

2. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure (ARI 210/240-94 for less than 135,000 btu/h and ARI 340/360 for units greater than 135,000 btu/h).

3. All equipment installations must meet manufacturers' instructions and specifications.

4. All equipment shall be new and not refurbished, previously installed, or used.

5. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

8. Return air filters shall be installed to meet manufacturer's specifications with no obstructions. Filters must be easily accessible and the location shown to the customer.

9. The contractor shall check that the controlling thermostat has been properly leveled, that the anticipator has been properly set and that the thermometer on the thermostat is correct to within two degrees Fahrenheit.

10. The contractor will be encouraged to use mastic on all new connections.

11. Air handling units, mechanical closets and enclosed support platforms shall be sealed from unconditioned air.

12. HVAC equipment must be all electric.

Air-Cooled and Water-Cooled Electric Chillers

1. Equipment efficiency ratings shall be obtained from a nationally recognized certification program directory or a manufacturer's rating certified to be in compliance with an approved DOE or ARI rating procedure.

2. All equipment for which an incentive is paid shall be new and not refurbished nor previously installed or used.

3. All equipment installations shall meet manufacturer's instructions and specifications.

4. An HVAC sizing calculation shall be performed by the contractor and shall be attached to the recommendation form when submitted for incentive payment. Cooling and heating design loads shall be determined using a Manual J or ASHRAE approved sizing calculation. Copies of all calculations must be provided to both the customer (left with the new equipment) and to PEF. Design conditions shall be those applicable to the PEF service area in which the facility is located. The contractor will certify that the unit was sized according to manufacturer specifications.

5. Refrigerant charge and type shall be according to manufacturer's recommendations for unit installed. The contractor will certify that the proper charge was installed and that the unit has been tested and is leak free.

6. HVAC equipment must be all electric.

6.3 CONTRACTOR REQUIREMENTS

1. Must meet the Contractor Requirements as outlined in Section 2.1.
2. Must be a licensed Mechanical Contractor, Class A, B, or C Air Conditioning Contractor in the jurisdiction having authority.
3. Contractors must demonstrate their ability to properly calculate heating and cooling loads by ASHRAE or Manual J method and to properly size and specify HVAC equipment.

6.4 TECHNICAL SPECIFICATIONS ON EQUIPMENT ELIGIBILITY

Small Heat Pumps (≤ 65,000 Btu/h)

MINIMUM COOLING EFFICIENCY	MINIMUM HEATING EFFICIENCY	INCENTIVE per Heat Pump
SEER	HSPF	
14.0	7.8	$100
16.0	8	$150

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Packaged Terminal Heat Pumps (PTHPs) (ARI 310/380 Test Standards)

Cooling Capacity (Btu/h)	Heating Efficiency (COP)		Cooling Efficiency (EER)	
	Baseline Efficiency	Minimum Efficiency Eligible for Incentive	Baseline Efficiency	Minimum Efficiency Eligible for Incentive
≤7,000	1.0	3	10.8	11.1
7,001-8,000	1.0	3	10.8	11.1
8,001-9,000	1.0	3	10.6	11.1
9,001-10,000	1.0	3	10.4	11
10,001-11,000	1.0	2.9	10.2	11
11,001-12,000	1.0	2.9	10	10.8
12,001-13,000	1.0	2.9	9.7	10.6
13,001-14,000	1.0	2.9	9.5	10.2
14,001-15,000	1.0	2.9	9.3	10
>15,000	1.0	2.9	9.1	9.7

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Unitary AC and Heat Pumps > 65,000 Btu/h

Equipment Type and Size Range	2006 State Energy Code Standard	Minimum Efficiency Eligible for Incentive
Air-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	10.3 EER	11.5 EER
135,001 – 240,000 Btu/h	9.7 EER	11 EER
240,001 – 760,000 Btu/h	9.5 EER	10.8 EER
over 760,000 Btu/h	9.2 EER	10.5 EER
Water-Cooled AC and Heat Pumps		
65,000-135,000 Btu/h	11.5 EER[a]	13 EER[a]
over 135,000 Btu/h	11 EER	12.5 EER

[a] Water-cooled EER is at Standard Rating of 85° F entering water

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Air-cooled and Water-cooled Electric Chillers (ARI 550/590 Test Standards)

Equipment Type and Size Range	2006State Energy Code Standard	Minimum Efficiency Eligible for Incentive
WATER-COOLED CENTRIFUGAL CHILLERS		
under 150 tons	0.70 kW/ton (5 COP)	0.65 kW/ton (5.4 COP)
150-300 tons	0.63 kW/ton (5.5 COP)	0.60 kW/ton (5.9 COP)
over 300 tons	0.58 kW/ton (6.1 COP)	0.56 kW/ton (6.3 COP)
WATER-COOLED SCROLL or SCREW CHILLERS		
under 150 tons	0.79 kW/ton (4.5 COP)	0.72 kW/ton (4.9 COP)
150-300 tons	0.72 kW/ton (4.9 COP)	0.66 kW/ton (5.3 COP)
over 300 tons	0.64 kW/ton (5.5 COP)	0.59 kW/ton (5.9 COP)
AIR-COOLED ELECTRIC CHILLERS		
any size	1.26 kW/ton (2.8 COP)	1.17 kW/ton (3 COP)

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7. Energy Recovery Ventilation

7.1 Participation Requirements

1. The customer must provide proof of energy recovery ventilation project cost, project contract date and an itemized inventory of equipment installed. This qualification is typically met by submitting copies of invoices.

2. Air Conditioning and Refrigeration Institute (ARI) 1060 certified efficiency data must be attached to the incentive form.

3. Heating and cooling system must be all electric.

4. Twenty (20) year life with one membrane change out.

7.2 Equipment and Installation Specifications

1. Installed equipment must be complete systems including any supplemental devices, and shall be listed by Underwriters Laboratories or other nationally recognized testing laboratories in accordance with UL standards as appropriate.

2. Equipment efficiency ratings shall be obtained from Air Conditioning and Refrigeration Institute (ARI) rating procedure standard 1060-2000.

3. To be eligible for an incentive, the energy recovery ventilation unit ARI 1060 rating must be greater than 65% winter effectiveness.

4. All equipment installations must meet manufacturers' instructions and specifications.

5. All equipment shall be new and not refurbished, previously installed, or used.

6. Contractors shall certify that the airflow meets manufacturer's specifications and recommendations for the system installed.

7. The contractor will be encouraged to use mastic on all new connections.

8. COOL ROOF

8.1 PARTICIPATION REQUIREMENTS

1. The customer must provide proof of Energy Star approved Roof Products project cost and project contract date. This qualification is typically met by submitting copies of invoices.

2. The "cool roof" product must be an approved Energy Star product. It should be tested using the ASTM E 903 OR ASTM C 1549 standards and be certified as having an Initial Solar Reflectance greater than or equal to 0.65 and certification must be attached to the incentive form.

3. Cooling system must be all electric.

8.2 MATERIAL AND INSTALLATION SPECIFICATIONS

1. Installed roofing product must be certified and approved by the Energy Star Roof Products program and shall be listed by the EPA in their approved products listing

2. Qualified roofing material ratings shall be obtained by the ASTM E 903 or ASTM C 1549 standards test and have an Initial Solar Reflectance greater than or equal to 0.65.

3. All installations must meet manufacturers' instructions and specifications.

9. DESIGN ASSISTANCE

9.1 PARTICIPATION REQUIREMENTS

1. Design assistance may be made available to the building design community (owners/developers, architects, engineers and contractors) through PEF -sponsored workshops, training seminars, advertising or direct marketing approaches.

2. Members in the building design community must perform work in PEF's service territory.

10. DESIGN AWARDS

10.1 PARTICIPATION REQUIREMENTS

1. PEF may give recognition to newly constructed energy efficient buildings through the distribution of energy awards and recognition advertising.

2. Each qualifying building will receive a design award plaque for placement in the building.

3. Facility receiving award must be served by PEF.

4. The design application must exceed the Florida Energy Efficiency Code for Building Construction by a minimum of 15% where applicable. Otherwise, the application must exceed standard practice by 15%.

5. Innovative applications of established technology or of operating schemes will also be considered.