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VIA: ELECTRONIC FILING

November 20, 2019

Mr. Adam J. Teitzman
Commission Clerk
Florida Public Service Commission
2540 Shumard Oak Boulevard
Tallahassee, FL 32399-0850

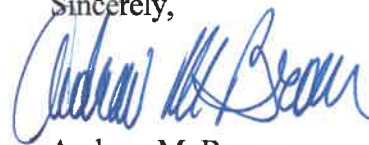
Re: Approval of Demand Side Management Plan for Peoples Gas System

Dear Mr. Teitzman:

Attached for electronic filing with the Commission on behalf of Peoples Gas System, please find Peoples' Petition for Approval of Demand Side Management Plan and Standards together.

We appreciate your usual assistance.

Sincerely,



Andrew M. Brown

AMB/pp
Attachment

BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION

In re: Approval of Demand Side)
Management Plan for Peoples)
Gas System)

DOCKET NO. _____

FILED: November 20, 2019

**PEOPLES GAS SYSTEM'S PETITION
FOR APPROVAL OF DEMAND SIDE MANAGEMENT PLAN**

Peoples Gas System ("Peoples" or "the company"), hereby petitions the Commission for approval of its Demand Side Management ("DSM") Plan designed to meet the numeric goals established by the Commission for Peoples Gas System in Order No. PSC-2019-0361-PAA-GU issued on August 26, 2019. In support of this petition the company states:

1. Notices and communications with respect to this petition in the above docket should be addressed to:

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2. On August 26, 2019 the Commission entered its Order No. 2019-0361-PAA-GU which established numeric conservation goals for Peoples Gas System for the 2019-2028 ten-year period.

3. Peoples Gas System has prepared and submits herewith its proposed DSM Plan and associated DSM Standards that contains the necessary conservation programs designed to achieve the numeric conservation goals established in Order No. 2019-0361-PAA-GU.

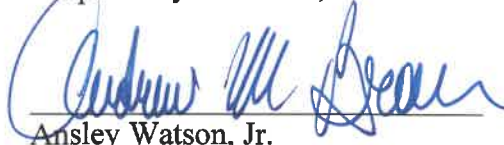
4. Peoples Gas System believes that its proposed programs are consistent with Order No. 2019-0361-PAA-GU and the numeric conservation goals set forth therein.

5. Peoples Gas System is not aware of any disputed issues of material fact relating to the matters addressed herein.

WHEREFORE, Peoples Gas System Requests that the Commission enter its order approving the company's proposed DSM Plan and associated DSM Standards for achieving the goals set by the Commission for the 2019-2028 ten-year period.

DATED this 20th day of November 2019.

Respectfully submitted,



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ATTORNEYS FOR PEOPLES GAS SYSTEM

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that true and correct copies of the foregoing have been furnished via electronic mail, this 20th day of November 2019, to the following:

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Andrew M. Brown



TECO[®]
PEOPLES GAS
AN EMERA COMPANY

Peoples Gas System

Ten-Year DSM Plan

2019-2028

November 20, 2019

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**Peoples Gas System's
2019-2028 Demand Side Management Plan**

Executive Summary

Peoples Gas System's 2019-2028 Demand Side Management Plan ("DSM Plan" or "Plan") provides a balanced, achievable, and comprehensive approach to meet the DSM goals that were approved by the Commission by Final Order No. PSC-2019-0361-PAA-GU issued on August 26, 2019 and Consummating Order No. PSC-2019-0390-GU issued on September 20, 2019. The Plan is based upon the current Commission approved programs including the addition of two specific programs (Residential Energy Audit – Online and Commercial Walk-Through Energy Audit) that were approved with the DSM Goals setting Docket. The addition of these two audit DSM Programs ensures the requirements of the Florida Energy Efficiency and Conservation Act ("FEECA") are met along with providing benefits to all rate classes. This DSM Plan includes notes on data and assumptions, new programs, and restructuring of existing programs to enable the streamlined reporting of energy savings and further participation in the company's DSM Programs.

In addition, this 2019-2028 DSM Plan continues all of the prior DSM Programs in providing gas customers with cost-effective programs for a total offering of 10 residential and 10 commercial/industrial DSM programs and one (1) research and development DSM program. Highlights of the Plan are detailed below:

Executive Summary Table of Contents:

- **Data and Assumptions for Incremental Energy Savings and Costs**
- **Reporting**
- **New DSM Programs**
- **Restructuring of Existing DSM Programs**
- **Program Standards**
- **2019-2028 Proposed Programs**
- **Cost Effectiveness Summary**
- **Cost and Impact of Proposed DSM Programs**

Data and Assumptions for Incremental Energy Savings and Costs

Data used to develop the incremental energy (Therm) savings came from the same sources that were utilized to develop the proposed DSM Goals that were approved by the Commission in Docket No. 20180186-GU. Data used to develop the costs to support this DSM Plan, including the performance of the FPSC required cost-effectiveness was obtained from the company's current costs in facilitating existing programs and costs currently experienced by the company and customers for energy efficient natural gas equipment and

infrastructure. The following sources were used to develop the data, costs and assumptions include the following:

1. Historical data: Peoples Gas System has cost-effectively offered DSM programs for over 30 years. The company captures data regarding the programs offered and when a substantial amount of history has been gained, this information may be used.
2. Load research data: Peoples Gas System utilizes its internal Load Research Department to provide data on forecasted customer counts and projected energy usage.
3. United States Energy Information Administration, 2015 Residential Energy Consumption Survey (“RECS”).
4. United States Energy Information Administration, 2012 Commercial Building Energy Consumption Survey (“CBECS”).
5. United States Energy Information Administration, June 2018 report, “Updated Building Sector Appliance and Equipment Costs and Efficiencies”.
6. National Renewable Energy Laboratory, “2014 Building America House Simulation protocols”.
7. Florida Solar Energy Center, “Estimating Daily Domestic Hot-water Use in North American Homes”, FSEC-PF-464-15.
8. Florida Solar Energy Center, Final Effectiveness Workbook, FSEC-CR-1918-12.

Reporting

Historically, Peoples Gas System has reported the results of the company’s Commission approved DSM program’s results through each program’s participation level and associated costs in the annual “true-up” and “projection” filings within the Natural Gas Conservation Cost Recovery (“NGCCR”) Docket. Starting in March 2019, Peoples Gas System started the reporting of the quantified energy savings based upon the actual efficiency of the equipment installed and the usage of the equipment within the specific market segment. Reporting on an annual basis will continue each year, with the company filing an Annual DSM Accomplishments Report to the Commission on the first of March of each year.

New Programs to fulfill Requirements of FEECA

Peoples Gas System received approval to add the following DSM programs to its DSM portfolio to ensure the full requirements of the FEECA are being met:

- **Residential Customer Assisted Energy Audit (Online Energy Audit):** A conservation program designed to save energy by increasing residential customer awareness of natural gas energy use in personal residences. This program allows for residential customers to engage in an online energy audit. Savings are dependent on the customer implementing energy conservation measures and practice recommendations. Recommendations provided to the customer includes an estimated range of energy savings including insightful advice on how to manage their overall energy usage.
- **Commercial Walk-Through Energy Audit:** A conservation program designed to reduce demand and energy consumption of commercial/industrial facilities by increasing customer awareness of the energy use in their facilities. The savings are dependent upon the customer's implementation of conservation measures and practices recommended.

Restructuring of Existing Programs

Peoples Gas System is proposing some restructuring to its existing residential and commercial/industrial DSM programs that will be offered with the company's 2019–2028 DSM Plan. The purpose of restructuring the programs is to streamline the effective and transparent reporting of energy reduction results and in some cases renaming of the program was chosen to ease the understanding of what measures are eligible for incentive. For reporting, most programs will have two components: "Replacement" which is the replacement of an existing natural gas system/equipment with an energy efficient natural gas system/equipment and "Retrofit" which is the replacement of an electric system/equipment with an energy efficient natural gas system/equipment. The company updated the incentive level of several programs to recognize the increased costs experienced to install energy efficient natural gas equipment, increased piping and venting costs and to attempt to gain participation in programs. The company restructured some programs due to recognizing that the existing program had been in place since its initial approval with needed updates due to the advancement in technology. All restructuring changes will be seamless and beneficial to the company's customers. Below is a summary of the restructuring being proposed (if any) in each of the DSM programs:

Residential Programs

- **Residential Central Heating:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate.
- **Residential Customer Assisted Energy Audit:** This program has no changes recommended.
- **Residential Dryer:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The rebate amount is being proposed to be increased for replacement participation from \$100 to \$150 and increased for retrofit participation from \$150 to \$200.
- **Residential ENERGY STAR Tank Water Heater:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The rebate amount is being proposed to be increased for retrofit participation from \$550 to \$650.
- **Residential Gas Space Conditioning:** The residential and commercial portion have been separated to provide reporting under the applicable market segment. The rebate amount is being proposed to be increased for retrofit participation from \$150 per ton of capacity to \$500 per ton of capacity.
- **Residential New Construction:** No restructuring of the program was necessary. The rebate amount is being proposed to be increased from a typical rebate of \$766 per participant to \$1,186 per participant.
- **Residential Range/Cooktop:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The rebate amount is being proposed to be increased for retrofit participation from \$200 to \$300.

- **Residential Space Heating:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results.
- **Residential Tank Water Heater:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The rebate amount is being proposed to be increased for retrofit participation from \$500 to \$550.
- **Residential Tankless Water Heater:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The rebate amount is being proposed to be increased for retrofit participation from \$675 to \$700.

Commercial Programs

- **Commercial Walk-Through Energy Audit:** This program has no changes recommended.
- **Commercial Combined Heat and Power:** This program is renamed from “Small Package Cogeneration and Feasibility Study” to provide more clarity to participating customers for what measures are eligible for a rebate. PGS removed the feasibility portion of this program due to the progression of combined heat and power (“CHP”) technology and associated studies since this programs inception in 1990 and increased the eligibility for participation by all rate payer commercial/industrial customers with the exception of the natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery. The rebate amount is being proposed to be increased for retrofit participation from \$150 per kW of capacity to \$300 per kW of capacity with additional requirements for waste heat offsetting natural gas use.
- **Commercial Dryer:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures

are eligible for a rebate. The rebate amount is being proposed to be increased for replacement participation from a maximum rebate of \$1,500 to \$2,000 and increased for retrofit participation from a maximum rebate of \$1,500 to \$2,500.

- **Commercial ENERGY STAR Tank Water Heater:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The maximum rebate amount is being proposed to be increased for retrofit participation from \$2,000 to \$2,500.
- **Commercial Fryer:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The maximum rebate amount is being proposed to be increased for retrofit participation from \$3,000 to \$3,500.
- **Commercial Gas Space Conditioning:** The residential and commercial portion have been separated to provide reporting under the applicable market segment. The rebate amount is being proposed to be increased for retrofit participation from \$150 per ton of capacity to \$500 per ton of capacity.
- **Commercial New Construction:** No restructuring of the program was necessary. The rebate amount is being proposed to be increased from a typical rebate of \$1,424 per participant to \$2,266 per participant.
- **Commercial Range/Cooktop:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The maximum rebate amount is being proposed to be increased for retrofit participation from \$1,500 to \$2,000.
- **Commercial Retrofit:** This program is renamed to provide more clarity to participating customers for what measures are eligible for an incentive. The rebate amount is being proposed to be increased from \$40 per offsetting kW to \$100 per offsetting kW.

- **Commercial Tankless Water Heater:** This program is extracted to be a stand-alone program to streamline the effective and transparent reporting of energy reduction results. In addition, the program is renamed to provide more clarity to participating customers for what measures are eligible for a rebate. The maximum rebate amount is being proposed to be increased for retrofit participation from \$2,500 to \$3,500.
- **Conservation Research and Development (“R&D”):** Rule 25-17.001(5)(f), Florida Administrative Code (“F.A.C.”) requires aggressive R&D projects to be “...an ongoing part of the practice of every well managed utility’s programs.” Peoples Gas System is combining the existing Monitoring and Research program with the Conservation Demonstration and Development program to become a single Conservation R&D program. PGS will continue its R&D efforts over the next five years at an estimated cost of \$125,000 per year and will not exceed \$500,000 over the most current five-year DSM Goals period. Peoples Gas System commits to communicate any potential R&D projects to the Commission prior to starting and upon completion will include all results or findings in the company’s next annual DSM report.

Program Standards

Peoples Gas System is filing the program standards concurrently with this proposed DSM Plan.

2019–2028 Proposed Programs

Residential

1. Residential Central Heating
2. Residential Customer Assisted Energy Audit
3. Residential Dryer
4. Residential ENERGY STAR Tank Water Heater
5. Residential Gas Space Conditioning
6. Residential New Construction
7. Residential Range/Cooktop
8. Residential Space Heating
9. Residential Tank Water Heater
10. Residential Tankless Water Heater

Commercial/Industrial

1. Commercial Walk-Through Energy Audit
2. Commercial Combined Heat and Power
3. Commercial Dryer
4. Commercial ENERGY STAR Tank Water Heater
5. Commercial Fryer
6. Commercial Gas Space Conditioning
7. Commercial New Construction
8. Commercial Range/Cooktop
9. Commercial Retrofit
10. Commercial Tankless Water Heater

Research and Development

1. Conservation Research and Development (“R&D”)

DSM Program Cost Effectiveness Summary

Residential Programs	G-RIM	PCT
Residential-New Construction		
New Construction	1.247	0.845
Residential-Retrofit		
Central Heating	1.175	1.256
Dryer	1.069	1.015
ENERGY STAR Water Heater	1.101	0.828
Gas Space Conditioning	1.307	0.382
Range/Cooktop	1.167	0.792
Space Heating	1.537	0.210
Tank Water Heater	1.166	0.915
Tankless Water Heater	1.017	0.986
Residential-Replacement		
Central Heating	1.032	11.225
Dryer	1.810	25.026
ENERGY STAR Water Heater	0.929	2.843
Gas Space Conditioning	0.758	0.938
Range/Cooktop	3.383	-19.192
Tank Water Heater	1.037	9.850
Tankless Water Heater	0.873	7.267

Commercial Programs	G-RIM	PCT
Commercial-New Construction		
New Construction	4.114	0.375
Commercial-Retrofit		
Combined Heat and Power	2.910	0.761
Dryer	1.481	0.577
ENERGY STAR Water Heater	4.739	0.562
Fryer	4.533	0.289
Gas Space Conditioning	3.793	0.170
Range/Cooktop	5.191	0.334
Commercial Retrofit	5.922	0.414
Tankless Water Heater	4.411	0.541
Commercial-Replacement		
Combined Heat and Power	1.016	1.239
Dryer	1.119	7.298
ENERGY STAR Water Heater	1.212	751.313
Fryer	1.057	212.020
Gas Space Conditioning	0.987	1.333
Range/Cooktop	1.220	-5.603
Tankless Water Heater	1.119	17.456

Cost and Impact of Proposed DSM Plan

Peoples Gas System's 2019-2028 DSM Plan is designed to meet the DSM goals that were approved by the Commission by Final Order No. PSC-2019-0361-PAA-GU issued on August 26, 2019 and Consummating Order No. PSC-2019-0390-GU issued on September 20, 2019. The DSM Plan is based upon the current Commission approved programs and will decrease overall energy costs to customers. The costs incurred to offer these DSM Programs to achieve these goals will be collected through the NGCCR Clause. Peoples Gas System's current 2019 projected residential NGCCR cost at 20 therms per month is \$2.13 (\$0.10655 per therm). With the approval of this DSM Plan to support the new established goals and other spending requirements, the residential NGCCR cost at 20 therms per month is projected to increase to \$2.86 for 2020 and \$3.22 by 2028. The tables below provide the detail of the cost impacts projected over the 10-year period to meet the Commission's approved DSM Goals.

DSM Cost Estimates Peoples Gas System			
Year	FPSC Approved Goal (Therm)	Cumulative (Therm)	DSM Plan Cost
2019	554,594	554,594	\$ 17,824,339
2020	569,170	1,123,764	\$ 18,217,208
2021	583,537	1,707,301	\$ 18,769,911
2022	597,561	2,304,862	\$ 19,295,915
2023	611,222	2,916,084	\$ 19,633,845
2024	624,502	3,540,586	\$ 19,955,462
2025	638,019	4,178,605	\$ 20,267,561
2026	651,779	4,830,385	\$ 20,596,393
2027	665,786	5,496,171	\$ 20,909,476
2028	680,046	6,176,217	\$ 21,285,745

Peoples Gas System 2019-2028 Projected Annual Therm Savings At the Meter										
Year	Residential Annual Energy (Therms)	Residential Cumulative Energy (Therms)	Residential FPSC Approved Goal	Residential Cumulative FPSC Approved Goal	Commercial Annual Energy (Therms)	Commercial Cumulative Energy (Therms)	Commercial FPSC Approved Goal	Commercial Cumulative FPSC Approved Goal	Combined Annual Energy (Therms)	Combined Cumulative FPSC Approved Goal
2019	349,812	349,812	338,439	338,439	232,867	232,867	216,155	216,155	582,679	554,594
2020	360,483	710,295	347,108	685,548	239,974	472,841	222,062	438,217	600,456	569,170
2021	374,721	1,085,016	355,569	1,041,116	246,185	719,026	227,968	666,184	620,907	583,537
2022	387,906	1,472,923	363,728	1,404,845	252,227	971,253	233,833	900,017	640,134	597,561
2023	395,216	1,868,139	371,562	1,776,406	258,313	1,229,567	239,661	1,139,678	653,529	611,222
2024	401,960	2,270,099	379,045	2,155,451	264,410	1,493,977	245,457	1,385,135	666,370	624,502
2025	408,618	2,678,717	386,682	2,542,133	270,486	1,764,463	251,338	1,636,473	679,104	638,019
2026	415,632	3,094,349	394,475	2,936,608	276,716	2,041,179	257,304	1,893,777	692,348	651,779
2027	422,290	3,516,640	402,429	3,339,037	283,078	2,324,257	263,357	2,157,134	705,368	665,786
2028	430,092	3,946,731	410,546	3,749,583	289,535	2,613,791	269,500	2,426,634	719,627	680,046

Program: Residential Central Heating Program

Program Start Date: October 1990

Program Description

The Residential Central Heating Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 0.00 Therms

Program Costs

Rebate:

Gas Retrofit: \$725 per qualifying natural gas central heating system.

Gas Replacement: \$500 per qualifying natural gas central heating system.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL CENTRAL HEATING

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	0.000	0.000
2020	0.000	0.000
2021	0.000	0.000
2022	0.000	0.000
2023	0.000	0.000
2024	0.000	0.000
2025	0.000	0.000
2026	0.000	0.000
2027	0.000	0.000
2028	0.000	0.000

PROGRAM NAME: RESIDENTIAL CENTRAL HEATING

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	4,100	1.1%	4,100
2020	371,763	371,763	4,200	2.2%	8,300
2021	380,824	380,824	4,300	3.3%	12,600
2022	389,564	389,564	4,400	4.4%	17,000
2023	397,953	397,953	4,500	5.4%	21,500
2024	405,968	405,968	4,600	6.4%	26,100
2025	414,147	414,147	4,700	7.4%	30,800
2026	422,494	422,494	4,800	8.4%	35,600
2027	431,013	431,013	4,900	9.4%	40,500
2028	439,707	439,707	5,000	10.3%	45,500

PSC FORM C.B. FORM 1
 PAGE 1 OF 1
 10/31/2019

INPUT DATA - PART 1
Residential - Furnace
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 140 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 48 Units/Year
- (5) Average Number of Participants per Year 48 Participants/Year
- (6) Avoided annual kWh per Appliance 3,150 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 725 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Residential - Furnace Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	1.256
(2) Gas-Rate Impact Measure Test (G-RIM)	1.175

PSC C.B. FORM 2
 Page 1 of 1
 October 31, 2019

Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Furnace

Year	Benefits					Costs					Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)	(12)
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Customer Gas O&M Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	238	0	725	0	963	570	850	0	58	135	38	1,651	(688)
2020	243	0	0	0	243	0	0	0	59	138	39	236	7
2021	248	0	0	0	248	0	0	0	60	141	40	241	7
2022	254	0	0	0	254	0	0	0	62	144	41	247	7
2023	259	0	0	0	259	0	0	0	63	148	42	252	7
2024	265	0	0	0	265	0	0	0	64	151	43	258	7
2025	271	0	0	0	271	0	0	0	66	154	43	263	7
2026	277	0	0	0	277	0	0	0	67	157	44	269	8
2027	283	0	0	0	283	0	0	0	69	161	45	275	8
2028	289	0	0	0	289	0	0	0	70	165	46	281	8
2029	295	0	0	0	295	0	0	0	72	168	47	287	8
2030	302	0	0	0	302	0	0	0	73	172	48	294	8
2031	309	0	0	0	309	0	0	0	75	176	50	300	8
2032	315	0	0	0	315	0	0	0	77	179	51	307	9
2033	322	0	0	0	322	0	0	0	78	183	52	313	9
2034	329	0	0	0	329	0	0	0	80	187	53	320	9
2035	337	0	0	0	337	0	0	0	82	192	54	327	9
2036	344	0	0	0	344	-3,981	0	0	83	196	55	-3,647	3,991
2037	352	0	0	0	352	0	0	0	85	200	56	342	10
2038	359	0	0	0	359	0	0	0	87	204	58	349	10
Nominal	5,890	0	725	0	6,615	-3,411	850	0	1,430	3,352	946	3,167	
NPV:	3,392	0	725	0	4,117	-871	850	0	823	1,931	545	3,278	
Discount rate:		0.0616											
			Total PV of Benefits		4,117		Total PV of Costs					3,278	
							PCT					1,256	

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits						Costs						Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	58	135	38	231	127	0	24	0	31	725	906	(675)	
2020	59	138	39	236	129	0	23	0	0	0	153	84	
2021	60	141	40	241	132	0	23	0	0	0	155	86	
2022	62	144	41	247	135	0	22	0	0	0	157	89	
2023	63	148	42	252	138	0	22	0	0	0	160	92	
2024	64	151	43	258	141	0	21	0	0	0	162	95	
2025	66	154	43	263	144	0	21	0	0	0	165	98	
2026	67	157	44	269	147	0	20	0	0	0	168	101	
2027	69	161	45	275	151	0	20	0	0	0	171	104	
2028	70	165	46	281	154	0	19	0	0	0	174	108	
2029	72	168	47	287	157	0	19	0	0	0	176	111	
2030	73	172	48	294	161	0	19	0	0	0	179	114	
2031	75	176	50	300	164	0	18	0	0	0	183	118	
2032	77	179	51	307	168	0	18	0	0	0	186	121	
2033	78	183	52	313	172	0	17	0	0	0	189	124	
2034	80	187	53	320	176	0	17	0	0	0	192	128	
2035	82	192	54	327	179	0	16	0	0	0	196	131	
2036	83	196	55	335	183	0	16	0	0	0	199	135	
2037	85	200	56	342	187	0	16	0	0	0	203	139	
2038	87	204	58	349	191	0	15	0	0	0	207	142	
NOMINAL	1,430	3,352	946	5,728	3,139	0	387	0	31	725	4,282	1,446	
NPV:	823	1,931	545	3,299	1,808	0	243	0	31	725	2,807	492	
Discount rate:	0.0616												
	Total PV of Benefits			3,299	Total PV of Costs			2,807	G-RIM				1,175

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INPUT DATA - PART 1
Residential - Furnace
Load Reduction

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 140 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 4,727 Units/Year
- (5) Average Number of Participants per Year 4,727 Participants/Year
- (6) Avoided annual kWh per Appliance 3,150 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 50 Therms/Year
- (8) Incentive payment per Appliance 500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Furnace Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	11.225
(2) Gas-Rate Impact Measure Test (G-RIM)	1.032

Participant Cost Test (PCT) (Load Reduction)											
Program: Residential - Furnace											
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Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	258	45	0	500	0	803	430	0	0	430	373
2020	264	46	0	0	0	310	0	0	0	0	310
2021	270	47	0	0	0	317	0	0	0	0	317
2022	276	48	0	0	0	324	0	0	0	0	324
2023	282	49	0	0	0	331	0	0	0	0	331
2024	288	50	0	0	0	338	0	0	0	0	338
2025	294	51	0	0	0	345	0	0	0	0	345
2026	301	52	0	0	0	353	0	0	0	0	353
2027	307	54	0	0	0	361	0	0	0	0	361
2028	314	55	0	0	0	369	0	0	0	0	369
2029	321	56	0	0	0	377	0	0	0	0	377
2030	328	57	0	0	0	385	0	0	0	0	385
2031	335	58	0	0	0	394	0	0	0	0	394
2032	343	60	0	0	0	402	0	0	0	0	402
2033	350	61	0	0	0	411	0	0	0	0	411
2034	358	62	0	0	0	420	0	0	0	0	420
2035	366	64	0	0	0	429	0	0	0	0	429
2036	374	65	0	0	0	439	0	0	0	0	439
2037	382	67	0	0	0	448	0	0	0	0	448
2038	390	68	0	0	0	458	0	0	0	0	458
Nominal	6,398		0	500	0	8,013	430	0	0	430	
NPV:	3,685		0	500	0	4,827	430	0	0	430	
Discount rate:		0.0616									
				Total PV of Benefits	4,827			Total PV of Costs		430	
									PCT	11,225	

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Gas - Rate Impact Measure Test (G-RIM)
 Program: Residential - Furnace

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Admin Cost	Total Cost	Net Benefits
2019	19	45	38	0	0	0	0	102	19	45	500	31	564	(462)
2020	20	46	39	0	0	0	0	105	20	46	0	0	66	39
2021	20	47	40	0	0	0	0	107	20	47	0	0	67	40
2022	20	48	41	0	0	0	0	109	20	48	0	0	69	41
2023	21	49	42	0	0	0	0	112	21	49	0	0	70	42
2024	21	50	43	0	0	0	0	114	21	50	0	0	72	43
2025	21	51	43	0	0	0	0	117	22	51	0	0	73	43
2026	22	52	44	0	0	0	0	119	22	52	0	0	75	44
2027	23	54	45	0	0	0	0	122	23	54	0	0	76	45
2028	23	55	46	0	0	0	0	124	23	55	0	0	78	46
2029	24	56	47	0	0	0	0	127	24	56	0	0	80	47
2030	24	57	48	0	0	0	0	130	24	57	0	0	82	48
2031	25	58	50	0	0	0	0	133	25	58	0	0	83	50
2032	25	60	51	0	0	0	0	136	25	60	0	0	85	51
2033	26	61	52	0	0	0	0	139	26	61	0	0	87	52
2034	27	62	53	0	0	0	0	142	27	62	0	0	89	53
2035	27	64	54	0	0	0	0	145	27	64	0	0	91	54
2036	28	65	55	0	0	0	0	148	28	65	0	0	93	55
2037	28	67	56	0	0	0	0	151	28	67	0	0	95	56
2038	29	68	58	0	0	0	0	155	29	68	0	0	97	58
NOMINAL	476	1,115	946	0	0	0	0	2,537	476	1,115	500	0	2091	446
NPV:	274	642	545	0	0	0	0	1,461	274	642	500	0	1,416	45
Discount rate:	0.0616													
	Total PV of Benefits							1,461	Total PV of Costs				1,416	
													G-RIM	1,032

Program: Residential Customer Assisted Energy Audit (Online)

Program Start Date: Projected April 2020

Program Description

A conservation program designed to save energy by increasing residential customer awareness of natural gas energy use in personal residences. This program allows for residential customers to engage in an online energy audit. Savings are dependent on the customer implementing energy conservation measure and practice recommendations. Recommendations provided to the customer includes an estimated range of energy savings including insightful advice on how to manage their overall energy usage.

To access this free audit, customers can participate by either logging in to Peoples Gas System's customer portal and completing the survey utilizing their actual historical natural gas usage or can complete the energy audit without logging in and using values the customer enters. Personalized audit results are immediately displayed on the customer's computer for review and implementation. The audit recommendations are based on the customers' answers to the questions and their actual energy consumption.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Program savings from the Residential Customer Assisted Energy Audit primarily come from behavioral savings. Because the savings primarily come through behavioral type changes and action taken by a customer to install a natural gas measure would likely be captured in another of the company's DSM programs. The savings per participant are as follows:

Annual Energy: 0.000 Therms

Program Costs

Based on projected costs, the administrative cost per audit is estimated to be \$10. There are no rebates or incentives for this program.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission. Peoples Gas System will evaluate the effectiveness of the online audit as compared to a residential walkthrough energy audit to ensure the justifications for the Rule Waiver that was approved in Order No. PSC-2019-0361-PAA-GU continue to be valid.

PROGRAM NAME: RESIDENTIAL CUSTOMER ASSISTED ENERGY AUDIT

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	Note 1	Note 1
2020	Note 1	Note 1
2021	Note 1	Note 1
2022	Note 1	Note 1
2023	Note 1	Note 1
2024	Note 1	Note 1
2025	Note 1	Note 1
2026	Note 1	Note 1
2027	Note 1	Note 1
2028	Note 1	Note 1

Note 1: Primary savings comes from behavioral applications and are not quantified per FPSC.

PROGRAM NAME: RESIDENTIAL CUSTOMER ASSISTED ENERGY AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level %	Cumulative Number of Program Participants
2019	362,478	362,478	2,500	0.7%	2,500
2020	371,763	371,763	3,500	1.6%	6,000
2021	380,824	380,824	4,500	2.8%	10,500
2022	389,564	389,564	4,500	3.9%	15,000
2023	397,953	397,953	4,500	4.9%	19,500
2024	405,968	405,968	4,500	5.9%	24,000
2025	414,147	414,147	4,500	6.9%	28,500
2026	422,494	422,494	4,500	7.8%	33,000
2027	431,013	431,013	4,500	8.7%	37,500
2028	439,707	439,707	4,500	9.6%	42,000

Program: Residential Dryer Program

Program Start Date: October 1990

Program Description

The Residential Dryer Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 1.020 Therms

Program Costs

Rebate:

Gas Retrofit: \$200 per qualifying natural gas dryer.

Gas Replacement: \$150 per qualifying natural gas dryer.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL DRYER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	1.020	1,938.000
2020	1.020	1,989.000
2021	1.020	2,040.000
2022	1.020	2,040.000
2023	1.020	2,091.000
2024	1.020	2,142.000
2025	1.020	2,244.000
2026	1.020	2,244.000
2027	1.020	2,346.000
2028	1.020	2,397.000

PROGRAM NAME: RESIDENTIAL DRYER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	1,900	0.5%	1,900
2020	371,763	371,763	1,950	1.0%	3,850
2021	380,824	380,824	2,000	1.5%	5,850
2022	389,564	389,564	2,000	2.0%	7,850
2023	397,953	397,953	2,050	2.5%	9,900
2024	405,968	405,968	2,100	3.0%	12,000
2025	414,147	414,147	2,200	3.4%	14,200
2026	422,494	422,494	2,200	3.9%	16,400
2027	431,013	431,013	2,300	4.3%	18,700
2028	439,707	439,707	2,350	4.8%	21,050

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INPUT DATA - PART 1
Residential - Dryer
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 11 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 668 Units/Year
- (5) Average Number of Participants per Year 668 Participants/Year
- (6) Avoided annual kWh per Appliance 1,400 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 200 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Dryer Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	1.015
(2) Gas-Rate Impact Measure Test (G-RIM)	1.069

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Dryer

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	106	0	200	0	306	60	850	0	5	11	38	964	(658)
2020	108	0	0	0	108	0	0	0	5	11	39	55	53
2021	110	0	0	0	110	0	0	0	5	12	40	56	54
2022	113	0	0	0	113	0	0	0	5	12	41	58	55
2023	115	0	0	0	115	0	0	0	5	12	42	59	56
2024	118	0	0	0	118	0	0	0	5	12	43	60	58
2025	120	0	0	0	120	0	0	0	5	13	43	61	59
2026	123	0	0	0	123	0	0	0	5	13	44	63	60
2027	126	0	0	0	126	0	0	0	6	13	45	64	62
2028	128	0	0	0	128	0	0	0	6	13	46	66	63
2029	131	0	0	0	131	0	0	0	6	14	47	67	64
2030	134	0	150	0	284	153	0	0	6	14	48	221	63
2031	137	0	0	0	137	0	0	0	6	14	50	70	67
2032	140	0	0	0	140	0	0	0	6	15	51	72	69
2033	143	0	0	0	143	0	0	0	6	15	52	73	70
2034	146	0	0	0	146	0	0	0	7	15	53	75	72
2035	150	0	0	0	150	0	0	0	7	16	54	76	73
2036	153	0	0	0	153	0	0	0	7	16	55	78	75
2037	156	0	0	0	156	0	0	0	7	16	56	80	77
2038	160	0	0	0	160	0	0	0	7	17	58	82	78
Nominal	2,618	0	350	0	2,968	213	850	0	117	273	946	2,399	
NPV:	1,508	0	278	0	1,785	139	850	0	67	157	545	1,758	
Discount rate:	0.0616												
	Total PV of Benefits												1,785
	Total PV of Costs												1,758
	PCT												1,015

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												Net Benefits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits						Costs						
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	5	11	38	54	10	0	24	0	31	200	265	(211)	
2020	5	11	39	55	11	0	23	0	0	0	34	21	
2021	5	12	40	56	11	0	23	0	0	0	34	23	
2022	5	12	41	58	11	0	22	0	0	0	33	24	
2023	5	12	42	59	11	0	22	0	0	0	33	26	
2024	5	12	43	60	12	0	21	0	0	0	33	27	
2025	5	13	43	61	12	0	21	0	0	0	33	29	
2026	5	13	44	63	12	0	20	0	0	0	32	30	
2027	6	13	45	64	12	0	20	0	0	0	32	32	
2028	6	13	46	66	13	0	19	0	0	0	32	34	
2029	6	14	47	67	13	0	19	0	0	0	32	35	
2030	6	14	48	68	13	0	19	0	39	150	221	(153)	
2031	6	14	50	70	13	0	18	0	0	0	32	38	
2032	6	15	51	72	14	0	18	0	0	0	31	40	
2033	6	15	52	73	14	0	17	0	0	0	31	42	
2034	7	15	53	75	14	0	17	0	0	0	31	44	
2035	7	16	54	76	15	0	16	0	0	0	31	45	
2036	7	16	55	78	15	0	16	0	0	0	31	47	
2037	7	16	56	80	15	0	16	0	0	0	31	49	
2038	7	17	58	82	16	0	15	0	0	0	31	50	
NOMINAL	117	273	946	1,336	256	0	387	0	70	350	1,063	273	
NPV:	67	157	545	769	147	0	243	0	51	278	719	50	
Discount rate:	0.0616												
	Total PV of Benefits			769	Total PV of Costs			719	G-RIM		1,069		

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INPUT DATA - PART 1
Residential - Dryer
Load Reduction

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 11 Therms
- (3) Program peak consumption per installed Appliance:
 - Summer 0 Therms
 - Winter 0 Therms
- (4) Appliances Installed per Program 1,559 Units/Year
- (5) Average Number of Participants per Year 1,559 Participants/Year
- (6) Avoided annual kWh per Appliance 1,400 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 8 Therms/Year
- (8) Incentive payment per Appliance 150 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 - Gas and Pipeline Capital 2.00 %
 - O&M 2.00 %
 - 2.20 %

Residential - Dryer Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	25.026
(2) Gas-Rate Impact Measure Test (G-RIM)	1.810

Participant Cost Test (PCT) (Load Reduction)											
Program: Residential - Dryer											
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Year	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	109	8	0	150	0	267	45	0	0	45	222
2020	111	8	0	0	0	119	0	0	0	0	119
2021	114	8	0	0	0	122	0	0	0	0	122
2022	116	8	0	0	0	124	0	0	0	0	124
2023	119	8	0	0	0	127	0	0	0	0	127
2024	122	8	0	0	0	130	0	0	0	0	130
2025	124	9	0	0	0	133	0	0	0	0	133
2026	127	9	0	0	0	136	0	0	0	0	136
2027	130	9	0	0	0	139	0	0	0	0	139
2028	133	9	0	0	0	142	0	0	0	0	142
2029	136	9	0	150	0	295	56	0	0	56	239
2030	139	10	0	0	0	148	0	0	0	0	148
2031	142	10	0	0	0	151	0	0	0	0	151
2032	145	10	0	0	0	155	0	0	0	0	155
2033	148	10	0	0	0	158	0	0	0	0	158
2034	151	10	0	0	0	162	0	0	0	0	162
2035	154	11	0	0	0	165	0	0	0	0	165
2036	158	11	0	0	0	169	0	0	0	0	169
2037	161	11	0	0	0	172	0	0	0	0	172
2038	165	11	0	0	0	176	0	0	0	0	176
Nominal	2,703		0	300	0	3,189	101	0	0	101	
NPV:	1,556		0	233	0	1,896	76	0	0	76	
Discount rate:		0.0616									
					Total PV of Benefits	1,896			Total PV of Costs	76	
									PCT	25.026	

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Gas - Rate Impact Measure Test (G-RIM) Program: Residential - Dryer														
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Benefits			Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Costs		Net Benefits
					Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes					Admin Cost	Total Cost	
2019	3	8	38	0	0	0	0	49	3	8	150	31	161	(112)
2020	3	8	39	0	0	0	0	50	3	8	0	0	11	39
2021	3	8	40	0	0	0	0	51	3	8	0	0	11	40
2022	3	8	41	0	0	0	0	52	3	8	0	0	11	41
2023	3	8	42	0	0	0	0	53	3	8	0	0	12	42
2024	4	8	43	0	0	0	0	55	4	8	0	0	12	43
2025	4	9	43	0	0	0	0	56	4	9	0	0	12	43
2026	4	9	44	0	0	0	0	57	4	9	0	0	12	44
2027	4	9	45	0	0	0	0	58	4	9	0	0	13	45
2028	4	9	46	0	0	0	0	59	4	9	0	0	13	46
2029	4	9	47	0	0	0	0	61	4	9	150	38	163	(103)
2030	4	10	48	0	0	0	0	62	4	10	0	0	14	48
2031	4	10	50	0	0	0	0	63	4	10	0	0	14	50
2032	4	10	51	0	0	0	0	65	4	10	0	0	14	51
2033	4	10	52	0	0	0	0	66	4	10	0	0	15	52
2034	4	10	53	0	0	0	0	68	4	10	0	0	15	53
2035	5	11	54	0	0	0	0	69	5	11	0	0	15	54
2036	5	11	55	0	0	0	0	71	5	11	0	0	16	55
2037	5	11	56	0	0	0	0	72	5	11	0	0	16	56
2038	5	11	58	0	0	0	0	74	5	11	0	0	16	58
NOMINAL	79	186	946	0	0	0	0	1,212	79	186	300	566	646	
NPV:	46	107	545	0	0	0	0	698	46	107	233	386	312	
Discount rate:			0.0616											
							Total PV of Benefits	698			Total PV of Costs	386		
											G-RIM	1,810		

Program: Residential ENERGY STAR Tank Water Heater

Program Start Date: September 2010

Program Description

The Residential ENERGY STAR Tank Water Heater Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 6.185 Therms

Program Costs

Rebate:

Gas Retrofit: \$650 per qualifying natural gas tank water heater.

Gas Replacement: \$400 per qualifying natural gas tank water heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL ENERGY STAR TANK WATER HEATER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	6.185	2,475.333
2020	6.185	2,538.696
2021	6.185	2,600.650
2022	6.185	2,660.187
2023	6.185	2,721.400
2024	6.185	2,783.250
2025	6.185	2,845.100
2026	6.185	2,876.025
2027	6.185	2,937.875
2028	6.185	3,002.557

PROGRAM NAME: RESIDENTIAL ENERGY STAR TANK WATER HEATER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	400	0.1%	400
2020	371,763	371,763	410	0.2%	811
2021	380,824	380,824	420	0.3%	1,231
2022	389,564	389,564	430	0.4%	1,661
2023	397,953	397,953	440	0.5%	2,101
2024	405,968	405,968	450	0.6%	2,551
2025	414,147	414,147	460	0.7%	3,011
2026	422,494	422,494	465	0.8%	3,476
2027	431,013	431,013	475	0.9%	3,951
2028	439,707	439,707	485	1.0%	4,437

INPUT DATA - PART 1
PROGRAM TITLE: Residential - Energy Star Water Heater
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 130 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 46 Units/Year
- (5) Average Number of Participants per Year 46 Participants/Year
- (6) Avoided annual kWh per Appliance 4,773 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 650 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Residential - Energy Star Water Heater Load Building Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.828
(2) Gas-Rate Impact Measure Test (G-RIM)	1.101

Participant Cost Test (PCT) (Load Building Scenario)														
Program: Residential - Energy Star Water Heater														
Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
														Benefits
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Customer Gas	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	360	0	650	0	1,010	2,525	0	0	54	125	38	2,742	(1,732)	
2020	368	0	0	0	368	0	0	0	55	128	39	222	146	
2021	376	0	0	0	376	0	0	0	56	131	40	227	149	
2022	384	0	0	0	384	0	0	0	57	134	41	232	153	
2023	393	0	0	0	393	0	0	0	58	137	42	237	156	
2024	401	0	0	0	401	0	0	0	60	140	43	242	159	
2025	410	0	0	0	410	0	0	0	61	143	43	247	163	
2026	419	0	0	0	419	0	0	0	62	146	44	253	166	
2027	429	0	0	0	429	0	0	0	64	149	45	258	170	
2028	438	0	0	0	438	0	0	0	65	153	46	264	174	
2029	448	0	0	0	448	0	0	0	67	156	47	270	178	
2030	457	0	0	0	457	0	0	0	68	159	48	276	182	
2031	468	0	400	0	868	3,278	0	0	69	163	50	3,560	(2,693)	
2032	478	0	0	0	478	0	0	0	71	166	51	288	190	
2033	488	0	0	0	488	0	0	0	73	170	52	294	194	
2034	499	0	0	0	499	0	0	0	74	174	53	301	198	
2035	510	0	0	0	510	0	0	0	76	178	54	308	202	
2036	521	0	0	0	521	0	0	0	77	182	55	314	207	
2037	533	0	0	0	533	0	0	0	79	186	56	321	211	
2038	544	0	0	0	544	0	0	0	81	190	58	328	216	
Nominal	8,925	0	1,050	0	9,975	5,803	0	0	1,326	3,110	946	11,186		
NPV:	5,140	0	845	0	5,985	4,125	0	0	764	1,791	545	7,225		
Discount rate:	0.0616													
	Total PV of Benefits				5,985	Total PV of Costs				7,225	PCT			0.828

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario) Program: Residential - Energy Star Water Heater													
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
	Benefits			Costs									Net Benefits	
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits		
2019	54	125	38	217	117	0	24	0	31	650	822	(605)		
2020	55	128	39	222	120	0	23	0	0	0	143	79		
2021	56	131	40	227	123	0	23	0	0	0	145	81		
2022	57	134	41	232	125	0	22	0	0	0	148	84		
2023	58	137	42	237	128	0	22	0	0	0	150	87		
2024	60	140	43	242	131	0	21	0	0	0	152	90		
2025	61	143	43	247	134	0	21	0	0	0	155	93		
2026	62	146	44	253	137	0	20	0	0	0	157	96		
2027	64	149	45	258	140	0	20	0	0	0	160	99		
2028	65	153	46	264	143	0	19	0	0	0	162	102		
2029	67	156	47	270	146	0	19	0	0	0	165	105		
2030	68	159	48	276	149	0	19	0	0	0	168	108		
2031	69	163	50	282	153	0	18	0	40	400	611	(329)		
2032	71	166	51	288	156	0	18	0	0	0	174	115		
2033	73	170	52	294	159	0	17	0	0	0	177	118		
2034	74	174	53	301	163	0	17	0	0	0	180	121		
2035	76	178	54	308	166	0	16	0	0	0	183	125		
2036	77	182	55	314	170	0	16	0	0	0	186	128		
2037	79	186	56	321	174	0	16	0	0	0	190	132		
2038	81	190	58	328	178	0	15	0	0	0	193	135		
NOMINAL	1,326	3,110	946	5,382	2,912	0	387	0	71	1,050	4,420	962		
NPV:	764	1,791	545	3,100	1,677	0	243	0	51	845	2,816	284		
Discount rate:	0.0616													
	Total PV of Benefits			3,100	Total PV of Costs									2,816
					G-RIM									1,101

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INPUT DATA - PART 1
PROGRAM TITLE: Residential - Energy Star Water Heater Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 130 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 418 Units/Year
- (5) Average Number of Participants per Year 418 Participants/Year
- (6) Avoided annual kWh per Appliance 4,773 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 6 Therms/Year
- (8) Incentive payment per Appliance 400 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Energy Star Water Heater Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	2.843
(2) Gas-Rate Impact Measure Test (G-RIM)	0.929

Participant Cost Test (PCT) (Load Reduction)											
Program: Residential - Energy Star Water Heater											
PSC C.B. FORM 4 Page 1 of 1 October 31, 2019											
Year	(1) Energy Charge Savings	(2) Gas Charge Savings	(3) Tax Credits	(4) Utility Rebate	(5) Other Benefits	(6) Total Benefits	Costs			(11) Net Benefits	
							(7) Net Customer Equipment Costs	(8) Net Customer Gas Installation Costs	(9) Incremental O&M Costs		(10) Total Costs
2019	363	6	0	400	0	768	1,260	0	0	1,260	(492)
2020	371	6	0	0	0	376	0	0	0	0	376
2021	379	6	0	0	0	385	0	0	0	0	385
2022	387	6	0	0	0	393	0	0	0	0	393
2023	396	6	0	0	0	402	0	0	0	0	402
2024	404	6	0	0	0	411	0	0	0	0	411
2025	413	6	0	0	0	420	0	0	0	0	420
2026	422	7	0	0	0	429	0	0	0	0	429
2027	432	7	0	0	0	438	0	0	0	0	438
2028	441	7	0	0	0	448	0	0	0	0	448
2029	451	7	0	0	0	458	0	0	0	0	458
2030	461	7	0	0	0	468	0	0	0	0	468
2031	471	7	0	400	0	878	1,636	0	0	1,636	(758)
2032	481	7	0	0	0	489	0	0	0	0	489
2033	492	8	0	0	0	499	0	0	0	0	499
2034	503	8	0	0	0	510	0	0	0	0	510
2035	514	8	0	0	0	522	0	0	0	0	522
2036	525	8	0	0	0	533	0	0	0	0	533
2037	536	8	0	0	0	545	0	0	0	0	545
2038	548	8	0	0	0	557	0	0	0	0	557
Nominal	8,988		0	800	0	9,927	2,896	0	0	2,896	
NPV:	5,176		0	595	0	5,851	2,058	0	0	2,058	
Discount rate:		0.0616									
			Total PV of Benefits		5,851			Total PV of Costs		2,058	
								PCT		2,843	

PSC C.B. FORM 5 Page 1 of 1 October 31, 2019														
Gas - Rate Impact Measure Test (G-RIM) Program: Residential - Energy Star Water Heater														
YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Admin Cost	Total Cost	Net Benefits
	Benefits				Costs									
2019	2	6	38	0	0	0	0	46	2	6	400	31	408	(362)
2020	2	6	39	0	0	0	0	47	2	6	0	0	8	39
2021	2	6	40	0	0	0	0	48	2	6	0	0	8	40
2022	3	6	41	0	0	0	0	49	3	6	0	0	9	41
2023	3	6	42	0	0	0	0	50	3	6	0	0	9	42
2024	3	6	43	0	0	0	0	51	3	6	0	0	9	43
2025	3	6	43	0	0	0	0	53	3	6	0	0	9	43
2026	3	7	44	0	0	0	0	54	3	7	0	0	9	44
2027	3	7	45	0	0	0	0	55	3	7	0	0	9	45
2028	3	7	46	0	0	0	0	56	3	7	0	0	10	46
2029	3	7	47	0	0	0	0	57	3	7	0	0	10	47
2030	3	7	48	0	0	0	0	59	3	7	0	0	10	48
2031	3	7	50	0	0	0	0	60	3	7	400	40	410	(350)
2032	3	7	51	0	0	0	0	61	3	7	0	0	11	51
2033	3	8	52	0	0	0	0	63	3	8	0	0	11	52
2034	3	8	53	0	0	0	0	64	3	8	0	0	11	53
2035	3	8	54	0	0	0	0	65	3	8	0	0	11	54
2036	3	8	55	0	0	0	0	67	3	8	0	0	12	55
2037	4	8	56	0	0	0	0	68	4	8	0	0	12	56
2038	4	8	58	0	0	0	0	70	4	8	0	0	12	58
NOMINAL	59	139	946	0	0	0	0	1,144	59	139	800	998	998	146
NPV:	34	80	545	0	0	0	0	659	34	80	595	709	709	-50
Discount rate:	0.0616													
	Total PV of Benefits							659	Total PV of Costs				709	
													G-RIM	0.929

Program: Residential Gas Space Conditioning

Program Start Date: October 1990

Program Description

The Residential Space Conditioning Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 266.000 Therms

Program Costs

Rebate:

Gas Retrofit: \$500 per ton of installed qualifying air conditioning equipment.

Gas Replacement: \$150 per ton of installed qualifying air conditioning equipment.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL GAS SPACE CONDITIONING

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	266.000	0.000
2020	266.000	0.000
2021	266.000	0.000
2022	266.000	0.000
2023	266.000	0.000
2024	266.000	0.000
2025	266.000	0.000
2026	266.000	0.000
2027	266.000	0.000
2028	266.000	0.000

PROGRAM NAME: RESIDENTIAL GAS SPACE CONDITIONING

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	0	0.0%	0
2020	371,763	371,763	0	0.0%	0
2021	380,824	380,824	0	0.0%	0
2022	389,564	389,564	0	0.0%	0
2023	397,953	397,953	0	0.0%	0
2024	405,968	405,968	0	0.0%	0
2025	414,147	414,147	0	0.0%	0
2026	422,494	422,494	0	0.0%	0
2027	431,013	431,013	0	0.0%	0
2028	439,707	439,707	0	0.0%	0

INPUT DATA - PART 1
PROGRAM TITLE: Residential - Gas Space Conditioning
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 2,334 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 24,456 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 4000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Residential - Gas Space Conditioning Load Building Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.382
(2) Gas-Rate Impact Measure Test (G-RIM)	1.307

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Gas Space Conditioning

Year	Benefits					Costs					Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)	(12)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	1,845	0	4,000	0	5,845	13,600	0	0	962	2,255	38	16,854	(11,010)
2020	1,886	0	0	0	1,886	0	0	0	983	2,304	39	3,326	(1,441)
2021	1,927	0	0	0	1,927	0	0	0	1,004	2,355	40	3,399	(1,472)
2022	1,969	0	0	0	1,969	0	0	0	1,026	2,407	41	3,474	(1,505)
2023	2,013	0	0	0	2,013	0	0	0	1,049	2,460	42	3,550	(1,538)
2024	2,057	0	0	0	2,057	0	0	0	1,072	2,514	43	3,629	(1,572)
2025	2,102	0	0	0	2,102	0	0	0	1,096	2,569	43	3,708	(1,606)
2026	2,148	0	0	0	2,148	0	0	0	1,120	2,626	44	3,790	(1,641)
2027	2,196	0	0	0	2,196	0	0	0	1,144	2,683	45	3,873	(1,678)
2028	2,244	0	1,200	0	3,444	26,760	0	0	1,170	2,742	46	30,718	(27,274)
2029	2,293	0	0	0	2,293	0	0	0	1,195	2,803	47	4,046	(1,752)
2030	2,344	0	0	0	2,344	0	0	0	1,222	2,864	48	4,135	(1,791)
2031	2,395	0	0	0	2,395	0	0	0	1,249	2,927	50	4,226	(1,830)
2032	2,448	0	0	0	2,448	0	0	0	1,276	2,992	51	4,319	(1,870)
2033	2,502	0	0	0	2,502	0	0	0	1,304	3,058	52	4,414	(1,912)
2034	2,557	0	0	0	2,557	0	0	0	1,333	3,125	53	4,511	(1,954)
2035	2,613	0	0	0	2,613	0	0	0	1,362	3,194	54	4,610	(1,997)
2036	2,671	0	0	0	2,671	0	0	0	1,392	3,264	55	4,711	(2,040)
2037	2,730	0	0	0	2,730	0	0	0	1,423	3,336	56	4,815	(2,085)
2038	2,790	0	1,200	0	3,990	20,564	0	0	1,454	3,409	58	25,485	(21,495)
Nominal	45,730	0	6,400	0	52,130	60,924	0	0	23,835	55,887	946	141,591	
NPV:	26,336	0	5,086	0	31,422	35,830	0	0	13,727	32,185	545	82,286	
Discount rate:	0.0616												
	Total PV of Benefits					Total PV of Costs					PCT		
	31,422					82,286					0.382		

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
Program: Residential - Gas Space Conditioning

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits
2019	962	2,255	38	3,254	2,111	0	24	0	31	4000	6,166	(2,911)
2020	983	2,304	39	3,326	2,158	0	23	0	0	0	2,181	1,145
2021	1,004	2,355	40	3,399	2,205	0	23	0	0	0	2,228	1,171
2022	1,026	2,407	41	3,474	2,254	0	22	0	0	0	2,276	1,198
2023	1,049	2,460	42	3,550	2,303	0	22	0	0	0	2,325	1,226
2024	1,072	2,514	43	3,629	2,354	0	21	0	0	0	2,375	1,253
2025	1,096	2,569	43	3,708	2,406	0	21	0	0	0	2,426	1,282
2026	1,120	2,626	44	3,790	2,458	0	20	0	0	0	2,479	1,311
2027	1,144	2,683	45	3,873	2,513	0	20	0	0	0	2,532	1,341
2028	1,170	2,742	46	3,959	2,568	0	19	0	38	1200	3,825	134
2029	1,195	2,803	47	4,046	2,624	0	19	0	0	0	2,643	1,402
2030	1,222	2,864	48	4,135	2,682	0	19	0	0	0	2,701	1,434
2031	1,249	2,927	50	4,226	2,741	0	18	0	0	0	2,759	1,466
2032	1,276	2,992	51	4,319	2,801	0	18	0	0	0	2,819	1,499
2033	1,304	3,058	52	4,414	2,863	0	17	0	0	0	2,880	1,533
2034	1,333	3,125	53	4,511	2,926	0	17	0	0	0	2,943	1,568
2035	1,362	3,194	54	4,610	2,990	0	16	0	0	0	3,007	1,603
2036	1,392	3,264	55	4,711	3,056	0	16	0	0	0	3,072	1,639
2037	1,423	3,336	56	4,815	3,123	0	16	0	0	0	3,139	1,676
2038	1,454	3,409	58	4,921	3,192	0	15	0	47	1200	4,454	466
NOMINAL	23,835	55,887	946	80,668	52,328	0	387	0	115	6,400	59,231	21,437
NPV:	13,727	32,185	545	46,456	30,136	0	243	0	68	5,086	35,533	10,923
Discount rate:	0.0616											
	Total PV of Benefits										46,456	
	Total PV of Costs										35,533	
	G-RIM										1,307	

INPUT DATA - PART 1

PROGRAM TITLE: sidental - Gas Space Condition Load Reduction

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(1) Life of Program 20 Years

(2) Average therms consumed by Appliance (s) 2,334 Therms

(3) Program peak consumption per installed Appliance:

	Summer	Winter
0 Therms	0 Therms	
0 Therms	0 Therms	

(4) Appliances Installed per Program 1 Units/Year

(5) Average Number of Participants per Year 1 Participants/Year

(6) Avoided annual kWh per Appliance 24,456 kWh

(6)a Avoided demand kW per Appliance 0.000 kW

(7) Avoided annual Therms per Appliance 266 Therms/Year

(8) Incentive payment per Appliance 1200 \$

(9) Other Costs not identified in C.B. Forms

(10) Escalation Rates:

	Gas and Pipeline Capital	O&M
2.00 %	2.00 %	2.00 %
2.00 %	2.00 %	2.20 %

Residential - Gas Space Conditioning Load Reduction
 Calculated Benefit to Cost Ratios

(1) Participant Cost Test (PCT)	0.938
(2) Gas-Rate Impact Measure Test (G-RIM)	0.758

Year	Participant Cost Test (PCT) (Load Reduction) Program: Residential - Gas Space Conditioning											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
	Benefits				Costs							
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits	
2019	1,955	241	0	1,200	0	3,395	13,600	0	0	13,600	(10,205)	
2020	1,998	246	0	0	0	2,243	0	0	0	0	2,243	
2021	2,041	251	0	0	0	2,293	0	0	0	0	2,293	
2022	2,086	257	0	0	0	2,343	0	0	0	0	2,343	
2023	2,132	262	0	0	0	2,395	0	0	0	0	2,395	
2024	2,179	268	0	0	0	2,447	0	0	0	0	2,447	
2025	2,227	274	0	0	0	2,501	0	0	0	0	2,501	
2026	2,276	280	0	0	0	2,556	0	0	0	0	2,556	
2027	2,326	286	0	0	0	2,613	0	0	0	0	2,613	
2028	2,377	293	0	1,200	0	3,870	26,760	0	0	26,760	(22,890)	
2029	2,430	299	0	0	0	2,729	0	0	0	0	2,729	
2030	2,483	306	0	0	0	2,789	0	0	0	0	2,789	
2031	2,538	312	0	0	0	2,850	0	0	0	0	2,850	
2032	2,594	319	0	0	0	2,913	0	0	0	0	2,913	
2033	2,651	326	0	0	0	2,977	0	0	0	0	2,977	
2034	2,709	333	0	0	0	3,042	0	0	0	0	3,042	
2035	2,769	341	0	0	0	3,109	0	0	0	0	3,109	
2036	2,829	348	0	0	0	3,178	0	0	0	0	3,178	
2037	2,892	356	0	0	0	3,248	0	0	0	0	3,248	
2038	2,955	364	0	1,200	0	4,519	20,564	0	0	20,564	(16,045)	
Nominal	48,447		0	3,600	0	58,010	60,924	0	0	60,924		
NPV:	27,900		0	2,286	0	33,621	35,830	0	0	35,830		
Discount rate:		0.0616										
			Total PV of Benefits		33,621			Total PV of Costs		35,830		
								PCT		0.938		

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
2019	103	241	38	0	0	0	0	381	103	241	1200	31	1,543	(1,162)
2020	105	246	39	0	0	0	0	390	105	246	0	0	351	39
2021	107	251	40	0	0	0	0	398	107	251	0	0	358	40
2022	110	257	41	0	0	0	0	407	110	257	0	0	366	41
2023	112	262	42	0	0	0	0	416	112	262	0	0	374	42
2024	114	268	43	0	0	0	0	425	114	268	0	0	383	43
2025	117	274	43	0	0	0	0	435	117	274	0	0	391	43
2026	119	280	44	0	0	0	0	444	119	280	0	0	400	44
2027	122	286	45	0	0	0	0	454	122	286	0	0	408	45
2028	125	293	46	0	0	0	0	464	125	293	1200	38	1,617	(1,154)
2029	128	299	47	0	0	0	0	474	128	299	0	0	427	47
2030	130	306	48	0	0	0	0	485	130	306	0	0	436	48
2031	133	312	50	0	0	0	0	495	133	312	0	0	446	50
2032	136	319	51	0	0	0	0	506	136	319	0	0	455	51
2033	139	326	52	0	0	0	0	517	139	326	0	0	465	52
2034	142	333	53	0	0	0	0	529	142	333	0	0	476	53
2035	145	341	54	0	0	0	0	540	145	341	0	0	486	54
2036	149	348	55	0	0	0	0	552	149	348	0	0	497	55
2037	152	356	56	0	0	0	0	564	152	356	0	0	508	56
2038	155	364	58	0	0	0	0	577	155	364	1200	47	1,719	(1,142)
NOMINAL	2,543	5,964	946	0	0	0	0	9,453	2,543	5,964	3,600		12,107	-2,654
NPV:	1,465	3,434	545	0	0	0	0	5,444	1,465	3,434	2,286		7,185	-1,741
Discount rate:	0.0616													
													Total PV of Benefits	5,444
													Total PV of Costs	7,185
													G-RIM	0.758

Program: Residential New Construction

Program Start Date: October 1990

Program Description

The Residential New Construction Program is designed to encourage builders and developers to construct new single family and multi-family homes with the installation of energy efficient natural gas appliances to help reduce the new customer's energy consumption and conserve energy resources. The rebates offered to builders and developers under this program are designed to assist in defraying the added cost of gas piping and venting. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 27.101 Therms

Program Costs

Rebate:

- \$725 per qualifying natural gas central heating system.
- \$200 per qualifying natural gas dryer system.
- \$650 per qualifying natural gas ENERGY STAR tank water heating system
- \$300 per qualifying natural gas range/cooktop system.
- \$550 per qualifying natural gas tank water heating system.
- \$700 per qualifying natural gas tankless water heating system.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL NEW CONSTRUCTION

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	27.101	224,938.300
2020	27.101	230,358.500
2021	27.101	235,778.700
2022	27.101	241,198.900
2023	27.101	243,909.000
2024	27.101	246,619.100
2025	27.101	249,329.200
2026	27.101	252,039.300
2027	27.101	254,749.400
2028	27.101	257,459.500

PROGRAM NAME: RESIDENTIAL NEW CONSTRUCTION

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	8,300	2.3%	8,300
2020	371,763	371,763	8,500	4.5%	16,800
2021	380,824	380,824	8,700	6.7%	25,500
2022	389,564	389,564	8,900	8.8%	34,400
2023	397,953	397,953	9,000	10.9%	43,400
2024	405,968	405,968	9,100	12.9%	52,500
2025	414,147	414,147	9,200	14.9%	61,700
2026	422,494	422,494	9,300	16.8%	71,000
2027	431,013	431,013	9,400	18.7%	80,400
2028	439,707	439,707	9,500	20.4%	89,900

INPUT DATA - PART 1
Residential - New Construction
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 174 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 9,245 Units/Year
- (5) Average Number of Participants per Year 9,245 Participants/Year
- (6) Avoided annual kWh per Appliance 7,394 kWh
 (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 1,186 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - New Construction Load Building Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.845
(2) Gas-Rate Impact Measure Test (G-RIM)	1.247

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - New Construction

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Costs			(10)	(11)	(12)	(13)
									Electric Bill Savings	Tax Credits	Utility Rebate				
2019	558	0	0	1,186	0	1,744	1,107	0	0	72	168	191	4,937	(3,193)	
2020	570	0	0	0	570	0	0	0	0	73	172	195	440	130	
2021	583	0	0	0	583	0	0	0	0	75	176	199	450	133	
2022	595	0	0	0	595	0	0	0	0	77	179	204	460	136	
2023	609	0	0	0	609	0	0	0	0	78	183	208	470	139	
2024	622	0	0	0	622	0	0	0	0	80	187	213	480	142	
2025	636	0	0	0	636	0	0	0	0	82	192	217	491	145	
2026	650	0	0	0	650	0	0	0	0	83	196	222	501	148	
2027	664	0	0	0	664	0	0	0	0	85	200	227	512	151	
2028	678	0	0	0	678	0	0	0	0	87	204	232	524	155	
2029	693	0	0	0	693	0	0	0	0	89	209	237	535	158	
2030	709	0	0	0	709	0	0	0	0	91	214	242	547	162	
2031	724	0	0	0	724	0	0	0	0	93	218	248	559	165	
2032	740	0	811	0	1,551	1,468	0	0	0	95	223	253	2,040	(489)	
2033	756	0	0	0	756	0	0	0	0	97	228	259	584	173	
2034	773	0	0	0	773	0	0	0	0	99	233	264	597	176	
2035	790	0	0	0	790	0	0	0	0	102	238	270	610	180	
2036	807	0	0	0	807	0	0	0	0	104	243	276	623	184	
2037	825	0	0	0	825	0	0	0	0	106	249	282	637	188	
2038	843	0	0	0	843	0	0	0	0	108	254	289	651	192	
Nominal	13,826	0	1,997	0	15,823	2,575	3,400	0	1,777	4,166	4,730	16,648			
NPV:	7,962	0	1,607	0	9,569	1,782	3,400	0	1,023	2,399	2,724	11,328			
Discount rate:			0.0616												
				Total PV of Benefits	9,569						Total PV of Costs	11,328			
											PCT	0.845			

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario) Program: Residential - New Construction												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits						Costs						Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	72	168	191	431	157	0	95	0	31	1186	1,469	(1,039)	
2020	73	172	195	440	161	0	93	0	0	0	254	186	
2021	75	176	199	450	164	0	91	0	0	0	255	195	
2022	77	179	204	460	168	0	89	0	0	0	257	203	
2023	78	183	208	470	172	0	87	0	0	0	258	211	
2024	80	187	213	480	175	0	85	0	0	0	260	220	
2025	82	192	217	491	179	0	83	0	0	0	262	228	
2026	83	196	222	501	183	0	81	0	0	0	264	237	
2027	85	200	227	512	187	0	79	0	0	0	267	246	
2028	87	204	232	524	191	0	77	0	0	0	269	255	
2029	89	209	237	535	196	0	76	0	0	0	271	264	
2030	91	214	242	547	200	0	74	0	0	0	273	273	
2031	93	218	248	559	204	0	72	0	0	0	277	282	
2032	95	223	253	571	209	0	71	0	164	811	1,255	(684)	
2033	97	228	259	584	213	0	69	0	0	0	283	301	
2034	99	233	264	597	218	0	68	0	0	0	286	311	
2035	102	238	270	610	223	0	66	0	0	0	289	321	
2036	104	243	276	623	228	0	65	0	0	0	293	331	
2037	106	249	282	637	233	0	63	0	0	0	296	341	
2038	108	254	289	651	238	0	62	0	0	0	300	351	
NOMINAL	1,777	4,166	4,730	10,673	3,901	0	1,546	0	195	1,997	7,639	3,034	
NPV:	1,023	2,399	2,724	6,146	2,246	0	970	0	107	1,607	4,930	1,216	
Discount rate:	0.0616												
	Total PV of Benefits			6,146	Total PV of Costs			4,930	G-RIM				1,247

Program: Residential Range/Cooktop Program

Program Start Date: October 1990

Program Description

The Residential Range/Cooktop Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 1.369 Therms

Program Costs

Rebate:

Gas Retrofit: \$300 per qualifying natural gas range/cooktop.

Gas Replacement: \$100 per qualifying natural gas range/cooktop.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL RANGE/COOKTOP

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	1.369	3,422.500
2020	1.369	3,422.500
2021	1.369	3,559.400
2022	1.369	3,696.300
2023	1.369	3,696.300
2024	1.369	3,833.200
2025	1.369	3,833.200
2026	1.369	3,970.100
2027	1.369	3,970.100
2028	1.369	4,107.000

PROGRAM NAME: RESIDENTIAL RANGE/COOKTOP

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	2,500	0.7%	2,500
2020	371,763	371,763	2,500	1.3%	5,000
2021	380,824	380,824	2,600	2.0%	7,600
2022	389,564	389,564	2,700	2.6%	10,300
2023	397,953	397,953	2,700	3.3%	13,000
2024	405,968	405,968	2,800	3.9%	15,800
2025	414,147	414,147	2,800	4.5%	18,600
2026	422,494	422,494	2,900	5.1%	21,500
2027	431,013	431,013	2,900	5.7%	24,400
2028	439,707	439,707	3,000	6.2%	27,400

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INPUT DATA - PART 1
PROGRAM TITLE: Residential - Range/Cooktop Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 43 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 1,148 Units/Year
- (5) Average Number of Participants per Year 1,148 Participants/Year
- (6) Avoided annual kWh per Appliance 1,300 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 300 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Range/Cooktop Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.792
(2) Gas-Rate Impact Measure Test (G-RIM)	1.167

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Range/Cooktop

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	98	0	300	0	398	-20	850	0	18	41	38	927	927
2020	100	0	0	0	100	0	0	0	18	42	39	99	99
2021	102	0	0	0	102	0	0	0	18	43	40	101	101
2022	105	0	0	0	105	0	0	0	19	44	41	103	103
2023	107	0	0	0	107	0	0	0	19	45	42	106	106
2024	109	0	0	0	109	0	0	0	20	46	43	108	108
2025	112	0	0	0	112	0	0	0	20	47	43	110	110
2026	114	0	0	0	114	0	0	0	20	48	44	113	113
2027	117	0	0	0	117	0	0	0	21	49	45	115	115
2028	119	0	0	0	119	0	0	0	21	50	46	118	118
2029	122	0	0	0	122	0	0	0	22	51	47	121	121
2030	125	0	0	0	125	0	0	0	22	52	48	123	123
2031	127	0	0	0	127	0	0	0	23	54	50	126	126
2032	130	0	0	0	130	0	0	0	23	55	51	129	129
2033	133	0	100	0	233	-27	0	0	24	56	52	134	129
2034	136	0	0	0	136	0	0	0	24	57	53	134	129
2035	139	0	0	0	139	0	0	0	25	58	54	137	129
2036	142	0	0	0	142	0	0	0	25	60	55	140	129
2037	145	0	0	0	145	0	0	0	26	61	56	143	129
2038	148	0	0	0	148	0	0	0	27	62	58	147	129
Nominal	2,431	0	400	0	2,831	-47	850	0	436	1,022	946	3,206	3,206
NPV:	1,400	0	343	0	1,743	-32	850	0	251	588	545	2,202	2,202
Discount rate:	0.0616												
	Total PV of Benefits												2,202
	Total PV of Costs												0.792
													PCT

PSC C.B. FORM 3
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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Residential - Range/Cooktop

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/Incentive	Total Cost	Net Benefits	
2019	18	41	38	97	39	0	24	0	31	300	393	(296)	
2020	18	42	39	99	39	0	23	0	0	0	63	36	
2021	18	43	40	101	40	0	23	0	0	0	63	38	
2022	19	44	41	103	41	0	22	0	0	0	63	40	
2023	19	45	42	106	42	0	22	0	0	0	64	42	
2024	20	46	43	108	43	0	21	0	0	0	64	44	
2025	20	47	43	110	44	0	21	0	0	0	65	46	
2026	20	48	44	113	45	0	20	0	0	0	65	48	
2027	21	49	45	115	46	0	20	0	0	0	66	50	
2028	21	50	46	118	47	0	19	0	0	0	66	52	
2029	22	51	47	121	48	0	19	0	0	0	67	54	
2030	22	52	48	123	49	0	19	0	0	0	68	56	
2031	23	54	50	126	50	0	18	0	0	0	68	58	
2032	23	55	51	129	51	0	18	0	0	0	69	60	
2033	24	56	52	131	52	0	17	0	42	100	212	(80)	
2034	24	57	53	134	53	0	17	0	0	0	70	64	
2035	25	58	54	137	55	0	16	0	0	0	71	66	
2036	25	60	55	140	56	0	16	0	0	0	72	68	
2037	26	61	56	143	57	0	16	0	0	0	73	71	
2038	27	62	58	147	58	0	15	0	0	0	74	73	
NOMINAL	436	1,022	946	2,403	956	0	387	0	73	400	1,816	587	
NPV:	251	588	545	1,384	551	0	243	0	49	343	1,186	198	
Discount rate:	0.0616												
	Total PV of Benefits			1,384	Total PV of Costs			1,186					
					G-RIM			1,167					

INPUT DATA - PART 1

PROGRAM TITLE: Residential - Range/Cooktop Load Reduction

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(1)	Life of Program	20 Years
(2)	Average therms consumed by Appliance (s)	43 Therms
(3)	Program peak consumption per installed Appliance:	
	Summer	0 Therms
	Winter	0 Therms
(4)	Appliances Installed per Program	1,722 Units/Year
(5)	Average Number of Participants per Year	1,722 Participants/Year
(6)	Avoided annual kWh per Appliance	1,300 kWh
(6)a	Avoided demand kW per Appliance	0.000 kW
(7)	Avoided annual Therms per Appliance	1 Therms/Year
(8)	Incentive payment per Appliance	100 \$
(9)	Other Costs not identified in C.B. Forms	
(10)	Escalation Rates:	
	Gas and Pipeline	2.00 %
	Capital	2.00 %
	O&M	2.20 %

Residential - Range/Cooktop Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	-19.192
(2) Gas-Rate Impact Measure Test (G-RIM)	3.383

Participant Cost Test (PCT) (Load Reduction) Program: Residential - Range/Cooktop											
Year	(1) Energy Charge Savings	(2) Gas Charge Savings	(3) Tax Credits	(4) Utility Rebate	(5) Other Benefits	(6) Total Benefits	(7) (8) (9) Benefits			(10) Total Costs	(11) Net Benefits
							(7) Net Customer Equipment Costs	(8) Net Customer Gas Installation Costs	(9) Incremental O&M Costs		
2019	99	1	0	100	0	200	-70	0	0	-70	270
2020	101	1	0	0	0	102	0	0	0	0	102
2021	103	1	0	0	0	104	0	0	0	0	104
2022	105	1	0	0	0	107	0	0	0	0	107
2023	108	1	0	0	0	109	0	0	0	0	109
2024	110	1	0	0	0	111	0	0	0	0	111
2025	112	1	0	0	0	114	0	0	0	0	114
2026	115	1	0	0	0	116	0	0	0	0	116
2027	117	1	0	0	0	119	0	0	0	0	119
2028	120	2	0	0	0	121	0	0	0	0	121
2029	123	2	0	0	0	124	0	0	0	0	124
2030	125	2	0	0	0	127	0	0	0	0	127
2031	128	2	0	0	0	130	0	0	0	0	130
2032	131	2	0	0	0	133	0	0	0	0	133
2033	134	2	0	100	0	235	-27	0	0	-27	263
2034	137	2	0	0	0	138	0	0	0	0	138
2035	140	2	0	0	0	141	0	0	0	0	141
2036	143	2	0	0	0	145	0	0	0	0	145
2037	146	2	0	0	0	148	0	0	0	0	148
2038	149	2	0	0	0	151	0	0	0	0	151
Nominal	2,445		0	200	0	2,676	-97	0	0	-97	
NPV:	1,408		0	143	0	1,569	-82	0	0	-82	
Discount rate:		0.0616									
				Total PV of Benefits	1,569			Total PV of Costs		-82	
								PCT		-19,192	

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Gas - Rate Impact Measure Test (G-RIM) Program: Residential - Range/Cooktop														
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
YEAR	Energy Charge	Gas Charge	Incremental Cust Charge	Benefits			Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Costs		Net Benefits	
				Avoided Main	Avoided Meter/Regulator	Avoided Depreciation					Admin Cost	Total Cost		
2019	1	1	38	0	0	0	0	40	1	1	100	31	102	(62)
2020	1	1	39	0	0	0	0	41	1	1	0	0	2	39
2021	1	1	40	0	0	0	0	42	1	1	0	0	2	40
2022	1	1	41	0	0	0	0	43	1	1	0	0	2	41
2023	1	1	42	0	0	0	0	44	1	1	0	0	2	42
2024	1	1	43	0	0	0	0	45	1	1	0	0	2	43
2025	1	1	43	0	0	0	0	46	1	1	0	0	2	43
2026	1	1	44	0	0	0	0	47	1	1	0	0	2	44
2027	1	1	45	0	0	0	0	48	1	1	0	0	2	45
2028	1	2	46	0	0	0	0	49	1	2	0	0	2	46
2029	1	2	47	0	0	0	0	50	1	2	0	0	2	47
2030	1	2	48	0	0	0	0	51	1	2	0	0	2	48
2031	1	2	50	0	0	0	0	52	1	2	0	0	2	50
2032	1	2	51	0	0	0	0	53	1	2	0	0	2	51
2033	1	2	52	0	0	0	0	54	1	2	100	42	102	(48)
2034	1	2	53	0	0	0	0	55	1	2	0	0	2	53
2035	1	2	54	0	0	0	0	57	1	2	0	0	3	54
2036	1	2	55	0	0	0	0	58	1	2	0	0	3	55
2037	1	2	56	0	0	0	0	59	1	2	0	0	3	56
2038	1	2	58	0	0	0	0	60	1	2	0	0	3	58
NOMINAL	13	31	946	0	0	0	0	990	13	31	200	143	244	746
NPV:	8	18	545	0	0	0	0	570	8	18	143	169	169	402
Discount rate:			0.0616											
							Total PV of Benefits	570			Total PV of Costs	169		
											G-RIM	3,383		

Program: Residential Space Heating Program

Program Start Date: October 1990

Program Description

The Residential Space Heating Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas space heating equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 0.000 Therms

Program Costs

Rebate:

Gas Retrofit: \$65 per qualifying natural gas space heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL SPACE HEATING

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	0.000	0.000
2020	0.000	0.000
2021	0.000	0.000
2022	0.000	0.000
2023	0.000	0.000
2024	0.000	0.000
2025	0.000	0.000
2026	0.000	0.000
2027	0.000	0.000
2028	0.000	0.000

PROGRAM NAME: RESIDENTIAL SPACE HEATING

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	0	0.0%	0
2020	371,763	371,763	0	0.0%	0
2021	380,824	380,824	0	0.0%	0
2022	389,564	389,564	0	0.0%	0
2023	397,953	397,953	0	0.0%	0
2024	405,968	405,968	0	0.0%	0
2025	414,147	414,147	0	0.0%	0
2026	422,494	422,494	0	0.0%	0
2027	431,013	431,013	0	0.0%	0
2028	439,707	439,707	0	0.0%	0

PROGRAM TITLE:		INPUT DATA - PART 1									
Residential - Space Heating Load Building		Residential - Space Heating Load Building									
(1) Life of Program		20 Years									
(2) Average therms consumed by Appliance (s)		136 Therms									
(3) Program peak consumption per installed Appliance:	Summer	0 Therms									
	Winter	0 Therms									
(4) Appliances Installed per Program		1 Units/Year									
(5) Average Number of Participants per Year		1 Participants/Year									
(6) Avoided annual kWh per Appliance		718 kWh									
(6)a Avoided demand kW per Appliance		0.000 kW									
(7) Avoided annual Therms per Appliance		0 Therms/Year									
(8) Incentive payment per Appliance		65 \$									
(9) Other Costs not identified in C.B. Forms											
(10) Escalation Rates:	Gas and Pipeline	2.00 %									
	Capital	2.00 %									
	O&M	2.20 %									
<table border="1"> <thead> <tr> <th colspan="2">Residential - Space Heating Load Building</th> </tr> <tr> <th colspan="2">Calculated Benefit to Cost Ratios</th> </tr> </thead> <tbody> <tr> <td>(1) Participant Cost Test (PCT)</td> <td style="text-align: right;">0.210</td> </tr> <tr> <td>(2) Gas-Rate Impact Measure Test (G-RIM)</td> <td style="text-align: right;">1.537</td> </tr> </tbody> </table>				Residential - Space Heating Load Building		Calculated Benefit to Cost Ratios		(1) Participant Cost Test (PCT)	0.210	(2) Gas-Rate Impact Measure Test (G-RIM)	1.537
Residential - Space Heating Load Building											
Calculated Benefit to Cost Ratios											
(1) Participant Cost Test (PCT)	0.210										
(2) Gas-Rate Impact Measure Test (G-RIM)	1.537										

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Space Heating

Year	Benefits				Costs							Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Customer Gas O&M Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Gas	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	54	0	65	0	119	-82	850	0	56	131	38	994	(874)	
2020	55	0	0	0	55	0	0	0	57	134	39	231	(175)	
2021	57	0	0	0	57	0	0	0	59	137	40	236	(179)	
2022	58	0	0	0	58	0	0	0	60	140	41	241	(183)	
2023	59	0	0	0	59	0	0	0	61	143	42	246	(187)	
2024	60	0	0	0	60	0	0	0	62	146	43	252	(191)	
2025	62	0	0	0	62	0	0	0	64	150	43	257	(195)	
2026	63	0	0	0	63	0	0	0	65	153	44	263	(200)	
2027	64	0	0	0	64	0	0	0	67	156	45	268	(204)	
2028	66	0	0	0	66	0	0	0	68	160	46	274	(208)	
2029	67	0	0	0	67	0	0	0	70	163	47	280	(213)	
2030	69	0	0	0	69	0	0	0	71	167	48	287	(218)	
2031	70	0	0	0	70	0	0	0	73	171	50	293	(223)	
2032	72	0	0	0	72	0	0	0	74	174	51	299	(227)	
2033	73	0	0	0	73	0	0	0	76	178	52	306	(232)	
2034	75	0	0	0	75	0	0	0	78	182	53	313	(238)	
2035	77	0	0	0	77	0	0	0	79	186	54	320	(243)	
2036	78	0	0	0	78	0	0	0	81	190	55	327	(248)	
2037	80	0	0	0	80	0	0	0	83	194	56	334	(254)	
2038	82	0	0	0	82	0	0	0	85	199	58	341	(259)	
Nominal	1,343	0	65	0	1,408	-82	850	0	1,389	3,256	946	6,359		
NPV:	773	0	65	0	838	-82	850	0	800	1,875	545	3,988		
Discount rate:	0.0616													
	Total PV of Benefits				838	Total PV of Costs				3,988	PCT		0.210	

Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Residential - Space Heating

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
	Energy Charge	Gas Charge	Gas Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits
2019	56	131	38	226	123	0	24	0	0	65	243	(17)
2020	57	134	39	231	126	0	23	0	0	0	149	82
2021	59	137	40	236	128	0	23	0	0	0	151	84
2022	60	140	41	241	131	0	22	0	0	0	154	87
2023	61	143	42	246	134	0	22	0	0	0	156	90
2024	62	146	43	252	137	0	21	0	0	0	158	93
2025	64	150	43	257	140	0	21	0	0	0	161	96
2026	65	153	44	263	143	0	20	0	0	0	164	99
2027	67	156	45	268	146	0	20	0	0	0	166	102
2028	68	160	46	274	150	0	19	0	0	0	169	105
2029	70	163	47	280	153	0	19	0	0	0	172	108
2030	71	167	48	287	156	0	19	0	0	0	175	112
2031	73	171	50	293	160	0	18	0	0	0	178	115
2032	74	174	51	299	163	0	18	0	0	0	181	118
2033	76	178	52	306	167	0	17	0	0	0	184	122
2034	78	182	53	313	170	0	17	0	0	0	187	125
2035	79	186	54	320	174	0	16	0	0	0	191	129
2036	81	190	55	327	178	0	16	0	0	0	194	132
2037	83	194	56	334	182	0	16	0	0	0	198	136
2038	85	199	58	341	186	0	15	0	0	0	201	140
NOMINAL	1,389	3,256	946	5,591	3,049	0	387	0	31	65	3,532	2,059
NPV:	800	1,875	545	3,220	1,756	0	243	0	31	65	2,095	1,125
Discount rate:	0.0616											
	Total PV of Benefits											3,220
	Total PV of Costs											2,095
	G-RIM											1,537

Program: Residential Tank Water Heater

Program Start Date: October 1990

Program Description

The Residential Tank Water Heater Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 7.030 Therms

Program Costs

Rebate:

Gas Retrofit: \$550 per qualifying natural gas tank water heater.

Gas Replacement: \$350 per qualifying natural gas tank water heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL TANK WATER HEATER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	7.030	46,749.500
2020	7.030	47,804.000
2021	7.030	49,210.000
2022	7.030	50,616.000
2023	7.030	52,022.000
2024	7.030	52,725.000
2025	7.030	53,427.400
2026	7.030	54,482.500
2027	7.030	55,185.500
2028	7.030	56,943.000

PROGRAM NAME: RESIDENTIAL TANK WATER HEATER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	6,650	1.8%	6,650
2020	371,763	371,763	6,800	3.6%	13,450
2021	380,824	380,824	7,000	5.4%	20,450
2022	389,564	389,564	7,200	7.1%	27,650
2023	397,953	397,953	7,400	8.8%	35,050
2024	405,968	405,968	7,500	10.5%	42,550
2025	414,147	414,147	7,600	12.1%	50,150
2026	422,494	422,494	7,750	13.7%	57,900
2027	431,013	431,013	7,850	15.3%	65,750
2028	439,707	439,707	8,100	16.8%	73,850

INPUT DATA - PART 1
PROGRAM TITLE: Residential - Tank Water Heater Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 138 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 77 Units/Year
- (5) Average Number of Participants per Year 77 Participants/Year
- (6) Avoided annual kWh per Appliance 4,773 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 550 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Tank Water Heater Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.915
(2) Gas-Rate Impact Measure Test (G-RIM)	1.166

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October 10, 2019

Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Tank Water Heater

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	Costs			(10)	(11)	(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Gas	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	360	0	0	550	0	1,400	850	0	57	134	134	38	2,479	(1,569)	
2020	368	0	0	0	0	0	0	0	58	137	137	39	234	134	
2021	376	0	0	0	0	0	0	0	59	140	140	40	239	137	
2022	384	0	0	0	0	0	0	0	61	143	143	41	244	140	
2023	393	0	0	0	0	0	0	0	62	146	146	42	249	143	
2024	401	0	0	0	0	0	0	0	64	149	149	43	255	146	
2025	410	0	0	0	0	0	0	0	65	152	152	43	261	150	
2026	419	0	0	0	0	0	0	0	66	156	156	44	266	153	
2027	429	0	0	0	0	0	0	0	68	159	159	45	272	156	
2028	438	0	0	0	0	0	0	0	69	162	162	46	278	160	
2029	448	0	0	0	0	0	0	0	71	166	166	47	284	163	
2030	457	0	0	0	0	0	0	0	72	170	170	48	291	167	
2031	468	0	350	0	0	1,818	0	0	74	173	173	50	2,115	(1,297)	
2032	478	0	0	0	0	0	0	0	76	177	177	51	303	174	
2033	488	0	0	0	0	0	0	0	77	181	181	52	310	178	
2034	499	0	0	0	0	0	0	0	79	185	185	53	317	182	
2035	510	0	0	0	0	0	0	0	81	189	189	54	324	186	
2036	521	0	0	0	0	0	0	0	82	193	193	55	331	190	
2037	533	0	0	0	0	0	0	0	84	198	198	56	338	194	
2038	544	0	0	0	0	0	0	0	86	202	202	58	346	199	
Nominal	8,925	0	900	0	9,825	3,218	850	0	1,412	3,311	3,311	946	9,736		
NPV:	5,140	0	721	0	5,861	2,287	850	0	813	1,907	1,907	545	6,402		
Discount rate:			0.0616												
				Total PV of Benefits	5,861							Total PV of Costs	6,402		
												PCT	0.915		

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario) Program: Residential - Tank Water Heater												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits			Costs									Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	57	134	38	229	125	0	24	0	31	550	730	(501)	
2020	58	137	39	234	128	0	23	0	0	0	151	83	
2021	59	140	40	239	131	0	23	0	0	0	153	85	
2022	61	143	41	244	133	0	22	0	0	0	156	88	
2023	62	146	42	249	136	0	22	0	0	0	158	91	
2024	64	149	43	255	139	0	21	0	0	0	161	94	
2025	65	152	43	261	143	0	21	0	0	0	163	97	
2026	66	156	44	266	146	0	20	0	0	0	166	100	
2027	68	159	45	272	149	0	20	0	0	0	169	103	
2028	69	162	46	278	152	0	19	0	0	0	172	107	
2029	71	166	47	284	155	0	19	0	0	0	174	110	
2030	72	170	48	291	159	0	19	0	0	0	177	113	
2031	74	173	50	297	162	0	18	0	40	350	571	(274)	
2032	76	177	51	303	166	0	18	0	0	0	184	120	
2033	77	181	52	310	170	0	17	0	0	0	187	123	
2034	79	185	53	317	173	0	17	0	0	0	190	127	
2035	81	189	54	324	177	0	16	0	0	0	194	130	
2036	82	193	55	331	181	0	16	0	0	0	197	134	
2037	84	198	56	338	185	0	16	0	0	0	201	138	
2038	86	202	58	346	189	0	15	0	0	0	205	141	
NOMINAL	1,412	3,311	946	5,669	3,100	0	387	0	71	900	4,458	1,211	
NPV:	813	1,907	545	3,265	1,785	0	243	0	51	721	2,800	465	
Discount rate:				0.0616									
	Total PV of Benefits			3,265	Total PV of Costs			2,800	G-RIM				1,166

PSC C.B. FORM 3
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 October 10, 2019

INPUT DATA - PART 1
PROGRAM TITLE: Residential - Tank Water Heater
Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 138 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 7,665 Units/Year
- (5) Average Number of Participants per Year 7,665 Participants/Year
- (6) Avoided annual kWh per Appliance 4,773 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 7 Therms/Year
- (8) Incentive payment per Appliance 350 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Tank Water Heater Load Reduction Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	9.850
(2) Gas-Rate Impact Measure Test (G-RIM)	1.037

Year	Participant Cost Test (PCT) (Load Reduction) Program: Residential - Tank Water Heater											
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	
	Benefits				Costs							
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits	
2019	363	6	0	350	0	719	360	0	0	360	359	
2020	371	6	0	0	0	377	0	0	0	0	377	
2021	379	7	0	0	0	386	0	0	0	0	386	
2022	387	7	0	0	0	394	0	0	0	0	394	
2023	396	7	0	0	0	403	0	0	0	0	403	
2024	405	7	0	0	0	412	0	0	0	0	412	
2025	414	7	0	0	0	421	0	0	0	0	421	
2026	423	7	0	0	0	430	0	0	0	0	430	
2027	432	8	0	0	0	440	0	0	0	0	440	
2028	441	8	0	0	0	449	0	0	0	0	449	
2029	451	8	0	0	0	459	0	0	0	0	459	
2030	461	8	0	0	0	469	0	0	0	0	469	
2031	471	8	0	350	0	830	467	0	0	467	362	
2032	482	8	0	0	0	490	0	0	0	0	490	
2033	492	9	0	0	0	501	0	0	0	0	501	
2034	503	9	0	0	0	512	0	0	0	0	512	
2035	514	9	0	0	0	523	0	0	0	0	523	
2036	525	9	0	0	0	535	0	0	0	0	535	
2037	537	9	0	0	0	546	0	0	0	0	546	
2038	549	10	0	0	0	558	0	0	0	0	558	
Nominal	8,997		0	700	0	9,654	827	0	0	827		
NPV:	5,181		0	521	0	5,793	588	0	0	588		
Discount rate:		0.0616										
			Total PV of Benefits		5,793		Total PV of Costs		588			
							PCT		9,850			

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Admin Cost	Total Cost	Net Benefits	
	Benefits				Costs										
2019	3	6	38	0	0	0	0	47	3	6	350	31	359	(312)	
2020	3	6	39	0	0	0	0	48	3	6	0	0	9	39	
2021	3	7	40	0	0	0	0	49	3	7	0	0	9	40	
2022	3	7	41	0	0	0	0	50	3	7	0	0	10	41	
2023	3	7	42	0	0	0	0	52	3	7	0	0	10	42	
2024	3	7	43	0	0	0	0	53	3	7	0	0	10	43	
2025	3	7	43	0	0	0	0	54	3	7	0	0	10	43	
2026	3	7	44	0	0	0	0	55	3	7	0	0	11	44	
2027	3	8	45	0	0	0	0	56	3	8	0	0	11	45	
2028	3	8	46	0	0	0	0	57	3	8	0	0	11	46	
2029	3	8	47	0	0	0	0	59	3	8	0	0	11	47	
2030	3	8	48	0	0	0	0	60	3	8	0	0	12	48	
2031	4	8	50	0	0	0	0	61	4	8	350	40	362	(300)	
2032	4	8	51	0	0	0	0	63	4	8	0	0	12	51	
2033	4	9	52	0	0	0	0	64	4	9	0	0	12	52	
2034	4	9	53	0	0	0	0	65	4	9	0	0	13	53	
2035	4	9	54	0	0	0	0	67	4	9	0	0	13	54	
2036	4	9	55	0	0	0	0	68	4	9	0	0	13	55	
2037	4	9	56	0	0	0	0	70	4	9	0	0	13	56	
2038	4	10	58	0	0	0	0	71	4	10	0	0	14	58	
NOMINAL	67	158	946	0	0	0	0	1,171	67	158	700	0	925	246	
NPV:	39	91	545	0	0	0	0	674	39	91	521	0	650	24	
Discount rate:	0.0616														
	Total PV of Benefits							674	Total PV of Costs			650	G-RIM		1,037

Program: Residential Tankless Water Heater

Program Start Date: October 2006

Program Description

The Residential Tankless Water Heater Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing residences with the installation of energy efficient natural gas appliances to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Savings were determined using the most recent U.S. Energy Information Administration Building Sector Appliance and Equipment Costs and Efficiencies Study and analyzed appliance usage patterns for residential Florida homes. The anticipated savings for customer participation are:

Annual Energy: 30.813 Therms

Program Costs

Rebate:

Gas Retrofit: \$700 per qualifying natural gas tankless water heater.

Gas Replacement: \$550 per qualifying natural gas tankless water heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: RESIDENTIAL TANKLESS WATER HEATER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	30.813	67,788.600
2020	30.813	70,869.900
2021	30.813	77,032.500
2022	30.813	83,195.100
2023	30.813	86,276.400
2024	30.813	89,357.700
2025	30.813	92,439.000
2026	30.813	95,520.300
2027	30.813	98,601.600
2028	30.813	101,682.900

PROGRAM NAME: RESIDENTIAL TANKLESS WATER HEATER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	362,478	362,478	2,200	0.6%	2,200
2020	371,763	371,763	2,300	1.2%	4,500
2021	380,824	380,824	2,500	1.8%	7,000
2022	389,564	389,564	2,700	2.5%	9,700
2023	397,953	397,953	2,800	3.1%	12,500
2024	405,968	405,968	2,900	3.8%	15,400
2025	414,147	414,147	3,000	4.4%	18,400
2026	422,494	422,494	3,100	5.1%	21,500
2027	431,013	431,013	3,200	5.7%	24,700
2028	439,707	439,707	3,300	6.4%	28,000

INPUT DATA - PART 1
Residential - Tankless Water Heater
Load Building

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PROGRAM TITLE: Residential - Tankless Water Heater
 Load Building

(1) Life of Program 20 Years

(2) Average therms consumed by Appliance (s) 98 Therms

(3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms

(4) Appliances Installed per Program 763 Units/Year

(5) Average Number of Participants per Year 763 Participants/Year

(6) Avoided annual kWh per Appliance 4,773 kWh
 (6)a Avoided demand kW per Appliance 0.000 kW

(7) Avoided annual Therms per Appliance 0 Therms/Year

(8) Incentive payment per Appliance 700 \$

(9) Other Costs not identified in C.B. Forms

(10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Residential - Tankless Water Heater Load Building Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.986
(2) Gas-Rate Impact Measure Test (G-RIM)	1.017

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Residential - Tankless Water Heater

Year	Benefits					Costs					Net Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	360	0	700	0	1,060	2,000	850	40	94	38	3,023	(1,963)
2020	368	0	0	0	368	0	0	41	97	39	177	191
2021	376	0	0	0	376	0	0	42	99	40	181	195
2022	384	0	0	0	384	0	0	43	101	41	185	200
2023	393	0	0	0	393	0	0	44	103	42	189	204
2024	401	0	0	0	401	0	0	45	105	43	193	209
2025	410	0	0	0	410	0	0	46	108	43	197	213
2026	419	0	0	0	419	0	0	47	110	44	201	218
2027	429	0	0	0	429	0	0	48	112	45	206	223
2028	438	0	0	0	438	0	0	49	115	46	210	228
2029	448	0	0	0	448	0	0	50	117	47	215	233
2030	457	0	0	0	457	0	0	51	120	48	220	238
2031	468	0	0	0	468	-1,655	0	52	123	50	-1,431	1,888
2032	478	0	0	0	478	0	0	53	125	51	229	248
2033	488	0	0	0	488	0	0	55	128	52	235	254
2034	499	0	0	0	499	0	0	56	131	53	240	259
2035	510	0	0	0	510	0	0	57	134	54	245	265
2036	521	0	0	0	521	0	0	58	137	55	250	271
2037	533	0	0	0	533	0	0	60	140	56	256	277
2038	544	0	550	0	1,094	4,952	0	61	143	58	5,213	(4,119)
Nominal	8,925	0	1,250	0	10,175	5,297	850	989	2,342	946	10,433	
NPV:	5,140	0	877	0	6,017	2,782	850	575	1,349	545	6,101	
Discount rate:		0.0616										
				Total PV of Benefits	6,017				Total PV of Costs		6,101	
									PCT		0.986	

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 October 31, 2019

Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Residential - Tankless Water Heater

YEAR	Benefits			Costs							Total Cost	Net Benefits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive		
2019	40	94	38	173	88	0	24	0	31	700	843	(670)
2020	41	97	39	177	90	0	23	0	0	0	114	63
2021	42	99	40	181	92	0	23	0	0	0	115	65
2022	43	101	41	185	94	0	22	0	0	0	117	68
2023	44	103	42	189	97	0	22	0	0	0	118	70
2024	45	105	43	193	99	0	21	0	0	0	120	73
2025	46	108	43	197	101	0	21	0	0	0	122	75
2026	47	110	44	201	103	0	20	0	0	0	123	78
2027	48	112	45	206	105	0	20	0	0	0	125	81
2028	49	115	46	210	108	0	19	0	0	0	127	83
2029	50	117	47	215	110	0	19	0	0	0	129	86
2030	51	120	48	220	112	0	19	0	0	0	131	89
2031	52	123	50	225	115	0	18	0	0	0	133	92
2032	53	125	51	229	117	0	18	0	0	0	135	94
2033	55	128	52	235	120	0	17	0	0	0	137	97
2034	56	131	53	240	123	0	17	0	0	0	139	100
2035	57	134	54	245	125	0	16	0	0	0	142	103
2036	58	137	55	250	128	0	16	0	0	0	144	106
2037	60	140	56	256	131	0	16	0	0	0	147	109
2038	61	143	58	262	134	0	15	0	47	550	746	(485)
NOMINAL	999	2,342	946	4,287	2,193	0	387	0	78	1,250	3,908	379
NPV:	575	1,349	545	2,469	1,263	0	243	0	46	877	2,428	40
Discount rate:		0.0616										
			Total PV of Benefits	2,469					Total PV of Costs		2,428	
									G-RIM		1,017	

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INPUT DATA - PART 1
PROGRAM TITLE: Residential - Tankless Water Heater
Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 98 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 2,288 Units/Year
- (5) Average Number of Participants per Year 2,288 Participants/Year
- (6) Avoided annual kWh per Appliance 4,773 kWh
- (6)a Avoided demand kW per Appliance 0.000 kW
- (7) Avoided annual Therms per Appliance 38 Therms/Year
- (8) Incentive payment per Appliance 550 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Residential - Tankless Water Heater Load Reduction Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	7.267
(2) Gas-Rate Impact Measure Test (G-RIM)	0.873

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Participant Cost Test (PCT) (Load Reduction)
Program: Residential - Tankless Water Heater

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	376	35	0	550	0	960	610	0	0	610	350
2020	384	35	0	0	0	419	0	0	0	0	419
2021	393	36	0	0	0	429	0	0	0	0	429
2022	401	37	0	0	0	438	0	0	0	0	438
2023	410	38	0	0	0	448	0	0	0	0	448
2024	419	39	0	0	0	458	0	0	0	0	458
2025	428	39	0	0	0	468	0	0	0	0	468
2026	438	40	0	0	0	478	0	0	0	0	478
2027	447	41	0	0	0	488	0	0	0	0	488
2028	457	42	0	0	0	499	0	0	0	0	499
2029	467	43	0	0	0	510	0	0	0	0	510
2030	477	44	0	0	0	521	0	0	0	0	521
2031	488	45	0	0	0	533	0	0	0	0	533
2032	499	46	0	0	0	545	0	0	0	0	545
2033	510	47	0	0	0	557	0	0	0	0	557
2034	521	48	0	0	0	569	0	0	0	0	569
2035	532	49	0	0	0	581	0	0	0	0	581
2036	544	50	0	0	0	594	0	0	0	0	594
2037	556	51	0	0	0	607	0	0	0	0	607
2038	568	52	0	550	0	1,171	922	0	0	922	248
Nominal	9,316		0	1,100	0	11,274	1,532	0	0	1,532	
NPV:	5,365		0	727	0	6,586	906	0	0	906	
Discount rate:		0.0616									
				Total PV of Benefits	6,586				Total PV of Costs	906	
									PCT	7.267	

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 October 10, 2019

Gas - Rate Impact Measure Test (G-RIM)
 Program: Residential - Tankless Water Heater

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/ Incentive	Admin Cost	Total Cost	Net Benefits
2019	15	35	38	0	0	0	0	88	15	35	550	31	599	(512)
2020	15	35	39	0	0	0	0	89	15	35	0	0	50	39
2021	15	36	40	0	0	0	0	91	15	36	0	0	52	40
2022	16	37	41	0	0	0	0	93	16	37	0	0	53	41
2023	16	38	42	0	0	0	0	95	16	38	0	0	54	42
2024	16	39	43	0	0	0	0	98	16	39	0	0	55	43
2025	17	39	43	0	0	0	0	100	17	39	0	0	56	43
2026	17	40	44	0	0	0	0	102	17	40	0	0	57	44
2027	18	41	45	0	0	0	0	104	18	41	0	0	59	45
2028	18	42	46	0	0	0	0	106	18	42	0	0	60	46
2029	18	43	47	0	0	0	0	109	18	43	0	0	61	47
2030	19	44	48	0	0	0	0	111	19	44	0	0	63	48
2031	19	45	50	0	0	0	0	114	19	45	0	0	64	50
2032	20	46	51	0	0	0	0	116	20	46	0	0	66	51
2033	20	47	52	0	0	0	0	119	20	47	0	0	67	52
2034	20	48	53	0	0	0	0	121	20	48	0	0	68	53
2035	21	49	54	0	0	0	0	124	21	49	0	0	70	54
2036	21	50	55	0	0	0	0	127	21	50	0	0	71	55
2037	22	51	56	0	0	0	0	130	22	51	0	0	73	56
2038	22	52	58	0	0	0	0	132	22	52	550	47	625	(492)
NOMINAL	366	858	946	0	0	0	0	2,170	366	858	1,100		2324	-154
NPV:	211	494	545	0	0	0	0	1,250	211	494	727		1,431	-182
Discount rate:	0.0616													
	Total PV of Benefits												1,431	
	Total PV of Costs												1,431	
													G-RIM	0.873

Program: Commercial Walk-Through Energy Audit

Program Start Date: Projected August 2020

Program Description:

A conservation program designed to reduce demand and energy consumption of commercial/industrial facilities by increasing customer awareness of the energy use in their facilities. The savings are dependent upon the customer's implementation of conservation measures and practices recommended.

The audit is conducted by a trained commercial energy analyst who will perform at a minimum the following:

1. Identify, note and recommend only those conservation measures and practices that apply to the specific commercial or industrial facility.
2. Encourage customer and organization participation in available conservation programs in which the specific commercial or industrial facility will benefit.
3. Energy usage profiling and benchmarking showing the historical energy usage and forecasted usage with no changes.
4. Identify and communicate to the customer identified no-cost, low-cost and capital cost conservation measures and practices including those that have less than a two-year payback.

Recommendations are tailored to the specific commercial or industrial facility based upon the replacement of less efficient equipment and systems or modifications to operations to enhance the customer's overall efficiency. Recommendations are primarily standardized and encourage the customer to implement measures that, if cost-effective, move the customer beyond the efficiency level typically installed in the marketplace.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Program savings from the Commercial Walk-Through Energy Audit primarily come from behavioral savings. Because the savings primarily come through behavioral type changes and action taken by a customer to install a natural gas measure would likely be captured in another of the company’s DSM programs. The savings per participant are as follows:

Annual Energy: 0.0 Therms

Program Costs

Based on projected costs, the administrative cost per audit is estimated to be \$180. There are no rebates or incentives for this program.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company’s annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL WALK-THROUGH ENERGY AUDIT

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	Note 1	Note 1
2020	Note 1	Note 1
2021	Note 1	Note 1
2022	Note 1	Note 1
2023	Note 1	Note 1
2024	Note 1	Note 1
2025	Note 1	Note 1
2026	Note 1	Note 1
2027	Note 1	Note 1
2028	Note 1	Note 1

*Primary savings comes from behavioral applications and are not quantified per FPSC.

PROGRAM NAME: COMMERCIAL WALK-THROUGH ENERGY AUDIT

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level %	Cumulative Number of Program Participants
2019	38,226	38,226	300	0.8%	300
2020	39,271	39,271	400	1.8%	700
2021	40,315	40,315	500	3.0%	1,200
2022	41,352	41,352	500	4.1%	1,700
2023	42,383	42,383	500	5.2%	2,200
2024	43,408	43,408	500	6.2%	2,700
2025	44,448	44,448	500	7.2%	3,200
2026	45,503	45,503	500	8.1%	3,700
2027	46,573	46,573	500	9.0%	4,200
2028	47,660	47,660	500	9.9%	4,700

Program: Commercial Combined Heat and Power Program

Program Start Date: October 1990

Program Description

The Commercial Combined Heat and Power Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas combined heat and power equipment to utilize waste heat to displace portions of natural gas usage for on-site heating, cooling and water heating.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 5,059.950 Therms

Program Costs

Rebate:

Gas Retrofit: \$300 per kW of actual electric demand reduced of installed combined heat and power equipment.

Gas Replacement: \$100 per kW of actual electric demand reduced of installed combined heat and power equipment.

The estimated administrative cost per participant is \$3,000.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL COMBINED HEAT AND POWER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	5,059.950	0.000
2020	5,059.950	0.000
2021	5,059.950	0.000
2022	5,059.950	0.000
2023	5,059.950	0.000
2024	5,059.950	0.000
2025	5,059.950	0.000
2026	5,059.950	0.000
2027	5,059.950	0.000
2028	5,059.950	0.000

PROGRAM NAME: COMMERCIAL COMBINED HEAT AND POWER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	0	0.0%	0
2020	39,271	39,271	0	0.0%	0
2021	40,315	40,315	0	0.0%	0
2022	41,352	41,352	0	0.0%	0
2023	42,383	42,383	0	0.0%	0
2024	43,408	43,408	0	0.0%	0
2025	44,448	44,448	0	0.0%	0
2026	45,503	45,503	0	0.0%	0
2027	46,573	46,573	0	0.0%	0
2028	47,660	47,660	0	0.0%	0

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Combined Heat and Power
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 20,472 Therms
- (3) Program peak consumption per installed Appliance:
 - Summer 0 Therms
 - Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 2,000,000 kWh
- (6)a Avoided demand kW per Appliance 250,000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 75,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 - Gas and Pipeline 2.00 %
 - Capital 2.00 %
 - O&M 2.20 %

Commercial - Combined Heat and Power Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.761
(2) Gas-Rate Impact Measure Test (G-RIM)	2.910



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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Combined Heat and Power

Year	Benefits					Costs					Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)	(12)
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	51,641	0	75,000	0	126,641	650,000	0	4,707	22,565	1,912	679,184	(552,543)	
2020	52,778	0	0	0	52,778	0	0	4,810	23,062	1,954	29,826	22,952	
2021	53,939	0	0	0	53,939	0	0	4,916	23,569	1,997	30,482	23,456	
2022	55,125	0	0	0	55,125	0	0	5,024	24,088	2,041	31,153	23,973	
2023	56,338	0	0	0	56,338	0	0	5,135	24,618	2,086	31,838	24,500	
2024	57,577	0	0	0	57,577	0	0	5,248	25,159	2,132	32,539	25,039	
2025	58,844	0	0	0	58,844	0	0	5,363	25,713	2,179	33,264	25,590	
2026	60,139	0	0	0	60,139	0	0	5,481	26,278	2,227	33,986	26,153	
2027	61,462	0	0	0	61,462	0	0	5,602	26,856	2,276	34,734	26,728	
2028	62,814	0	0	0	62,814	0	0	5,725	27,447	2,326	35,498	27,316	
2029	64,196	0	0	0	64,196	0	0	5,851	28,051	2,377	36,279	27,917	
2030	65,608	0	0	0	65,608	0	0	5,979	28,668	2,429	37,077	28,531	
2031	67,052	0	0	0	67,052	0	0	6,111	29,299	2,483	37,893	29,159	
2032	68,527	0	0	0	68,527	0	0	6,245	29,943	2,537	38,726	29,800	
2033	70,034	0	0	0	70,034	0	0	6,383	30,602	2,593	39,578	30,456	
2034	71,575	0	0	0	71,575	0	0	6,523	31,275	2,650	40,449	31,126	
2035	73,150	0	0	0	73,150	0	0	6,667	31,964	2,709	41,339	31,811	
2036	74,759	0	0	0	74,759	0	0	6,813	32,667	2,768	42,248	32,511	
2037	76,404	0	0	0	76,404	0	0	6,963	33,385	2,829	43,178	33,226	
2038	78,085	0	0	0	78,085	0	0	7,116	34,120	2,891	44,128	33,957	
Nominal	1,280,045	0	75,000	0	1,355,045	650,000	0	116,661	559,330	47,397	1,373,388		
NPV:	737,170	0	75,000	0	812,170	650,000	0	67,184	322,114	27,295	1,066,594		
Discount rate:	0.0616												
	Total PV of Benefits				812,170	Total PV of Costs				1,066,594	PCT		
										0.761			

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												Net Benefits
	Benefits						Costs						
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost			
2019	22,565	4,707	1,912	29,184	4,407	0	218	3,000	75,000	82,625		(53,441)	
2020	23,062	4,810	1,954	29,826	4,504	0	214	0	0	4,717		25,108	
2021	23,569	4,916	1,997	30,482	4,603	0	210	0	0	4,812		25,670	
2022	24,088	5,024	2,041	31,153	4,704	0	206	0	0	4,910		26,243	
2023	24,618	5,135	2,086	31,838	4,808	0	202	0	0	5,009		26,829	
2024	25,159	5,248	2,132	32,539	4,913	0	198	0	0	5,111		27,427	
2025	25,713	5,363	2,179	33,254	5,021	0	194	0	0	5,215		28,039	
2026	26,278	5,481	2,227	33,986	5,132	0	190	0	0	5,322		28,664	
2027	26,856	5,602	2,276	34,734	5,245	0	187	0	0	5,431		29,302	
2028	27,447	5,725	2,326	35,498	5,360	0	183	0	0	5,543		29,954	
2029	28,051	5,851	2,377	36,279	5,478	0	180	0	0	5,658		30,621	
2030	28,668	5,979	2,429	37,077	5,599	0	176	0	0	5,775		31,302	
2031	29,299	6,111	2,483	37,893	5,722	0	173	0	0	5,895		31,998	
2032	29,943	6,245	2,537	38,726	5,848	0	170	0	0	6,017		32,709	
2033	30,602	6,383	2,593	39,578	5,976	0	167	0	0	6,143		33,435	
2034	31,275	6,523	2,650	40,449	6,108	0	163	0	0	6,271		34,178	
2035	31,964	6,667	2,709	41,339	6,242	0	160	0	0	6,403		34,936	
2036	32,667	6,813	2,768	42,248	6,380	0	157	0	0	6,537		35,711	
2037	33,385	6,963	2,829	43,178	6,520	0	155	0	0	6,674		36,503	
2038	34,120	7,116	2,891	44,128	6,663	0	152	0	0	6,815		37,313	
NOMINAL	559,330	116,661	47,397	723,388	109,233	0	3,653	3,000	75,000	190,886		532,502	
NPV:	322,114	67,184	27,295	416,594	62,907	0	2,277	3,000	75,000	143,184		273,411	
Discount rate:													
	Total PV of Benefits											416,594	
	Total PV of Costs											143,184	
	G-RIM											2,910	

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Commercial - Combined Heat and Power

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Combined Heat and Power Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 20,472 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 2,000,000 kWh
- (6)a Avoided demand kW per Appliance 250,000 kW
- (7) Avoided annual Therms per Appliance 6,824 Therms/Year
- (8) Incentive payment per Appliance 25,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Commercial - Combined Heat and Power Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	1.239
(2) Gas-Rate Impact Measure Test (G-RIM)	1.016

Participant Cost Test (PCT) (Load Reduction)											
Program: Commercial - Combined Heat and Power											
Year	Benefits				Costs			Total Costs	Net Benefits	(11)	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)				(8)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs		
2019	53,210	1,469	0	25,000	0	79,679	650,000	0	0	650,000	(570,321)
2020	54,381	1,501	0	0	0	55,882	0	0	0	0	55,882
2021	55,577	1,534	0	0	0	57,112	0	0	0	0	57,112
2022	56,800	1,568	0	0	0	58,368	0	0	0	0	58,368
2023	58,050	1,603	0	0	0	59,652	0	0	0	0	59,652
2024	59,327	1,638	0	0	0	60,964	0	0	0	0	60,964
2025	60,632	1,674	0	0	0	62,306	0	0	0	0	62,306
2026	61,966	1,711	0	0	0	63,676	0	0	0	0	63,676
2027	63,329	1,748	0	0	0	65,077	0	0	0	0	65,077
2028	64,722	1,787	0	0	0	66,509	0	0	0	0	66,509
2029	66,146	1,826	0	0	0	67,972	0	0	0	0	67,972
2030	67,601	1,866	0	0	0	69,468	0	0	0	0	69,468
2031	69,089	1,907	0	0	0	70,996	0	0	0	0	70,996
2032	70,608	1,949	0	0	0	72,558	0	0	0	0	72,558
2033	72,162	1,992	0	0	0	74,154	0	0	0	0	74,154
2034	73,749	2,036	0	0	0	75,785	0	0	0	0	75,785
2035	75,372	2,081	0	0	0	77,453	0	0	0	0	77,453
2036	77,030	2,127	0	0	0	79,157	0	0	0	0	79,157
2037	78,725	2,173	0	0	0	80,898	0	0	0	0	80,898
2038	80,457	2,221	0	0	0	82,678	0	0	0	0	82,678
Nominal	1,318,932		0	25,000	0	1,380,343	650,000	0	0	650,000	
NPV:	759,564		0	25,000	0	805,533	650,000	0	0	650,000	
Discount rate:		0.0616									
				Total PV of Benefits	805,533			Total PV of Costs		650,000	
								PCT		1.239	

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Gas - Rate Impact Measure Test (G-RIM)
Program: Commercial - Combined Heat and Power

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	7,043	1,469	1,912	0	0	0	0	10,424	7,043	1,469	25,000	3,000	33,512	(23,089)	
2020	7,198	1,501	1,954	0	0	0	0	10,653	7,198	1,501	0	0	8,699	1,954	
2021	7,356	1,534	1,997	0	0	0	0	10,888	7,356	1,534	0	0	8,890	1,997	
2022	7,518	1,568	2,041	0	0	0	0	11,127	7,518	1,568	0	0	9,086	2,041	
2023	7,683	1,603	2,086	0	0	0	0	11,372	7,683	1,603	0	0	9,286	2,086	
2024	7,852	1,638	2,132	0	0	0	0	11,622	7,852	1,638	0	0	9,490	2,132	
2025	8,025	1,674	2,179	0	0	0	0	11,878	8,025	1,674	0	0	9,699	2,179	
2026	8,202	1,711	2,227	0	0	0	0	12,139	8,202	1,711	0	0	9,912	2,227	
2027	8,382	1,748	2,276	0	0	0	0	12,406	8,382	1,748	0	0	10,130	2,276	
2028	8,567	1,787	2,326	0	0	0	0	12,679	8,567	1,787	0	0	10,353	2,326	
2029	8,755	1,826	2,377	0	0	0	0	12,958	8,755	1,826	0	0	10,581	2,377	
2030	8,948	1,866	2,429	0	0	0	0	13,243	8,948	1,866	0	0	10,814	2,429	
2031	9,144	1,907	2,483	0	0	0	0	13,535	9,144	1,907	0	0	11,052	2,483	
2032	9,346	1,949	2,537	0	0	0	0	13,832	9,346	1,949	0	0	11,295	2,537	
2033	9,551	1,992	2,593	0	0	0	0	14,137	9,551	1,992	0	0	11,543	2,593	
2034	9,761	2,036	2,650	0	0	0	0	14,448	9,761	2,036	0	0	11,797	2,650	
2035	9,976	2,081	2,709	0	0	0	0	14,765	9,976	2,081	0	0	12,057	2,709	
2036	10,196	2,127	2,768	0	0	0	0	15,090	10,196	2,127	0	0	12,322	2,768	
2037	10,420	2,173	2,829	0	0	0	0	15,422	10,420	2,173	0	0	12,593	2,829	
2038	10,649	2,221	2,891	0	0	0	0	15,762	10,649	2,221	0	0	12,870	2,891	
NOMINAL	174,572	36,411	47,397	0	0	0	0	258,380	174,572	36,411	25,000	0	235,983	22,397	
NPV:	100,635	20,969	27,295	0	0	0	0	148,799	100,635	20,969	25,000	0	146,504	2,295	
Discount rate:														0.0616	
													Total PV of Costs	146,504	
													G-RIM	1,016	

Program: Commercial Dryer Program

Program Start Date: January 2014

Program Description

The Commercial Dryer Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 16.696 Therms

Program Costs

Rebate:

Gas Retrofit: \$2,500 per qualifying natural gas dryer.

Gas Replacement: Up to \$2,000 per qualifying natural gas dryer.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL DRYER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	16.696	252.189
2020	16.696	229.328
2021	16.696	239.869
2022	16.696	250.325
2023	16.696	260.715
2024	16.696	271.065
2025	16.696	281.577
2026	16.696	292.208
2027	16.696	302.998
2028	16.696	313.948

PROGRAM NAME: COMMERCIAL DRYER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	15	0.0%	15
2020	39,271	39,271	14	0.1%	29
2021	40,315	40,315	14	0.1%	43
2022	41,352	41,352	15	0.1%	58
2023	42,383	42,383	16	0.2%	74
2024	43,408	43,408	16	0.2%	90
2025	44,448	44,448	17	0.2%	107
2026	45,503	45,503	18	0.3%	124
2027	46,573	46,573	18	0.3%	143
2028	47,660	47,660	19	0.3%	161

INPUT DATA - PART 1
Commercial - Dryer
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 230 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 2 Units/Year
- (5) Average Number of Participants per Year 2 Participants/Year
- (6) Avoided annual kWh per Appliance 6,280 kWh
- (6)a Avoided demand kW per Appliance 2.390 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 2,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Commercial - Dryer Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.577
(2) Gas-Rate Impact Measure Test (G-RIM)	1.481

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Dryer

Year	Benefits				Costs							Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	182	0	2,500	0	2,682	550	0	0	53	253	382	1,238	1,444	
2020	186	0	0	0	186	0	0	0	54	259	391	703	(517)	
2021	190	0	0	0	190	0	0	0	55	264	399	719	(529)	
2022	195	0	0	0	195	0	0	0	56	270	408	735	(540)	
2023	199	0	0	0	199	0	0	0	58	276	417	751	(552)	
2024	203	0	0	0	203	0	0	0	59	282	426	767	(564)	
2025	208	0	0	0	208	0	0	0	60	288	436	784	(577)	
2026	212	0	0	0	212	0	0	0	61	295	445	802	(589)	
2027	217	0	0	0	217	0	0	0	63	301	455	819	(602)	
2028	222	0	0	0	222	0	0	0	64	308	465	837	(616)	
2029	227	0	2,000	0	2,227	684	0	0	66	315	475	1,539	687	
2030	232	0	0	0	232	0	0	0	67	322	486	875	(643)	
2031	237	0	0	0	237	0	0	0	69	329	497	894	(657)	
2032	242	0	0	0	242	0	0	0	70	336	507	913	(672)	
2033	247	0	0	0	247	0	0	0	72	343	519	933	(686)	
2034	253	0	0	0	253	0	0	0	73	351	530	954	(701)	
2035	258	0	0	0	258	0	0	0	75	359	542	975	(717)	
2036	264	0	0	0	264	0	0	0	76	366	554	996	(733)	
2037	270	0	0	0	270	0	0	0	78	374	566	1,018	(749)	
2038	276	0	0	0	276	0	0	0	80	383	578	1,041	(765)	
Nominal	4,517	0	4,500	0	9,017	1,234	0	0	1,309	6,274	9,479	18,296		
NPV:	2,601	0	3,600	0	6,201	926	0	0	754	3,613	5,459	10,752		
Discount rate:	0.0616													
	Total PV of Benefits				6,201	Total PV of Costs				10,752	PCT			0.577

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits						Costs						
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/Incentive	Total Cost	Net Benefits	
2019	253	53	382	688	49	0	218	0	31	2500	2,798	(2,110)	
2020	259	54	391	703	51	0	214	0	0	0	264	439	
2021	264	55	399	719	52	0	210	0	0	0	261	458	
2022	270	56	408	735	53	0	206	0	0	0	258	476	
2023	276	58	417	751	54	0	202	0	0	0	256	495	
2024	282	59	426	767	55	0	198	0	0	0	253	515	
2025	288	60	436	784	56	0	194	0	0	0	250	534	
2026	295	61	445	802	58	0	190	0	0	0	248	554	
2027	301	63	455	819	59	0	187	0	0	0	245	574	
2028	308	64	465	837	60	0	183	0	0	0	243	594	
2029	315	66	475	856	61	0	180	0	38	2000	2,280	(1,424)	
2030	322	67	486	875	63	0	176	0	0	0	239	635	
2031	329	69	497	894	64	0	173	0	0	0	237	657	
2032	336	70	507	913	66	0	170	0	0	0	235	678	
2033	343	72	519	933	67	0	167	0	0	0	234	700	
2034	351	73	530	954	69	0	163	0	0	0	232	722	
2035	359	75	542	975	70	0	160	0	0	0	231	745	
2036	366	76	554	996	72	0	157	0	0	0	229	767	
2037	374	78	566	1,018	73	0	155	0	0	0	228	791	
2038	383	80	578	1,041	75	0	152	0	0	0	226	814	
NOMINAL	6,274	1,309	9,479	17,062	1,225	0	3,653	0	69	4,500	9,447	7,615	
NPV:	3,613	754	5,459	9,826	706	0	2,277	0	52	3,600	6,635	3,191	
Discount rate:	0.0616												
	Total PV of Benefits			9,826	Total PV of Costs			6,635	G-RIM				1,481

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INPUT DATA - PART 1
Commercial - Dryer
Load Reduction

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 230 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 16 Units/Year
- (5) Average Number of Participants per Year 16 Participants/Year
- (6) Avoided annual kWh per Appliance 6,280 kWh
- (6)a Avoided demand kW per Appliance 2.390 kW
- (7) Avoided annual Therms per Appliance 118 Therms/Year
- (8) Incentive payment per Appliance 2,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - Dryer Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	7.298
(2) Gas-Rate Impact Measure Test (G-RIM)	1.119

Participant Cost Test (PCT) (Load Reduction) Program: Commercial - Dryer											
Year	Benefits						Costs				
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	209	25	0	2,000	0	2,235	525	0	0	525	1,710
2020	214	26	0	0	0	240	0	0	0	0	240
2021	219	27	0	0	0	245	0	0	0	0	245
2022	223	27	0	0	0	251	0	0	0	0	251
2023	228	28	0	0	0	256	0	0	0	0	256
2024	233	28	0	0	0	262	0	0	0	0	262
2025	239	29	0	0	0	268	0	0	0	0	268
2026	244	30	0	0	0	273	0	0	0	0	273
2027	249	30	0	0	0	279	0	0	0	0	279
2028	255	31	0	0	0	286	0	0	0	0	286
2029	260	32	0	2,000	0	2,292	653	0	0	653	1,639
2030	266	32	0	0	0	298	0	0	0	0	298
2031	272	33	0	0	0	305	0	0	0	0	305
2032	278	34	0	0	0	312	0	0	0	0	312
2033	284	34	0	0	0	318	0	0	0	0	318
2034	290	35	0	0	0	325	0	0	0	0	325
2035	297	36	0	0	0	333	0	0	0	0	333
2036	303	37	0	0	0	340	0	0	0	0	340
2037	310	38	0	0	0	347	0	0	0	0	347
2038	317	38	0	0	0	355	0	0	0	0	355
Nominal	5,189		0	4,000	0	9,819	1,178	0	0	1,178	
NPV:	2,989		0	3,100	0	6,451	884	0	0	884	
Discount rate:		0.0616									
			Total PV of Benefits		6,451			Total PV of Costs		884	
								PCT		7,298	

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	122	25	382	0	0	0	0	408	122	25	2000	31	2,147	(1,739)	
2020	124	26	391	0	0	0	0	417	124	26	0	0	150	266	
2021	127	27	399	0	0	0	0	426	127	27	0	0	154	272	
2022	130	27	408	0	0	0	0	435	130	27	0	0	157	278	
2023	133	28	417	0	0	0	0	445	133	28	0	0	161	284	
2024	136	28	426	0	0	0	0	455	136	28	0	0	164	291	
2025	139	29	436	0	0	0	0	465	139	29	0	0	168	297	
2026	142	30	445	0	0	0	0	475	142	30	0	0	171	304	
2027	145	30	455	0	0	0	0	485	145	30	0	0	175	310	
2028	148	31	465	0	0	0	0	496	148	31	0	0	179	317	
2029	151	32	475	0	0	0	0	507	151	32	2000	38	2,183	(1,676)	
2030	155	32	486	0	0	0	0	518	155	32	0	0	187	331	
2031	158	33	497	0	0	0	0	530	158	33	0	0	191	338	
2032	162	34	507	0	0	0	0	541	162	34	0	0	195	346	
2033	165	34	519	0	0	0	0	553	165	34	0	0	200	353	
2034	169	35	530	0	0	0	0	565	169	35	0	0	204	361	
2035	173	36	542	0	0	0	0	578	173	36	0	0	208	369	
2036	176	37	554	0	0	0	0	590	176	37	0	0	213	377	
2037	180	38	566	0	0	0	0	603	180	38	0	0	218	386	
2038	184	38	578	0	0	0	0	617	184	38	0	0	223	394	
NOMINAL	3,019	630		0	0	0	0	10,109	3,019	630	4,000		7,648	2,461	
NPV:	1,738	363		0	0	0	0	5,822	1,738	363	3,100		5,201	621	
Discount rate:	0.0616														
	Total PV of Benefits							5,822	Total PV of Costs				5,201		
													G-RIM	1,119	

Program: Commercial ENERGY STAR Tank Water Heater Program

Program Start Date: October 1990

Program Description

The Commercial Tank Water Heater Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 754.862 Therms

Program Costs

Rebate:

Gas Retrofit: \$2,500 per qualifying natural gas tank water heater.

Gas Replacement: Up to \$1,500 per qualifying natural gas tank water heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL TANK WATER HEATER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	754.862	19,102.229
2020	754.862	19,664.935
2021	754.862	20,228.181
2022	754.862	20,786.845
2023	754.862	21,342.030
2024	754.862	21,895.043
2025	754.862	22,456.757
2026	754.862	23,024.763
2027	754.862	23,601.323
2028	754.862	24,186.410

PROGRAM NAME: COMMERCIAL TANK WATER HEATER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	25	0.1%	25
2020	39,271	39,271	26	0.1%	51
2021	40,315	40,315	27	0.2%	78
2022	41,352	41,352	28	0.3%	106
2023	42,383	42,383	28	0.3%	134
2024	43,408	43,408	29	0.4%	163
2025	44,448	44,448	30	0.4%	193
2026	45,503	45,503	31	0.5%	223
2027	46,573	46,573	31	0.5%	254
2028	47,660	47,660	32	0.6%	287

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - ENERGY STAR Water Heater
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 4,644 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 27 Units/Year
- (5) Average Number of Participants per Year 27 Participants/Year
- (6) Avoided annual kWh per Appliance 136,114 kWh
- (6)a Avoided demand kW per Appliance 31.076 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 2,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - ENERGY STAR Water Heater Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.562
(2) Gas-Rate Impact Measure Test (G-RIM)	4.739

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - ENERGY STAR Water Heater

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	3,690	0	2,500	0	6,190	3,550	0	0	1,068	5,119	382	10,119	(3,929)
2020	3,772	0	0	0	3,772	0	0	0	1,091	5,232	391	6,714	(2,942)
2021	3,855	0	0	0	3,855	0	0	0	1,115	5,347	399	6,861	(3,007)
2022	3,939	0	0	0	3,939	0	0	0	1,140	5,464	408	7,012	(3,073)
2023	4,026	0	0	0	4,026	0	0	0	1,165	5,585	417	7,167	(3,141)
2024	4,115	0	0	0	4,115	0	0	0	1,190	5,707	426	7,324	(3,210)
2025	4,205	0	0	0	4,205	0	0	0	1,217	5,833	436	7,485	(3,280)
2026	4,298	0	0	0	4,298	0	0	0	1,243	5,961	445	7,650	(3,352)
2027	4,392	0	0	0	4,392	0	0	0	1,271	6,093	455	7,818	(3,426)
2028	4,489	0	0	0	4,489	0	0	0	1,299	6,227	465	7,990	(3,502)
2029	4,588	0	0	0	4,588	0	0	0	1,327	6,364	475	8,166	(3,579)
2030	4,689	0	0	0	4,689	0	0	0	1,356	6,504	486	8,346	(3,657)
2031	4,792	0	0	0	4,792	0	0	0	1,386	6,647	497	8,529	(3,738)
2032	4,897	0	1,500	0	6,397	4,711	0	0	1,417	6,793	507	13,428	(7,031)
2033	5,005	0	0	0	5,005	0	0	0	1,448	6,942	519	8,909	(3,904)
2034	5,115	0	0	0	5,115	0	0	0	1,480	7,095	530	9,105	(3,990)
2035	5,228	0	0	0	5,228	0	0	0	1,512	7,251	542	9,305	(4,078)
2036	5,343	0	0	0	5,343	0	0	0	1,546	7,411	554	9,510	(4,167)
2037	5,460	0	0	0	5,460	0	0	0	1,580	7,574	566	9,719	(4,259)
2038	5,580	0	0	0	5,580	0	0	0	1,614	7,740	578	9,933	(4,353)
Nominal	91,476	0	4,000	0	95,476	8,261	0	0	26,465	126,887	9,479	171,093	
NPV:	52,681	0	3,190	0	55,870	5,716	0	0	15,241	73,074	5,459	99,490	
Discount rate:	0.0616												
	Total PV of Benefits												99,490
	Total PV of Costs												0.562
													PCT

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 October 31, 2019

Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Commercial - ENERGY STAR Water Heater

YEAR	Benefits			Costs						Rebate/ Incentive	Total Cost	Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)				(10)	(11)
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin					
2019	5,119	1,068	382	6,569	1,000	0	218	0	0	31	2500	3,749	2,821	
2020	5,232	1,091	391	6,714	1,022	0	214	0	0	0	0	1,235	5,478	
2021	5,347	1,115	399	6,861	1,044	0	210	0	0	0	0	1,254	5,608	
2022	5,464	1,140	408	7,012	1,067	0	206	0	0	0	0	1,273	5,740	
2023	5,585	1,165	417	7,167	1,091	0	202	0	0	0	0	1,292	5,874	
2024	5,707	1,190	426	7,324	1,115	0	198	0	0	0	0	1,312	6,012	
2025	5,833	1,217	436	7,485	1,139	0	194	0	0	0	0	1,333	6,152	
2026	5,961	1,243	445	7,650	1,164	0	190	0	0	0	0	1,354	6,296	
2027	6,093	1,271	455	7,818	1,190	0	187	0	0	0	0	1,376	6,442	
2028	6,227	1,299	465	7,990	1,216	0	183	0	0	0	0	1,399	6,591	
2029	6,364	1,327	475	8,166	1,243	0	180	0	0	0	0	1,422	6,744	
2030	6,504	1,356	486	8,346	1,270	0	176	0	0	0	0	1,446	6,899	
2031	6,647	1,386	497	8,529	1,298	0	173	0	0	0	0	1,471	7,058	
2032	6,793	1,417	507	8,717	1,327	0	170	0	41	1500	0	3,037	5,680	
2033	6,942	1,448	519	8,909	1,356	0	167	0	0	0	0	1,522	7,387	
2034	7,095	1,480	530	9,105	1,386	0	163	0	0	0	0	1,549	7,556	
2035	7,251	1,512	542	9,305	1,416	0	160	0	0	0	0	1,577	7,729	
2036	7,411	1,546	554	9,510	1,447	0	157	0	0	0	0	1,605	7,905	
2037	7,574	1,580	566	9,719	1,479	0	155	0	0	0	0	1,634	8,086	
2038	7,740	1,614	578	9,933	1,512	0	152	0	0	0	0	1,663	8,270	
NOMINAL	126,887	26,465	9,479	162,832	24,780	0	3,653	0	72	4,000	0	32,505	130,327	
NPV:	73,074	15,241	5,459	93,774	14,271	0	2,277	0	50	3,190	0	19,787	73,987	
Discount rate:	0.0616													
	Total PV of Benefits			93,774	Total PV of Costs							19,787		
					G-RIM							4,739		

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - ENERGY STAR Water Heater
Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 4,644 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 3 Units/Year
- (5) Average Number of Participants per Year 3 Participants/Year
- (6) Avoided annual kWh per Appliance 136,114 kWh
- (6)a Avoided demand kW per Appliance 31,076 kW
- (7) Avoided annual Therms per Appliance 755 Therms/Year
- (8) Incentive payment per Appliance 1,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - ENERGY STAR Water Heater Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	751.313
(2) Gas-Rate Impact Measure Test (G-RIM)	1,212

Year	Participant Cost Test (PCT) (Load Reduction) Program: Commercial - ENERGY STAR Water Heater										
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
	Benefits				Costs						
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	3,864	163	0	1,500	0	5,527	50	0	0	50	5,477
2020	3,949	166	0	0	0	4,115	0	0	0	0	4,115
2021	4,036	170	0	0	0	4,206	0	0	0	0	4,206
2022	4,125	173	0	0	0	4,298	0	0	0	0	4,298
2023	4,215	177	0	0	0	4,393	0	0	0	0	4,393
2024	4,308	181	0	0	0	4,489	0	0	0	0	4,489
2025	4,403	185	0	0	0	4,588	0	0	0	0	4,588
2026	4,500	189	0	0	0	4,689	0	0	0	0	4,689
2027	4,599	193	0	0	0	4,792	0	0	0	0	4,792
2028	4,700	198	0	0	0	4,898	0	0	0	0	4,898
2029	4,803	202	0	0	0	5,005	0	0	0	0	5,005
2030	4,909	206	0	0	0	5,116	0	0	0	0	5,116
2031	5,017	211	0	0	0	5,228	0	0	0	0	5,228
2032	5,127	216	0	0	0	5,343	0	0	0	0	5,343
2033	5,240	220	0	1,500	0	6,961	68	0	0	68	6,893
2034	5,356	225	0	0	0	5,581	0	0	0	0	5,581
2035	5,473	230	0	0	0	5,704	0	0	0	0	5,704
2036	5,594	235	0	0	0	5,829	0	0	0	0	5,829
2037	5,717	240	0	0	0	5,957	0	0	0	0	5,957
2038	5,843	246	0	0	0	6,088	0	0	0	0	6,088
Nominal	95,779		0	3,000	0	102,807	118	0	0	118	
NPV:	55,158		0	2,150	0	59,628	79	0	0	79	
Discount rate:		0.0616									
			Total PV of Benefits		59,628			Total PV of Costs		79	
								PCT		751.313	

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Gas - Rate Impact Measure Test (G-RIM)
Program: Commercial - ENERGY STAR Water Heater

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	779	163	382	0	0	0	0	1,324	779	163	1500	31	2,442	(1,115)	
2020	796	166	391	0	0	0	0	1,353	796	166	0	0	962	391	
2021	814	170	399	0	0	0	0	1,383	814	170	0	0	984	399	
2022	832	173	408	0	0	0	0	1,413	832	173	0	0	1,005	408	
2023	850	177	417	0	0	0	0	1,445	850	177	0	0	1,027	417	
2024	869	181	426	0	0	0	0	1,476	869	181	0	0	1,050	426	
2025	888	185	436	0	0	0	0	1,509	888	185	0	0	1,073	436	
2026	907	189	445	0	0	0	0	1,542	907	189	0	0	1,097	445	
2027	927	193	455	0	0	0	0	1,576	927	193	0	0	1,121	455	
2028	948	198	465	0	0	0	0	1,611	948	198	0	0	1,145	465	
2029	969	202	475	0	0	0	0	1,646	969	202	0	0	1,171	475	
2030	990	206	486	0	0	0	0	1,682	990	206	0	0	1,196	486	
2031	1,012	211	497	0	0	0	0	1,719	1,012	211	0	0	1,223	497	
2032	1,034	216	507	0	0	0	0	1,757	1,034	216	0	0	1,250	507	
2033	1,057	220	519	0	0	0	0	1,796	1,057	220	1500	42	2,777	(981)	
2034	1,080	225	530	0	0	0	0	1,835	1,080	225	0	0	1,305	530	
2035	1,104	230	542	0	0	0	0	1,876	1,104	230	0	0	1,334	542	
2036	1,128	235	554	0	0	0	0	1,917	1,128	235	0	0	1,363	554	
2037	1,153	240	566	0	0	0	0	1,959	1,153	240	0	0	1,393	566	
2038	1,178	246	578	0	0	0	0	2,002	1,178	246	0	0	1,424	578	
NOMINAL	19,314	4,028		0	0	0	0	32,822	19,314	4,028	3,000		26,343	6,479	
NPV:	11,123	2,320		0	0	0	0	18,902	11,123	2,320	2,150		15,693	3,310	
Discount rate:		0.0616													
								Total PV of Benefits				Total PV of Costs			
								18,902				G-RIM		1,212	

Program: Commercial Fryer Program

Program Start Date: January 2014

Program Description

The Commercial Fryer Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 519.766 Therms

Program Costs

Rebate:

Gas Retrofit: \$3,500 per qualifying natural gas fryer.

Gas Replacement: Up to \$3,000 per qualifying natural gas fryer.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL FRYER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	519.766	12,452.755
2020	519.766	12,514.172
2021	519.766	13,095.913
2022	519.766	13,672.922
2023	519.766	13,726.571
2024	519.766	14,297.742
2025	519.766	14,877.901
2026	519.766	14,944.792
2027	519.766	15,540.285
2028	519.766	16,144.585

PROGRAM NAME: COMMERCIAL FRYER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	24	0.1%	24
2020	39,271	39,271	24	0.1%	48
2021	40,315	40,315	25	0.2%	73
2022	41,352	41,352	26	0.2%	100
2023	42,383	42,383	26	0.3%	126
2024	43,408	43,408	28	0.4%	153
2025	44,448	44,448	29	0.4%	182
2026	45,503	45,503	29	0.5%	211
2027	46,573	46,573	30	0.5%	241
2028	47,660	47,660	31	0.6%	272

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INPUT DATA - PART 1
Commercial - Fryer
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 5,507 Therms
- (3) Program peak consumption per installed Appliance:
 - Summer 0 Therms
 - Winter 0 Therms
- (4) Appliances Installed per Program 3 Units/Year
- (5) Average Number of Participants per Year 3 Participants/Year
- (6) Avoided annual kWh per Appliance 69,857 kWh
- (6)a Avoided demand kW per Appliance 13,291 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 3,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 - Gas and Pipeline 2.00 %
 - Capital 2.00 %
 - O&M 2.20 %

Commercial - Fryer Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.289
(2) Gas-Rate Impact Measure Test (G-RIM)	4.533

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Fryer

Year	Benefits				Costs				Net Benefits	Total Costs	Net Benefits			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)				(9)	(10)	(11)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	1,861	0	3,500	0	5,361	-450	0	0	1,266	6,070	382	7,269	(1,908)	
2020	1,902	0	0	0	1,902	0	0	0	1,294	6,204	391	7,889	(5,987)	
2021	1,944	0	0	0	1,944	0	0	0	1,322	6,340	399	8,062	(6,119)	
2022	1,986	0	0	0	1,986	0	0	0	1,352	6,480	408	8,240	(6,253)	
2023	2,030	0	0	0	2,030	0	0	0	1,381	6,622	417	8,421	(6,391)	
2024	2,075	0	0	0	2,075	0	0	0	1,412	6,768	426	8,606	(6,532)	
2025	2,120	0	0	0	2,120	0	0	0	1,443	6,917	436	8,796	(6,675)	
2026	2,167	0	0	0	2,167	0	0	0	1,474	7,069	445	8,989	(6,822)	
2027	2,215	0	0	0	2,215	0	0	0	1,507	7,225	455	9,187	(6,972)	
2028	2,263	0	0	0	2,263	0	0	0	1,540	7,384	465	9,389	(7,126)	
2029	2,313	0	0	0	2,313	0	0	0	1,574	7,546	475	9,595	(7,282)	
2030	2,364	0	3,000	0	5,364	-572	0	0	1,609	7,712	486	9,235	(3,871)	
2031	2,416	0	0	0	2,416	0	0	0	1,644	7,882	497	10,022	(7,606)	
2032	2,469	0	0	0	2,469	0	0	0	1,680	8,055	507	10,243	(7,774)	
2033	2,524	0	0	0	2,524	0	0	0	1,717	8,232	519	10,468	(7,945)	
2034	2,579	0	0	0	2,579	0	0	0	1,755	8,414	530	10,698	(8,119)	
2035	2,636	0	0	0	2,636	0	0	0	1,793	8,599	542	10,934	(8,298)	
2036	2,694	0	0	0	2,694	0	0	0	1,833	8,788	554	11,174	(8,481)	
2037	2,753	0	0	0	2,753	0	0	0	1,873	8,981	566	11,420	(8,667)	
2038	2,814	0	0	0	2,814	0	0	0	1,914	9,179	578	11,671	(8,858)	
Nominal	46,124	0	6,500	0	52,624	-1,022	0	0	31,383	150,468	9,479	190,309		
NPV:	26,562	0	5,054	0	31,617	-746	0	0	18,074	86,653	5,459	109,440		
Discount rate:	0.0616													
	Total PV of Benefits				31,617	Total PV of Costs				109,440	PCT			0.289

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Commercial - Fryer

YEAR	Benefits			Costs							Rebate/ Incentive	Admin	Total Cost	Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Total PV of Costs				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)			
2019	6,070	1,266	382	7,719	1,186	0	218	0	31	3500	4,934	2,785		
2020	6,204	1,294	391	7,889	1,212	0	214	0	0	0	1,425	6,463		
2021	6,340	1,322	399	8,062	1,238	0	210	0	0	0	1,448	6,614		
2022	6,480	1,352	408	8,240	1,265	0	206	0	0	0	1,471	6,769		
2023	6,622	1,381	417	8,421	1,293	0	202	0	0	0	1,495	6,926		
2024	6,768	1,412	426	8,606	1,322	0	198	0	0	0	1,519	7,087		
2025	6,917	1,443	436	8,796	1,351	0	194	0	0	0	1,545	7,251		
2026	7,069	1,474	445	8,989	1,381	0	190	0	0	0	1,571	7,418		
2027	7,225	1,507	455	9,187	1,411	0	187	0	0	0	1,598	7,589		
2028	7,384	1,540	465	9,389	1,442	0	183	0	0	0	1,625	7,764		
2029	7,546	1,574	475	9,595	1,474	0	180	0	0	0	1,653	7,942		
2030	7,712	1,609	486	9,807	1,506	0	176	0	39	3000	4,722	5,085		
2031	7,882	1,644	497	10,022	1,539	0	173	0	0	0	1,712	8,310		
2032	8,055	1,680	507	10,243	1,573	0	170	0	0	0	1,743	8,500		
2033	8,232	1,717	519	10,468	1,608	0	167	0	0	0	1,774	8,694		
2034	8,414	1,755	530	10,698	1,643	0	163	0	0	0	1,807	8,892		
2035	8,599	1,793	542	10,934	1,679	0	160	0	0	0	1,840	9,094		
2036	8,788	1,833	554	11,174	1,716	0	157	0	0	0	1,874	9,301		
2037	8,981	1,873	566	11,420	1,754	0	155	0	0	0	1,908	9,512		
2038	9,179	1,914	578	11,671	1,793	0	152	0	0	0	1,944	9,727		
NOMINAL	150,468	31,383	9,479	191,331	29,385	0	3,653	0	70	6,500	39,608	151,722		
NPV:	86,653	18,074	5,459	110,186	16,923	0	2,277	0	51	5,054	24,306	85,880		
Discount rate:	0.0616			Total PV of Benefits								Total PV of Costs		
				110,186								24,306	4,533	
												G-RIM		

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INPUT DATA - PART 1
Commercial - Fryer
Load Reduction

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 5,507 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 26 Units/Year
- (5) Average Number of Participants per Year 26 Participants/Year
- (6) Avoided annual kWh per Appliance 69,857 kWh
- (6)a Avoided demand kW per Appliance 13,291 kW
- (7) Avoided annual Therms per Appliance 636 Therms/Year
- (8) Incentive payment per Appliance 3,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Commercial - Fryer Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	212.020
(2) Gas-Rate Impact Measure Test (G-RIM)	1.057

Participant Cost Test (PCT) (Load Reduction)											
Program: Commercial - Fryer											
Year	Benefits				Costs				Total Costs	Net Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	2,007	137	0	3,000	0	5,144	100	0	0	100	5,044
2020	2,051	140	0	0	0	2,191	0	0	0	0	2,191
2021	2,096	143	0	0	0	2,239	0	0	0	0	2,239
2022	2,142	146	0	0	0	2,289	0	0	0	0	2,289
2023	2,190	149	0	0	0	2,339	0	0	0	0	2,339
2024	2,238	153	0	0	0	2,390	0	0	0	0	2,390
2025	2,287	156	0	0	0	2,443	0	0	0	0	2,443
2026	2,337	159	0	0	0	2,497	0	0	0	0	2,497
2027	2,389	163	0	0	0	2,552	0	0	0	0	2,552
2028	2,441	167	0	0	0	2,608	0	0	0	0	2,608
2029	2,495	170	0	0	0	2,665	0	0	0	0	2,665
2030	2,550	174	0	3,000	0	5,724	127	0	0	127	5,597
2031	2,606	178	0	0	0	2,784	0	0	0	0	2,784
2032	2,663	182	0	0	0	2,845	0	0	0	0	2,845
2033	2,722	186	0	0	0	2,907	0	0	0	0	2,907
2034	2,782	190	0	0	0	2,971	0	0	0	0	2,971
2035	2,843	194	0	0	0	3,037	0	0	0	0	3,037
2036	2,905	198	0	0	0	3,104	0	0	0	0	3,104
2037	2,969	203	0	0	0	3,172	0	0	0	0	3,172
2038	3,035	207	0	0	0	3,242	0	0	0	0	3,242
Nominal	49,748		0	6,000	0	59,142	227	0	0	227	
NPV:	28,650		0	4,554	0	35,158	166	0	0	166	
Discount rate:		0.0616									
			Total PV of Benefits		35,158			Total PV of Costs		166	
								PCT		212,020	

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	656	137	382	0	0	0	0	1,176	656	137	3000	31	3,793	(2,618)	
2020	671	140	391	0	0	0	0	1,202	671	140	0	0	811	391	
2021	686	143	399	0	0	0	0	1,228	686	143	0	0	829	399	
2022	701	146	408	0	0	0	0	1,255	701	146	0	0	847	408	
2023	716	149	417	0	0	0	0	1,283	716	149	0	0	865	417	
2024	732	153	426	0	0	0	0	1,311	732	153	0	0	884	426	
2025	748	156	436	0	0	0	0	1,340	748	156	0	0	904	436	
2026	764	159	445	0	0	0	0	1,369	764	159	0	0	924	445	
2027	781	163	455	0	0	0	0	1,399	781	163	0	0	944	455	
2028	798	167	465	0	0	0	0	1,430	798	167	0	0	965	465	
2029	816	170	475	0	0	0	0	1,462	816	170	0	0	986	475	
2030	834	174	486	0	0	0	0	1,494	834	174	3000	39	4,008	(2,514)	
2031	852	178	497	0	0	0	0	1,527	852	178	0	0	1,030	497	
2032	871	182	507	0	0	0	0	1,560	871	182	0	0	1,053	507	
2033	890	186	519	0	0	0	0	1,594	890	186	0	0	1,076	519	
2034	910	190	530	0	0	0	0	1,630	910	190	0	0	1,100	530	
2035	930	194	542	0	0	0	0	1,665	930	194	0	0	1,124	542	
2036	950	198	554	0	0	0	0	1,702	950	198	0	0	1,148	554	
2037	971	203	566	0	0	0	0	1,740	971	203	0	0	1,174	566	
2038	993	207	578	0	0	0	0	1,778	993	207	0	0	1,200	578	
NOMINAL	16,270	3,394		0	0	0	0	29,143	16,270	3,394	6,000		25,664	3,479	
NPV:	9,370	1,954		0	0	0	0	16,783	9,370	1,954	4,554		15,879	905	
Discount rate:	0.0616														
	Total PV of Benefits												Total PV of Costs		
													G-RIM		
													1,057		

Program: Commercial Gas Space Conditioning Program

Program Start Date: October 1990

Program Description

The Commercial Space Conditioning Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 924.053 Therms

Program Costs

Rebate:

Gas Retrofit: \$500 per ton of installed qualifying air conditioning equipment.

Gas Replacement: \$150 per ton of installed qualifying air conditioning equipment.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL GAS SPACE CONDITIONING

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	924.053	0.000
2020	924.053	0.000
2021	924.053	0.000
2022	924.053	0.000
2023	924.053	0.000
2024	924.053	0.000
2025	924.053	0.000
2026	924.053	0.000
2027	924.053	0.000
2028	924.053	0.000

PROGRAM NAME: COMMERCIAL GAS SPACE CONDITIONING

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level %	Cumulative Number of Program Participants
2019	38,226	38,226	0	0.0%	0
2020	39,271	39,271	0	0.0%	0
2021	40,315	40,315	0	0.0%	0
2022	41,352	41,352	0	0.0%	0
2023	42,383	42,383	0	0.0%	0
2024	43,408	43,408	0	0.0%	0
2025	44,448	44,448	0	0.0%	0
2026	45,503	45,503	0	0.0%	0
2027	46,573	46,573	0	0.0%	0
2028	47,660	47,660	0	0.0%	0

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Gas Space Conditioning
Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 7,019 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 73,333 kWh
- (6)a Avoided demand kW per Appliance 20,928 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 10,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - Gas Space Conditioning Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.170
(2) Gas-Rate Impact Measure Test (G-RIM)	3.793

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Gas Space Conditioning

Year	Benefits			Costs							Total Costs	Net Benefits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	2,041	0	10,000	0	12,041	40,800	0	1,614	7,737	382	50,533	(38,492)
2020	2,086	0	0	0	2,086	0	0	1,649	7,907	391	9,947	(7,861)
2021	2,131	0	0	0	2,131	0	0	1,685	8,081	399	10,166	(8,034)
2022	2,178	0	0	0	2,178	0	0	1,723	8,259	408	10,389	(8,211)
2023	2,226	0	0	0	2,226	0	0	1,760	8,440	417	10,618	(8,392)
2024	2,275	0	0	0	2,275	0	0	1,799	8,626	426	10,852	(8,576)
2025	2,325	0	0	0	2,325	0	0	1,839	8,816	436	11,090	(8,765)
2026	2,376	0	0	0	2,376	0	0	1,879	9,010	445	11,334	(8,958)
2027	2,429	0	0	0	2,429	0	0	1,921	9,208	455	11,584	(9,155)
2028	2,482	0	3,000	0	5,482	80,279	0	1,963	9,411	465	92,117	(86,635)
2029	2,537	0	0	0	2,537	0	0	2,006	9,618	475	12,099	(9,562)
2030	2,593	0	0	0	2,593	0	0	2,050	9,829	486	12,365	(9,773)
2031	2,650	0	0	0	2,650	0	0	2,095	10,045	497	12,637	(9,988)
2032	2,708	0	0	0	2,708	0	0	2,141	10,266	507	12,915	(10,207)
2033	2,767	0	0	0	2,767	0	0	2,188	10,492	519	13,199	(10,432)
2034	2,828	0	0	0	2,828	0	0	2,237	10,723	530	13,490	(10,661)
2035	2,891	0	0	0	2,891	0	0	2,286	10,959	542	13,786	(10,896)
2036	2,954	0	0	0	2,954	0	0	2,336	11,200	554	14,080	(11,136)
2037	3,019	0	0	0	3,019	0	0	2,387	11,446	566	14,400	(11,381)
2038	3,086	0	3,000	0	6,086	61,692	0	2,440	11,698	578	76,408	(70,323)
Nominal	50,582	0	16,000	0	66,582	182,771	0	39,988	191,771	9,479	424,019	
NPV:	29,130	0	12,715	0	41,845	107,490	0	23,035	110,440	5,459	246,424	
Discount rate:		0.0616										
				Total PV of Benefits	41,845					Total PV of Costs	246,424	
										PCT	0.170	

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits			Costs									Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	7,737	1,614	382	9,733	1,511	0	218	0	0	31	11,760	(2,027)	
2020	7,907	1,649	391	9,947	1,544	0	214	0	0	0	1,758	8,189	
2021	8,081	1,685	399	10,166	1,578	0	210	0	0	0	1,788	8,378	
2022	8,259	1,723	408	10,389	1,613	0	206	0	0	0	1,818	8,571	
2023	8,440	1,760	417	10,618	1,648	0	202	0	0	0	1,850	8,768	
2024	8,626	1,799	426	10,852	1,685	0	198	0	0	0	1,882	8,969	
2025	8,816	1,839	436	11,090	1,722	0	194	0	0	0	1,916	9,175	
2026	9,010	1,879	445	11,334	1,760	0	190	0	0	0	1,950	9,385	
2027	9,208	1,921	455	11,584	1,798	0	187	0	0	0	1,985	9,599	
2028	9,411	1,963	465	11,838	1,838	0	183	0	38	3,000	5,059	6,780	
2029	9,618	2,006	475	12,099	1,878	0	180	0	0	0	2,058	10,041	
2030	9,829	2,050	486	12,365	1,920	0	176	0	0	0	2,096	10,269	
2031	10,045	2,095	497	12,637	1,962	0	173	0	0	0	2,135	10,502	
2032	10,266	2,141	507	12,915	2,005	0	170	0	0	0	2,175	10,740	
2033	10,492	2,188	519	13,199	2,049	0	167	0	0	0	2,216	10,984	
2034	10,723	2,237	530	13,490	2,094	0	163	0	0	0	2,258	11,232	
2035	10,959	2,286	542	13,786	2,140	0	160	0	0	0	2,301	11,486	
2036	11,200	2,336	554	14,090	2,187	0	157	0	0	0	2,345	11,745	
2037	11,446	2,387	566	14,400	2,235	0	155	0	0	0	2,390	12,010	
2038	11,698	2,440	578	14,716	2,285	0	152	0	47	3,000	5,483	9,233	
NOMINAL	191,771	39,998	9,479	241,249	37,452	0	3,653	0	115	16,000	57,220	184,029	
NPV:	110,440	23,035	5,459	138,933	21,568	0	2,277	0	68	12,715	36,628	102,305	
Discount rate:				0.0616									
	Total PV of Benefits			138,933	Total PV of Costs							36,628	
					G-RIM							3,793	

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Gas Space Conditioning Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 7,019 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 20 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 73,333 kWh
- (6)a Avoided demand kW per Appliance 20.928 kW
- (7) Avoided annual Therms per Appliance 781 Therms/Year
- (8) Incentive payment per Appliance 3,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
2.20 %

Commercial - Gas Space Conditioning Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	1.333
(2) Gas-Rate Impact Measure Test (G-RIM)	0.987

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)	
												Admin Cost	Total Cost			
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits		
2019	806	168	382	0	0	0	0	1,357	806	168	3000	31	3,974	(2,618)		
2020	824	172	391	0	0	0	0	1,386	824	172	0	0	996	391		
2021	842	176	399	0	0	0	0	1,417	842	176	0	0	1,018	399		
2022	860	179	408	0	0	0	0	1,448	860	179	0	0	1,040	408		
2023	879	183	417	0	0	0	0	1,480	879	183	0	0	1,063	417		
2024	899	187	426	0	0	0	0	1,513	899	187	0	0	1,086	426		
2025	918	192	436	0	0	0	0	1,546	918	192	0	0	1,110	436		
2026	939	196	445	0	0	0	0	1,580	939	196	0	0	1,134	445		
2027	959	200	455	0	0	0	0	1,615	959	200	0	0	1,159	455		
2028	980	204	465	0	0	0	0	1,650	980	204	3000	38	4,185	(2,535)		
2029	1,002	209	475	0	0	0	0	1,686	1,002	209	0	0	1,211	475		
2030	1,024	214	486	0	0	0	0	1,723	1,024	214	0	0	1,238	486		
2031	1,047	218	497	0	0	0	0	1,761	1,047	218	0	0	1,265	497		
2032	1,070	223	507	0	0	0	0	1,800	1,070	223	0	0	1,293	507		
2033	1,093	228	519	0	0	0	0	1,840	1,093	228	0	0	1,321	519		
2034	1,117	233	530	0	0	0	0	1,880	1,117	233	0	0	1,350	530		
2035	1,142	238	542	0	0	0	0	1,922	1,142	238	0	0	1,380	542		
2036	1,167	243	554	0	0	0	0	1,964	1,167	243	0	0	1,410	554		
2037	1,193	249	566	0	0	0	0	2,007	1,193	249	0	0	1,441	566		
2038	1,219	254	578	0	0	0	0	2,051	1,219	254	3000	47	4,473	(2,422)		
NOMINAL	19,980	4,167		0	0	0	0	33,626	19,980	4,167	9,000		33,147	479		
NPV:	11,506	2,400		0	0	0	0	19,365	11,506	2,400	5,715		19,621	-256		
Discount rate:	0.0616															
	Total PV of Benefits												Total PV of Costs			
	19,365												19,621		G-RIM	0.987

Program: Commercial New Construction Program

Program Start Date: October 2006

Program Description

The Commercial New Construction Program is designed to encourage builders and developers to construct commercial and industrial facilities with the installation of energy efficient natural gas equipment to help reduce the new customer's energy consumption and conserve energy resources. The rebates offered to builders and developers under this program are designed to assist in defraying the added cost of gas piping and venting. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 484.781 Therms

Program Costs

Rebate:

\$2,500 per qualifying natural gas dryer system.

\$2,500 per qualifying natural gas ENERGY STAR tank water heating system.

\$3,500 per qualifying natural gas fryer system.

\$500 per qualifying ton of natural gas space conditioning system.

\$2,000 per qualifying natural gas range/cooktop system.

\$3,500 per qualifying natural gas tankless water heating system.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL NEW CONSTRUCTION

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	484.781	43,145.509
2020	484.781	45,569.414
2021	484.781	46,538.976
2022	484.781	48,478.100
2023	484.781	49,932.443
2024	484.781	50,902.005
2025	484.781	52,841.129
2026	484.781	54,295.472
2027	484.781	55,265.034
2028	484.781	56,234.596

PROGRAM NAME: COMMERCIAL NEW CONSTRUCTION

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	89	0.2%	89
2020	39,271	39,271	94	0.5%	183
2021	40,315	40,315	96	0.7%	279
2022	41,352	41,352	100	0.9%	379
2023	42,383	42,383	103	1.1%	482
2024	43,408	43,408	105	1.4%	587
2025	44,448	44,448	109	1.6%	696
2026	45,503	45,503	112	1.8%	808
2027	46,573	46,573	114	2.0%	922
2028	47,660	47,660	116	2.2%	1,038

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INPUT DATA - PART 1
Commercial - New Construction
Load Building

PROGRAM TITLE:

(1) Life of Program 20 Years

(2) Average therms consumed by Appliance (s) 4,807 Therms

(3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms

(4) Appliances Installed per Program 171 Units/Year

(5) Average Number of Participants per Year 110 Participants/Year

(6) Avoided annual kWh per Appliance 106,258 kWh
 (6)a Avoided demand kW per Appliance 20.216 kW

(7) Avoided annual Therms per Appliance 0 Therms/Year

(8) Incentive payment per Appliance 2,266 \$

(9) Other Costs not identified in C.B. Forms

(10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - New Construction Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.375
(2) Gas-Rate Impact Measure Test (G-RIM)	4.114

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - New Construction

Year	Benefits					Costs					Net Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)		(11)
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	2,830	0	2,266	0	5,097	2,110	0	1,105	5,299	1,912	10,426	(5,329)
2020	2,893	0	0	0	2,893	0	0	1,129	5,415	1,954	8,499	(5,606)
2021	2,956	0	0	0	2,956	0	0	1,154	5,534	1,997	8,686	(5,729)
2022	3,021	0	0	0	3,021	0	0	1,180	5,656	2,041	8,877	(5,855)
2023	3,088	0	0	0	3,088	0	0	1,206	5,780	2,086	9,072	(5,984)
2024	3,156	0	0	0	3,156	0	0	1,232	5,908	2,132	9,272	(6,116)
2025	3,225	0	0	0	3,225	0	0	1,259	6,038	2,179	9,476	(6,250)
2026	3,296	0	0	0	3,296	0	0	1,287	6,170	2,227	9,684	(6,388)
2027	3,369	0	0	0	3,369	0	0	1,315	6,306	2,276	9,897	(6,529)
2028	3,443	0	0	0	3,443	0	0	1,344	6,445	2,326	10,115	(6,672)
2029	3,518	0	0	0	3,518	0	0	1,374	6,587	2,377	10,337	(6,819)
2030	3,596	0	3,500	0	7,096	0	0	1,404	6,732	2,429	10,565	(3,469)
2031	3,675	0	0	0	3,675	0	0	1,435	6,880	2,483	10,797	(7,122)
2032	3,756	0	0	0	3,756	0	0	1,466	7,031	2,537	11,035	(7,279)
2033	3,838	0	0	0	3,838	0	0	1,499	7,186	2,593	11,278	(7,439)
2034	3,923	0	0	0	3,923	0	0	1,532	7,344	2,650	11,526	(7,603)
2035	4,009	0	0	0	4,009	0	0	1,565	7,505	2,709	11,779	(7,770)
2036	4,097	0	0	0	4,097	0	0	1,600	7,670	2,768	12,038	(7,941)
2037	4,188	0	0	0	4,188	0	0	1,635	7,839	2,829	12,303	(8,116)
2038	4,280	0	2,500	0	6,780	0	0	1,671	8,012	2,891	12,574	(5,794)
Nominal	70,157	0	8,266	0	78,424	2,110	0	27,393	131,335	47,397	208,235	
NPV:	40,403	0	4,883	0	45,286	2,110	0	15,775	75,635	27,295	120,816	
Discount rate:		0.0616										
				Total PV of Benefits	45,286					Total PV of Costs	120,816	
										PCT	0.375	

YEAR	Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)												
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	
	Benefits			Costs									Net Benefits
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	Net Benefits	
2019	5,299	1,105	1,912	8,316	1,035	0	872	0	31	2266	4,204	4,112	
2020	5,415	1,129	1,954	8,499	1,058	0	855	0	0	0	1,912	6,586	
2021	5,534	1,154	1,997	8,686	1,081	0	838	0	0	0	1,919	6,766	
2022	5,656	1,180	2,041	8,877	1,105	0	822	0	0	0	1,927	6,950	
2023	5,780	1,206	2,086	9,072	1,129	0	807	0	0	0	1,935	7,137	
2024	5,908	1,232	2,132	9,272	1,154	0	791	0	0	0	1,945	7,327	
2025	6,038	1,259	2,179	9,476	1,179	0	776	0	0	0	1,955	7,520	
2026	6,170	1,287	2,227	9,684	1,205	0	761	0	0	0	1,966	7,718	
2027	6,306	1,315	2,276	9,897	1,232	0	747	0	0	0	1,979	7,919	
2028	6,445	1,344	2,326	10,115	1,259	0	733	0	0	0	1,991	8,123	
2029	6,587	1,374	2,377	10,337	1,286	0	719	0	0	0	2,005	8,332	
2030	6,732	1,404	2,429	10,565	1,315	0	705	0	80	3500	5,600	4,964	
2031	6,880	1,435	2,483	10,797	1,344	0	692	0	0	0	2,036	8,762	
2032	7,031	1,466	2,537	11,035	1,373	0	679	0	0	0	2,052	8,983	
2033	7,186	1,499	2,593	11,278	1,403	0	666	0	0	0	2,070	9,208	
2034	7,344	1,532	2,650	11,526	1,434	0	654	0	0	0	2,088	9,437	
2035	7,505	1,565	2,709	11,779	1,466	0	642	0	0	0	2,108	9,672	
2036	7,670	1,600	2,768	12,038	1,498	0	630	0	0	0	2,128	9,910	
2037	7,839	1,635	2,829	12,303	1,531	0	618	0	0	0	2,149	10,154	
2038	8,012	1,671	2,891	12,574	1,565	0	607	0	47	2500	4,718	7,856	
NOMINAL	131,335	27,393	47,397	206,125	25,649	0	14,616	0	158	8,266	48,689	157,436	
NPV:	75,635	15,775	27,295	118,706	14,771	0	9,111	0	88	4,883	28,853	89,854	
Discount rate:	0.0616			Total PV of Benefits	Total PV of Costs								G-RIM
				118,706	28,853								4,114

Program: Commercial Range/Cooktop Program

Program Start Date: January 2014

Program Description

The Commercial Range/Cooktop Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 88.589 Therms

Program Costs

Rebate:

Retrofit: \$2,000 per qualifying natural gas range/cooktop.

Replacement: Up to \$1,500 per qualifying natural gas range/cooktop.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL RANGE/COOKTOP

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	88.589	952.618
2020	88.589	990.716
2021	88.589	1,028.852
2022	88.589	1,066.677
2023	88.589	1,104.267
2024	88.589	1,141.709
2025	88.589	1,179.741
2026	88.589	1,218.198
2027	88.589	1,257.235
2028	88.589	1,296.849

PROGRAM NAME: COMMERCIAL RANGE/COOKTOP

	(a)	(b)	(c)	(d)	(e)
Year	Total Number of Customers	Total Number of Eligible Customers	Annual Number of Program Participants	Cumulative Penetration Level %	Cumulative Number of Program Participants
2019	38,226	38,226	11	0.0%	11
2020	39,271	39,271	11	0.1%	22
2021	40,315	40,315	12	0.1%	34
2022	41,352	41,352	12	0.1%	46
2023	42,383	42,383	12	0.1%	58
2024	43,408	43,408	13	0.2%	71
2025	44,448	44,448	13	0.2%	84
2026	45,503	45,503	14	0.2%	98
2027	46,573	46,573	14	0.2%	112
2028	47,660	47,660	15	0.3%	127

INPUT DATA - PART 1
Commercial - Range/Cooktop
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 6,866 Therms
- (3) Program peak consumption per installed Appliance:
 - Summer 0 Therms
 - Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 107,318 kWh
- (6)a Avoided demand kW per Appliance 17.501 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 2,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 - Gas and Pipeline 2.00 %
 - Capital 2.00 %
 - O&M 2.20 %

Commercial - Range/Cooktop Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.334
(2) Gas-Rate Impact Measure Test (G-RIM)	5.191

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Range/Cooktop

Year	Benefits				Costs							Total Costs	Net Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)			(12)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits	
2019	2,822	0	2,000	0	4,822	-4,200	0	0	1,578	7,568	382	5,329	(506)	
2020	2,884	0	0	0	2,884	0	0	0	1,613	7,734	391	9,738	(6,854)	
2021	2,948	0	0	0	2,948	0	0	0	1,649	7,904	399	9,952	(7,005)	
2022	3,013	0	0	0	3,013	0	0	0	1,685	8,078	408	10,171	(7,159)	
2023	3,079	0	0	0	3,079	0	0	0	1,722	8,256	417	10,395	(7,316)	
2024	3,147	0	0	0	3,147	0	0	0	1,760	8,438	426	10,624	(7,477)	
2025	3,216	0	0	0	3,216	0	0	0	1,799	8,623	436	10,858	(7,642)	
2026	3,287	0	0	0	3,287	0	0	0	1,838	8,813	445	11,096	(7,810)	
2027	3,359	0	0	0	3,359	0	0	0	1,879	9,007	455	11,340	(7,982)	
2028	3,433	0	0	0	3,433	0	0	0	1,920	9,205	465	11,590	(8,157)	
2029	3,508	0	0	0	3,508	0	0	0	1,962	9,407	475	11,845	(8,337)	
2030	3,585	0	1,500	0	5,085	-5,336	0	0	2,005	9,614	486	6,770	(1,684)	
2031	3,664	0	0	0	3,664	0	0	0	2,049	9,826	497	12,372	(8,708)	
2032	3,745	0	0	0	3,745	0	0	0	2,095	10,042	507	12,644	(8,899)	
2033	3,827	0	0	0	3,827	0	0	0	2,141	10,263	519	12,922	(9,095)	
2034	3,911	0	0	0	3,911	0	0	0	2,188	10,489	530	13,207	(9,295)	
2035	3,998	0	0	0	3,998	0	0	0	2,236	10,720	542	13,497	(9,500)	
2036	4,085	0	0	0	4,085	0	0	0	2,285	10,955	554	13,794	(9,709)	
2037	4,175	0	0	0	4,175	0	0	0	2,335	11,196	566	14,097	(9,922)	
2038	4,267	0	0	0	4,267	0	0	0	2,387	11,443	578	14,408	(10,140)	
Nominal	69,953	0	3,500	0	73,453	-9,536	0	0	39,124	187,581	9,479	226,649		
NPV:	40,285	0	2,777	0	43,063	-6,965	0	0	22,531	108,027	5,459	129,053		
Discount rate:	0.0616													
	Total PV of Benefits				43,063	Total PV of Costs							129,053	
	PCT												0.334	

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Commercial - Range/Cooktop

YEAR	Benefits			Costs					Rebate/ Incentive	Total Cost	Net Benefits		
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer				Admin	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)		
2019	7,568	1,578	382	9,529	1,478	0	218	0	31	2000	3,727	5,802	
2020	7,734	1,613	391	9,738	1,510	0	214	0	0	0	1,724	8,014	
2021	7,904	1,649	399	9,952	1,544	0	210	0	0	0	1,753	8,199	
2022	8,078	1,685	408	10,171	1,578	0	206	0	0	0	1,783	8,388	
2023	8,256	1,722	417	10,395	1,612	0	202	0	0	0	1,814	8,581	
2024	8,438	1,760	426	10,624	1,648	0	198	0	0	0	1,846	8,778	
2025	8,623	1,799	436	10,858	1,684	0	194	0	0	0	1,878	8,980	
2026	8,813	1,838	445	11,096	1,721	0	190	0	0	0	1,911	9,185	
2027	9,007	1,879	455	11,340	1,759	0	187	0	0	0	1,946	9,395	
2028	9,205	1,920	465	11,590	1,798	0	183	0	0	0	1,981	9,609	
2029	9,407	1,962	475	11,845	1,837	0	180	0	0	0	2,017	9,828	
2030	9,614	2,005	486	12,106	1,878	0	176	0	39	1500	3,593	8,512	
2031	9,826	2,049	497	12,372	1,919	0	173	0	0	0	2,092	10,280	
2032	10,042	2,095	507	12,644	1,961	0	170	0	0	0	2,131	10,513	
2033	10,263	2,141	519	12,922	2,004	0	167	0	0	0	2,171	10,751	
2034	10,489	2,188	530	13,207	2,048	0	163	0	0	0	2,212	10,995	
2035	10,720	2,236	542	13,497	2,093	0	160	0	0	0	2,254	11,243	
2036	10,955	2,285	554	13,794	2,140	0	157	0	0	0	2,297	11,497	
2037	11,196	2,335	566	14,097	2,187	0	155	0	0	0	2,341	11,756	
2038	11,443	2,387	578	14,408	2,235	0	152	0	0	0	2,386	12,021	
NOMINAL	187,581	39,124	9,479	236,185	36,633	0	3,653	0	70	3,500	43,856	192,329	
NPV:	108,027	22,531	5,459	136,017	21,097	0	2,277	0	51	2,777	26,202	109,815	
Discount rate:				0.0616									
			Total PV of Benefits	136,017							Total PV of Costs	26,202	
												G-RIM	5,191

INPUT DATA - PART 1
Commercial - Range/Cooktop
Load Reduction

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 6,866 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 12 Units/Year
- (5) Average Number of Participants per Year 12 Participants/Year
- (6) Avoided annual kWh per Appliance 107,318 kWh
- (6)a Avoided demand kW per Appliance 17.501 kW
- (7) Avoided annual Therms per Appliance 686 Therms/Year
- (8) Incentive payment per Appliance 1,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline 2.00 %
 Capital 2.00 %
 O&M 2.20 %

Commercial - Range/Cooktop Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	-5.603
(2) Gas-Rate Impact Measure Test (G-RIM)	1.220

Participant Cost Test (PCT) (Load Reduction)											
Program: Commercial - Range/Cooktop											
Year	Benefits				Costs				Total Costs	Net Benefits	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)			(9)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	2,980	148	0	1,500	0	4,628	-5,050	0	0	-5,050	9,678
2020	3,045	151	0	0	0	3,196	0	0	0	0	3,196
2021	3,112	154	0	0	0	3,267	0	0	0	0	3,267
2022	3,181	158	0	0	0	3,339	0	0	0	0	3,339
2023	3,251	161	0	0	0	3,412	0	0	0	0	3,412
2024	3,322	165	0	0	0	3,487	0	0	0	0	3,487
2025	3,395	168	0	0	0	3,564	0	0	0	0	3,564
2026	3,470	172	0	0	0	3,642	0	0	0	0	3,642
2027	3,547	176	0	0	0	3,722	0	0	0	0	3,722
2028	3,625	180	0	0	0	3,804	0	0	0	0	3,804
2029	3,704	184	0	0	0	3,888	0	0	0	0	3,888
2030	3,786	188	0	1,500	0	5,473	-6,416	0	0	-6,416	11,889
2031	3,869	192	0	0	0	4,061	0	0	0	0	4,061
2032	3,954	196	0	0	0	4,150	0	0	0	0	4,150
2033	4,041	200	0	0	0	4,241	0	0	0	0	4,241
2034	4,130	205	0	0	0	4,335	0	0	0	0	4,335
2035	4,221	209	0	0	0	4,430	0	0	0	0	4,430
2036	4,314	214	0	0	0	4,528	0	0	0	0	4,528
2037	4,409	218	0	0	0	4,627	0	0	0	0	4,627
2038	4,506	223	0	0	0	4,729	0	0	0	0	4,729
Nominal	73,862		0	3,000	0	80,523	-11,466	0	0	-11,466	
NPV:	42,537		0	2,277	0	46,922	-8,374	0	0	-8,374	
Discount rate:		0.0616									
			Total PV of Benefits		46,922			Total PV of Costs		-8,374	
								PCT		-5,603	

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	708	148	382	0	0	0	0	1,238	708	148	1500	31	2,356	(1,115)	
2020	724	151	391	0	0	0	0	1,265	724	151	0	0	874	391	
2021	739	154	399	0	0	0	0	1,293	739	154	0	0	894	399	
2022	756	158	408	0	0	0	0	1,322	756	158	0	0	913	408	
2023	772	161	417	0	0	0	0	1,351	772	161	0	0	933	417	
2024	789	165	426	0	0	0	0	1,380	789	165	0	0	954	426	
2025	807	168	436	0	0	0	0	1,411	807	168	0	0	975	436	
2026	824	172	445	0	0	0	0	1,442	824	172	0	0	996	445	
2027	843	176	455	0	0	0	0	1,474	843	176	0	0	1,018	455	
2028	861	180	465	0	0	0	0	1,506	861	180	0	0	1,041	465	
2029	880	184	475	0	0	0	0	1,539	880	184	0	0	1,064	475	
2030	899	188	486	0	0	0	0	1,573	899	188	1500	39	2,587	(1,014)	
2031	919	192	497	0	0	0	0	1,608	919	192	0	0	1,111	497	
2032	939	196	507	0	0	0	0	1,643	939	196	0	0	1,135	507	
2033	960	200	519	0	0	0	0	1,679	960	200	0	0	1,160	519	
2034	981	205	530	0	0	0	0	1,716	981	205	0	0	1,186	530	
2035	1,003	209	542	0	0	0	0	1,754	1,003	209	0	0	1,212	542	
2036	1,025	214	554	0	0	0	0	1,792	1,025	214	0	0	1,239	554	
2037	1,047	218	566	0	0	0	0	1,832	1,047	218	0	0	1,266	566	
2038	1,071	223	578	0	0	0	0	1,872	1,071	223	0	0	1,294	578	
NOMINAL	17,549	3,660		0	0	0	0	30,689	17,549	3,660	3,000		24,210	6,479	
NPV:	10,107	2,108		0	0	0	0	17,674	10,107	2,108	2,277		14,492	3,182	
Discount rate:														0.0616	
													Total PV of Benefits	17,674	
													Total PV of Costs	14,492	
													G-RIM	1,220	

Program: Commercial Retrofit Program

Program Start Date: October 1990

Program Description

This Commercial Retrofit Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 0.000 Therms

Program Costs

Rebate: \$100 per kW reduction for qualifying natural gas equipment.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL RETROFIT

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	0.000	0.000
2020	0.000	0.000
2021	0.000	0.000
2022	0.000	0.000
2023	0.000	0.000
2024	0.000	0.000
2025	0.000	0.000
2026	0.000	0.000
2027	0.000	0.000
2028	0.000	0.000

PROGRAM NAME: COMMERCIAL RETROFIT

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	1	0.0%	1
2020	39,271	39,271	1	0.0%	2
2021	40,315	40,315	1	0.0%	3
2022	41,352	41,352	1	0.0%	4
2023	42,383	42,383	1	0.0%	5
2024	43,408	43,408	1	0.0%	6
2025	44,448	44,448	1	0.0%	7
2026	45,503	45,503	1	0.0%	8
2027	46,573	46,573	1	0.0%	9
2028	47,660	47,660	1	0.0%	10

INPUT DATA - PART 1
Commercial - Electric Resistance
Load Building

PROGRAM TITLE:

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 17,287 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 1 Units/Year
- (5) Average Number of Participants per Year 1 Participants/Year
- (6) Avoided annual kWh per Appliance 400,000 kWh
- (6)a Avoided demand kW per Appliance 10,000 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 1,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
2.20 %

Commercial - Electric Resistance Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.414
(2) Gas-Rate Impact Measure Test (G-RIM)	5.922

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Electric Resistance

Year	Benefits													Costs					Net Benefits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(1)	(2)	(3)	(4)	(5)	
Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits							
2019	9,828	0	1,000	0	10,828	7,500	0	3,974	19,055	382	30,912	(20,084)							
2020	10,044	0	0	0	10,044	0	0	4,062	19,474	391	23,927	(13,882)							
2021	10,265	0	0	0	10,265	0	0	4,151	19,902	399	24,453	(14,188)							
2022	10,491	0	0	0	10,491	0	0	4,242	20,340	408	24,991	(14,500)							
2023	10,722	0	0	0	10,722	0	0	4,336	20,788	417	25,541	(14,819)							
2024	10,958	0	0	0	10,958	0	0	4,431	21,245	426	26,103	(15,145)							
2025	11,199	0	0	0	11,199	0	0	4,529	21,712	436	26,677	(15,478)							
2026	11,445	0	0	0	11,445	0	0	4,628	22,190	445	27,264	(15,819)							
2027	11,697	0	0	0	11,697	0	0	4,730	22,678	455	27,864	(16,167)							
2028	11,954	0	0	0	11,954	0	0	4,834	23,177	465	28,477	(16,522)							
2029	12,217	0	0	0	12,217	0	0	4,940	23,687	475	29,103	(16,886)							
2030	12,486	0	0	0	12,486	0	0	5,049	24,208	486	29,743	(17,257)							
2031	12,761	0	0	0	12,761	0	0	5,160	24,741	497	30,398	(17,637)							
2032	13,041	0	0	0	13,041	0	0	5,274	25,285	507	31,066	(18,025)							
2033	13,328	0	0	0	13,328	0	0	5,390	25,841	519	31,750	(18,422)							
2034	13,621	0	0	0	13,621	0	0	5,508	26,410	530	32,448	(18,827)							
2035	13,921	0	0	0	13,921	0	0	5,630	26,991	542	33,162	(19,241)							
2036	14,227	0	0	0	14,227	0	0	5,753	27,585	554	33,892	(19,664)							
2037	14,540	0	0	0	14,540	0	0	5,880	28,192	566	34,637	(20,097)							
2038	14,860	0	0	0	14,860	0	0	6,009	28,812	578	35,399	(20,539)							
Nominal	243,606	0	1,000	0	244,606	7,500	0	98,512	472,314	9,479	587,806								
NPV:	140,291	0	1,000	0	141,291	7,500	0	56,732	272,003	5,459	341,694								
Discount rate:	0.0616													Total PV of Benefits	341,694	Total PV of Costs	341,694	PCT	0.414

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
 Program: Commercial - Electric Resistance

YEAR	Benefits												Costs					Net Benefits							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply		Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost	
2019	19,055	3,974	382	23,412	3,721	0	218	0	0	31	1000	4,970	19,474	4,062	391	23,927	3,803	0	214	0	0	0	4,017	18,441	
2020	19,474	4,062	391	23,927	3,803	0	210	0	0	0	0	4,096	19,902	4,151	399	24,453	3,887	0	206	0	0	0	4,178	19,910	
2021	19,902	4,151	399	24,453	3,887	0	206	0	0	0	0	4,178	20,340	4,242	408	24,991	3,972	0	202	0	0	0	4,261	20,813	
2022	20,340	4,242	408	24,991	3,972	0	198	0	0	0	0	4,347	20,788	4,336	417	25,541	4,060	0	194	0	0	0	4,434	21,279	
2023	20,788	4,336	417	25,541	4,060	0	194	0	0	0	0	4,524	21,245	4,431	426	26,103	4,149	0	187	0	0	0	4,616	21,756	
2024	21,245	4,431	426	26,103	4,149	0	187	0	0	0	0	4,709	21,712	4,529	436	26,677	4,240	0	180	0	0	0	4,806	22,243	
2025	21,712	4,529	436	26,677	4,240	0	183	0	0	0	0	4,904	22,190	4,628	445	27,264	4,334	0	176	0	0	0	4,904	22,740	
2026	22,190	4,628	445	27,264	4,334	0	176	0	0	0	0	5,005	22,678	4,730	455	27,864	4,429	0	170	0	0	0	5,108	23,248	
2027	22,678	4,730	455	27,864	4,429	0	180	0	0	0	0	5,213	23,177	4,834	465	28,477	4,526	0	167	0	0	0	5,321	23,767	
2028	23,177	4,834	465	28,477	4,526	0	173	0	0	0	0	5,432	23,687	4,940	475	29,103	4,626	0	163	0	0	0	5,545	24,297	
2029	23,687	4,940	475	29,103	4,626	0	170	0	0	0	0	5,660	24,208	5,049	486	29,743	4,728	0	157	0	0	0	5,778	24,839	
2030	24,208	5,049	486	29,743	4,728	0	155	0	0	0	0	5,880	24,741	5,160	497	30,398	4,832	0	152	0	0	0	5,999	25,393	
2031	24,741	5,160	497	30,398	4,832	0	152	0	0	0	0	6,009	25,285	5,274	507	31,066	4,938	0	152	0	0	0	6,118	25,959	
2032	25,285	5,274	507	31,066	4,938	0	152	0	0	0	0	6,227	25,841	5,390	519	31,750	5,047	0	152	0	0	0	6,336	26,537	
2033	25,841	5,390	519	31,750	5,047	0	152	0	0	0	0	6,448	26,410	5,508	530	32,448	5,158	0	152	0	0	0	6,563	27,127	
2034	26,410	5,508	530	32,448	5,158	0	152	0	0	0	0	6,660	26,991	5,630	542	33,162	5,271	0	152	0	0	0	6,775	27,731	
2035	26,991	5,630	542	33,162	5,271	0	152	0	0	0	0	6,877	27,585	5,753	554	33,892	5,387	0	152	0	0	0	6,991	28,347	
2036	27,585	5,753	554	33,892	5,387	0	152	0	0	0	0	7,100	28,192	5,880	566	34,637	5,506	0	152	0	0	0	7,214	28,977	
2037	28,192	5,880	566	34,637	5,506	0	152	0	0	0	0	7,323	28,812	6,009	578	35,399	5,627	0	152	0	0	0	7,437	29,621	
2038	28,812	6,009	578	35,399	5,627	0	152	0	0	0	0	7,546						0	152	0	0	0	7,660	30,273	
NOMINAL	472,314	98,512	9,479	580,306	92,240	0	3,653	0	31	1,000	96,923	483,382													
NPV:	272,003	56,732	5,459	334,194	53,120	0	2,277	0	31	1,000	56,428	277,766													
Discount rate:	0.0616												Total PV of Benefits					334,194	Total PV of Costs					56,428	277,766
													G-RIM					5.922							

Program: Commercial Tankless Water Heater Program

Program Start Date: January 2014

Program Description

The Commercial Tankless Water Heater Program is designed to encourage current and new natural gas customers to make cost-effective improvements to existing commercial/industrial facilities with the installation of energy efficient natural gas equipment to help reduce their energy consumption and conserve energy resources. The goal is to offer customer rebates for installing new energy efficient natural gas equipment.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Savings

Annual Energy: 544.022 Therms

Program Costs

Rebate:

Gas Retrofit: \$3,500 per qualifying natural gas tankless water heater.

Gas Replacement: Up to \$2,000 per qualifying natural gas tankless water heater.

The estimated administrative cost per participant is \$31.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company's annual Demand Side Management filings to the Commission.

PROGRAM NAME: COMMERCIAL TANKLESS WATER HEATER

AT THE METER		
Year	Per Customer Therm Reduction	Total Annual Therm Reduction
2019	544.022	156,961.634
2020	544.022	161,005.196
2021	544.022	165,053.678
2022	544.022	167,972.333
2023	544.022	171,947.300
2024	544.022	175,902.457
2025	544.022	178,848.929
2026	544.022	182,940.817
2027	544.022	187,110.721
2028	544.022	191,358.387

PROGRAM NAME: COMMERCIAL TANKLESS WATER HEATER

Year	(a) Total Number of Customers	(b) Total Number of Eligible Customers	(c) Annual Number of Program Participants	(d) Cumulative Penetration Level %	(e) Cumulative Number of Program Participants
2019	38,226	38,226	289	0.8%	289
2020	39,271	39,271	296	1.5%	584
2021	40,315	40,315	303	2.2%	888
2022	41,352	41,352	309	2.9%	1,197
2023	42,383	42,383	316	3.6%	1,513
2024	43,408	43,408	323	4.2%	1,836
2025	44,448	44,448	329	4.9%	2,165
2026	45,503	45,503	336	5.5%	2,501
2027	46,573	46,573	344	6.1%	2,845
2028	47,660	47,660	352	6.7%	3,197

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Tankless Water Heater Load Building

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 4,223 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 84 Units/Year
- (5) Average Number of Participants per Year 84 Participants/Year
- (6) Avoided annual kWh per Appliance 119,780 kWh
- (6)a Avoided demand kW per Appliance 45.578 kW
- (7) Avoided annual Therms per Appliance 0 Therms/Year
- (8) Incentive payment per Appliance 3,500 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
 2.20 %

Commercial - Tankless Water Heater Load Building	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	0.541
(2) Gas-Rate Impact Measure Test (G-RIM)	4.411

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Participant Cost Test (PCT) (Load Building Scenario)
Program: Commercial - Tankless Water Heater

Year	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Electric Bill Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Customer Gas Installation Costs	Incremental O&M Costs	Annual Gas Energy Charge	Annual Cost of Gas	Annual Customer Charge	Total Costs	Net Benefits
2019	3,476	0	3,500	0	6,976	9,125	0	0	971	4,655	382	15,133	(8,158)
2020	3,552	0	0	0	3,552	0	0	0	992	4,757	391	6,140	(2,588)
2021	3,630	0	0	0	3,630	0	0	0	1,014	4,862	399	6,276	(2,645)
2022	3,710	0	0	0	3,710	0	0	0	1,036	4,969	408	6,414	(2,703)
2023	3,792	0	0	0	3,792	0	0	0	1,059	5,078	417	6,555	(2,763)
2024	3,875	0	0	0	3,875	0	0	0	1,082	5,190	426	6,699	(2,824)
2025	3,960	0	0	0	3,960	0	0	0	1,106	5,304	436	6,846	(2,886)
2026	4,048	0	0	0	4,048	0	0	0	1,131	5,421	445	6,997	(2,949)
2027	4,137	0	0	0	4,137	0	0	0	1,156	5,540	455	7,151	(3,014)
2028	4,228	0	0	0	4,228	0	0	0	1,181	5,662	465	7,308	(3,081)
2029	4,321	0	0	0	4,321	0	0	0	1,207	5,787	475	7,469	(3,148)
2030	4,416	0	0	0	4,416	0	0	0	1,233	5,914	486	7,633	(3,218)
2031	4,513	0	0	0	4,513	0	0	0	1,261	6,044	497	7,801	(3,288)
2032	4,612	0	0	0	4,612	0	0	0	1,288	6,177	507	7,973	(3,361)
2033	4,714	0	0	0	4,714	0	0	0	1,317	6,313	519	8,148	(3,435)
2034	4,817	0	0	0	4,817	0	0	0	1,346	6,452	530	8,327	(3,510)
2035	4,923	0	0	0	4,923	0	0	0	1,375	6,594	542	8,511	(3,587)
2036	5,032	0	0	0	5,032	0	0	0	1,406	6,739	554	8,698	(3,666)
2037	5,142	0	0	0	5,142	0	0	0	1,436	6,887	566	8,889	(3,747)
2038	5,255	0	2,000	0	7,255	13,797	0	0	1,468	7,039	578	22,882	(15,627)
Nominal	86,152	0	5,500	0	91,652	22,922	0	0	24,066	115,383	9,479	171,851	
NPV:	49,615	0	4,142	0	53,757	13,556	0	0	13,859	66,448	5,459	98,323	
Discount rate:	0.0616												
	Total PV of Benefits												99,323
	Total PV of Costs												0.541
													PCT

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Gas - Rate Impact Measure Test (G-RIM)(Load Building Scenario)
Program: Commercial - Tankless Water Heater

YEAR	Benefits												Costs					Net Benefits
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(1)	(2)	(3)	(4)	(5)	
	Energy Charge	Gas Charge	Customer Charge	Total Benefits	Gas Supply	Non-Fuel Supply Costs	Depreciation	Customer	Admin	Rebate/ Incentive	Total Cost							
2019	4,655	971	382	6,008	909	0	218	0	0	31	3500	4,658	1,350					
2020	4,757	992	391	6,140	929	0	214	0	0	0	0	1,143	4,998					
2021	4,862	1,014	399	6,276	950	0	210	0	0	0	0	1,159	5,116					
2022	4,969	1,036	408	6,414	970	0	206	0	0	0	0	1,176	5,238					
2023	5,078	1,059	417	6,555	992	0	202	0	0	0	0	1,193	5,361					
2024	5,190	1,082	426	6,699	1,014	0	198	0	0	0	0	1,211	5,488					
2025	5,304	1,106	436	6,846	1,036	0	194	0	0	0	0	1,230	5,617					
2026	5,421	1,131	445	6,997	1,059	0	190	0	0	0	0	1,249	5,748					
2027	5,540	1,156	455	7,151	1,082	0	187	0	0	0	0	1,269	5,882					
2028	5,662	1,181	465	7,308	1,106	0	183	0	0	0	0	1,289	6,019					
2029	5,787	1,207	475	7,469	1,130	0	180	0	0	0	0	1,310	6,159					
2030	5,914	1,233	486	7,633	1,155	0	176	0	0	0	0	1,331	6,302					
2031	6,044	1,261	497	7,801	1,180	0	173	0	0	0	0	1,353	6,448					
2032	6,177	1,288	507	7,973	1,206	0	170	0	0	0	0	1,376	6,597					
2033	6,313	1,317	519	8,148	1,233	0	167	0	0	0	0	1,399	6,749					
2034	6,452	1,346	530	8,327	1,260	0	163	0	0	0	0	1,423	6,904					
2035	6,594	1,375	542	8,511	1,288	0	160	0	0	0	0	1,448	7,062					
2036	6,739	1,406	554	8,698	1,316	0	157	0	0	0	0	1,474	7,224					
2037	6,887	1,436	566	8,889	1,345	0	155	0	0	0	0	1,500	7,390					
2038	7,039	1,468	578	9,085	1,375	0	152	0	47	2000	3,573	5,512						
NOMINAL	115,383	24,066	9,479	148,928	22,533	0	3,653	0	78	5,500	31,764	117,164						
NPV:	66,448	13,859	5,459	85,767	12,977	0	2,277	0	46	4,142	19,442	66,324						
Discount rate:		0.0616																
			Total PV of Benefits	85,767					Total PV of Costs			19,442						
									G-RIM			4,411						

INPUT DATA - PART 1
PROGRAM TITLE: Commercial - Tankless Water Heater Load Reduction

- (1) Life of Program 20 Years
- (2) Average therms consumed by Appliance (s) 4,223 Therms
- (3) Program peak consumption per installed Appliance:
 Summer 0 Therms
 Winter 0 Therms
- (4) Appliances Installed per Program 252 Units/Year
- (5) Average Number of Participants per Year 252 Participants/Year
- (6) Avoided annual kWh per Appliance 119,780 kWh
- (6)a Avoided demand kW per Appliance 45.078 kW
- (7) Avoided annual Therms per Appliance 1,176 Therms/Year
- (8) Incentive payment per Appliance 2,000 \$
- (9) Other Costs not identified in C.B. Forms
- (10) Escalation Rates:
 Gas and Pipeline Capital 2.00 %
 O&M 2.00 %
2.20 %

Commercial - Tankless Water Heater Load Reduction	
Calculated Benefit to Cost Ratios	
(1) Participant Cost Test (PCT)	17.456
(2) Gas-Rate Impact Measure Test (G-RIM)	1.119

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Participant Cost Test (PCT) (Load Reduction)
Program: Commercial - Tankless Water Heater

Year	Benefits				Costs				Net Benefits		
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)		(9)	(10)
	Energy Charge Savings	Gas Charge Savings	Tax Credits	Utility Rebate	Other Benefits	Total Benefits	Net Customer Equipment Costs	Net Customer Gas Installation Costs	Incremental O&M Costs	Total Costs	Net Benefits
2019	3,740	253	0	2,000	0	5,993	2,275	0	0	2,275	3,718
2020	3,822	259	0	0	0	4,081	0	0	0	0	4,081
2021	3,906	264	0	0	0	4,171	0	0	0	0	4,171
2022	3,992	270	0	0	0	4,262	0	0	0	0	4,262
2023	4,080	276	0	0	0	4,356	0	0	0	0	4,356
2024	4,170	282	0	0	0	4,452	0	0	0	0	4,452
2025	4,261	288	0	0	0	4,550	0	0	0	0	4,550
2026	4,355	295	0	0	0	4,650	0	0	0	0	4,650
2027	4,451	301	0	0	0	4,752	0	0	0	0	4,752
2028	4,549	308	0	0	0	4,857	0	0	0	0	4,857
2029	4,649	315	0	0	0	4,964	0	0	0	0	4,964
2030	4,751	322	0	0	0	5,073	0	0	0	0	5,073
2031	4,856	329	0	0	0	5,184	0	0	0	0	5,184
2032	4,963	336	0	0	0	5,299	0	0	0	0	5,299
2033	5,072	343	0	0	0	5,415	0	0	0	0	5,415
2034	5,183	351	0	0	0	5,534	0	0	0	0	5,534
2035	5,297	359	0	0	0	5,656	0	0	0	0	5,656
2036	5,414	366	0	0	0	5,780	0	0	0	0	5,780
2037	5,533	375	0	0	0	5,908	0	0	0	0	5,908
2038	5,655	383	0	0	0	6,038	3,440	0	0	3,440	2,598
Nominal	92,699		0	2,000	0	100,974	5,715	0	0	5,715	
NPV:	53,385		0	2,000	0	58,998	3,380	0	0	3,380	
Discount rate:		0.0616									
				Total PV of Benefits	58,998			Total PV of Costs		3,380	
								PCT		17,456	

YEAR	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	Costs		(13)	(14)
												Admin Cost	Total Cost		
	Energy Charge	Gas Charge	Incremental Cust Charge	Avoided Main	Avoided Meter/Regulator	Avoided Depreciation	Avoided Taxes	Total Benefits	Energy Charge	Gas Charge	Rebate/Incentive	Admin Cost	Total Cost	Net Benefits	
2019	1,214	253	382	0	0	0	0	1,849	1,214	253	2,000	31	3,467	(1,618)	
2020	1,240	259	391	0	0	0	0	1,890	1,240	259	0	0	1,499	391	
2021	1,268	264	399	0	0	0	0	1,932	1,268	264	0	0	1,532	399	
2022	1,296	270	408	0	0	0	0	1,974	1,296	270	0	0	1,566	408	
2023	1,324	276	417	0	0	0	0	2,017	1,324	276	0	0	1,600	417	
2024	1,353	282	426	0	0	0	0	2,062	1,353	282	0	0	1,635	426	
2025	1,383	288	436	0	0	0	0	2,107	1,383	288	0	0	1,671	436	
2026	1,413	295	445	0	0	0	0	2,154	1,413	295	0	0	1,708	445	
2027	1,445	301	455	0	0	0	0	2,201	1,445	301	0	0	1,746	455	
2028	1,476	308	465	0	0	0	0	2,249	1,476	308	0	0	1,784	465	
2029	1,509	315	475	0	0	0	0	2,299	1,509	315	0	0	1,823	475	
2030	1,542	322	486	0	0	0	0	2,349	1,542	322	0	0	1,864	486	
2031	1,576	329	497	0	0	0	0	2,401	1,576	329	0	0	1,905	497	
2032	1,611	336	507	0	0	0	0	2,454	1,611	336	0	0	1,946	507	
2033	1,646	343	519	0	0	0	0	2,508	1,646	343	0	0	1,989	519	
2034	1,682	351	530	0	0	0	0	2,563	1,682	351	0	0	2,033	530	
2035	1,719	359	542	0	0	0	0	2,620	1,719	359	0	0	2,078	542	
2036	1,757	366	554	0	0	0	0	2,677	1,757	366	0	0	2,124	554	
2037	1,796	375	566	0	0	0	0	2,736	1,796	375	0	0	2,170	566	
2038	1,835	383	578	0	0	0	0	2,796	1,835	383	2,000	47	4,218	(1,422)	
NOMINAL	30,085	6,275		0	0	0	0	45,839	30,085	6,275	4,000		40,359	5,479	
NPV:	17,326	3,614		0	0	0	0	26,398	17,326	3,614	2,642		23,681	2,817	
Discount rate:	0.0616														
	Total PV of Benefits												Total PV of Costs		
	26,398												23,681		1,119
													G-RIM		

Program: Conservation Research and Development (“R&D”)

Program Start Date: October 1990

Program Description

This program is in response to Rule 25-17.001 (5) (f), F.A.C., that requires aggressive R&D projects be “...an ongoing part of the practice of every well managed utility’s programs.” It is also in support of FPSC Order No. 22176 dated November 14, 1989, requiring utilities to “...pursue research, development, and demonstration projects designed to promote energy efficiency and conservation.” R&D activity will be conducted on proposed measures to determine the impact to the company and its ratepayers and may occur at customer premises, Peoples Gas System facilities or at independent test sites.

Program Participation Standards

Peoples Gas System is filing the program standards concurrently with this proposed Plan.

Program Eligible Measures

Most technology measures are eligible for consideration including green energy sources, energy efficient construction, heat recovery, space conditioning equipment, compressors, cooking, fuel cells, thermal energy storage systems, water heating, etc.

Program Costs

Program costs are estimated at \$125,000 per year for a five-year period. Expenses for a given year may exceed \$125,000; however, total program cost shall not exceed \$500,000 for the five-year period.

Program Monitoring and Evaluation

Peoples Gas System will monitor, evaluate and report the results of this program through the company’s annual Demand Side Management filings to the Commission.



Peoples Gas System

DSM Plan Program Standards

2019-2028

November 20, 2019

Program: Residential Central Heating Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$725 per qualifying natural gas central heating system.
 - Gas Replacement: \$500 per qualifying natural gas central heating system.
 - One rebate allowance is authorized per customer premise every 10 years. Up to two rebates are authorized for the same type of natural gas heating system if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.
3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Fireplaces and fire logs.
4. Equipment eligibility requirements:
 - Natural gas central heating system must be a thermostatically controlled vented system with blower.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Customer Assisted Energy Audit

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. This audit will be advertised to residential customers demonstrating the benefits of participating.
3. There is no payment processing with this program.
4. There are no technical specifications on equipment eligibility with this program.
5. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Dryer Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$200 per qualifying natural gas dryer.
 - Gas Replacement: \$150 per qualifying natural gas dryer.
 - One rebate allowance is authorized per customer premise every 5 years.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. There are no technical specifications on equipment eligibility with this program.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential ENERGY STAR Tank Water Heater Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$650 per qualifying natural gas tank water heater.
 - Gas Replacement: \$400 per qualifying natural gas tank water heater.
 - One rebate allowance is authorized per customer premise every 6 years. Up to two rebates are authorized for the same type of natural gas water heater, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Qualifying water heaters must have the ENERGY STAR certification or an efficiency greater than 10 percent over current Florida Building Code and Federal Appliance Energy Efficiency Standards whichever is greater.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - ENERGY STAR product label
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Gas Space Conditioning Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Retrofit: \$500 per ton of installed qualifying air conditioning equipment.
 - Gas Replacement: \$150 per ton of installed qualifying air conditioning equipment.
 - One rebate allowance is authorized per customer premise every 5 years. Up to two rebates are authorized for the same type of natural gas space conditioning, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Portable space conditioning equipment.
4. There are no technical specifications on equipment eligibility with this program.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential New Construction Program

Program Participation Standards

1. Participation is available to any new PGS customer with a new residence located in PGS service area.
2. Rebates:
 - \$725 per qualifying natural gas central heating system. (Up to two rebates for the same type of natural gas heating system if two systems are installed.)
 - \$200 per qualifying natural gas dryer/dryer stub.
 - \$300 per qualifying natural gas range or cooktop.
 - Water Heating: Up to two rebates for any combination of the following water heating systems.
 - \$650 per qualifying natural gas ENERGY STAR tank water heating system.
 - \$550 per qualifying natural gas tank water heating system.
 - \$700 per qualifying natural gas tankless water heating system.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Outdoor kitchens.
 - Outdoor grills.
 - Firepit, fireplaces and fire logs.
4. Eligibility requirements:
 - Rebate allowances are for new single or multi-family residences.
 - Natural gas central heating system must be a thermostatically controlled vented system with blower.
 - Tankless water heating system must provide a minimum of five gallons per minute ("GPM").
 - Qualifying water heaters must have the ENERGY STAR certification or a thermal efficiency greater than 10 percent over current Florida Building Code and Federal Appliance Energy Efficiency Standards whichever is greater.
5. The builder or developer will receive the rebate by PGS based upon the actual energy efficiency measure(s) installed. In the event of a customer installation with no builder or developer involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - Appliances must be installed and in operational condition with the exception of the dryer, which may be left as stubbed.
 - Certificate of occupancy must be issued for the premise.
 - A complete and correct participant application has been submitted to the company.

- Application must include:
 - All equipment model numbers
 - All equipment serial numbers
- 7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
- 8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Range/Cooktop Program

Program Participation Standards

1. Participation is available to any existing residential Peoples Gas System (“PGS”) customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$300 per qualifying natural gas range/cooktop.
 - Gas Replacement: \$100 per qualifying natural gas range/cooktop.
 - One rebate allowance is authorized per customer premise every 7 years. Up to two rebates are authorized for the same type of natural gas range/cooktop, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Outdoor kitchen cooktops/ranges.
 - Outdoor grills.
 - Firepits, fire logs or fireplaces.
4. There are no technical specifications on equipment eligibility with this program.
5. The contractor will subtract the rebate paid by PGS from the customer’s total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company’s annual Demand Side Management filings to the Commission.

Program: Residential Space Heating Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - \$65 per qualifying natural gas space heater.
 - One rebate allowance is authorized per customer premise every 5 years. Up to two rebates are authorized for the same type of natural gas space heating, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Fireplaces and fire logs.
 - Portable space heating equipment.
4. There are no technical specifications on equipment eligibility with this program.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Tank Water Heater Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$550 per qualifying natural gas tank water heater.
 - Gas Replacement: \$350 per qualifying natural gas tank water heater.
 - One rebate allowance is authorized per customer premise every 6 years. Up to two rebates are authorized for the same type of natural gas water heater, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. There are no technical specifications on equipment eligibility with this program.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Residential Tankless Water Heater Program

Program Participation Standards

1. Participation is available to any existing PGS residential customer located within PGS service area.
2. Rebates:
 - Gas Retrofit: \$700 per qualifying natural gas tankless water heater.
 - Gas Replacement: \$550 per qualifying natural gas tankless water heater.
 - One rebate allowance is authorized per customer premise every 10 years. Up to two rebates are authorized for the same type of natural gas water heater, if two systems are installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Point of service tankless water heaters.
4. Equipment eligibility requirements:
 - Tankless units must provide a minimum of five GPM.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Walk-Through Energy Audit

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. This audit will be offered to PGS customers in response to a request for the service.
3. When applicable, customers are qualified for participation in other PGS conservation programs.
4. There is no payment processing with this program.
5. There are no technical specifications on equipment eligibility with this program.
6. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Combined Heat and Power Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from Energy Conservation Cost Recovery ("ECCR") clause recovery.
2. Rebates:
 - Gas Retrofit: \$300 per kW of actual demand reduced of installed combined heat and power equipment. 50 percent of eligible rebate will be paid upon completion of project. The remaining 50 percent of rebate will be paid upon demonstrated satisfactory operation of waste heat recovery.
 - Gas Replacement: \$100 per kW of actual demand reduced of installed combined heat and power equipment. 50 percent of eligible rebate will be paid upon completion of project. The remaining 50 percent of rebate will be paid upon demonstrated satisfactory operation of waste heat recovery.
 - One rebate allowance is authorized per customer every 12 years per premise. Multiple appliances are authorized for the same type of natural gas heating system installed

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Combined heat and power equipment must be fueled from natural gas and utilize waste heat to displace portions of natural gas usage for on-site heating, cooling or water heating.
 - Equipment must be rated at 1 MW or less.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment ratings
 - Equipment model number
 - Equipment serial number
 - 12-months of historic electric and natural gas bills
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full

7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Dryer Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Gas Retrofit: \$2,500 per qualifying natural gas dryer.
 - Gas Replacement: Up to the following rebate amounts per qualifying natural gas dryer.

Equipment Cost	Eligible Rebate
\$0 to \$1,500	\$750 rebate
\$1,501 to \$3,000	\$1,000 rebate
\$3,001 and up	\$2,000 rebate
 - One rebate is authorized per qualifying appliance every 5 years per premise. Multiple appliances are authorized for the same type of natural gas dryer installed up to a capped total rebate amount of \$15,000 per year.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Dryer(s) must be ENERGY STAR certified.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.

8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial ENERGY STAR Tank Water Heater Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Gas Retrofit: \$2,500 for a new natural gas tank water heater that is replacing an existing electric tank water heater.
 - Gas Replacement: Up to the following rebate amounts per qualifying natural gas tank water heater.

Equipment Cost	Eligible Rebate
\$0 to \$1,500	\$750 rebate
\$1,501 to \$3,000	\$1,000 rebate
\$3,001 and up	\$1,500 rebate
 - One rebate allowance is authorized per qualifying appliance every 7 years per premise. Multiple appliances are authorized for the same type of natural gas water heater installed up to a capped total rebate amount of \$15,000 per year.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Water heater(s) must be ENERGY STAR certified or have a thermal efficiency greater than 10 percent over current Florida Building Code and Federal Appliance Energy Efficiency Standards whichever is greater.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full

7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Fryer Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Gas Retrofit: \$3,500 per qualifying natural gas fryer.
 - Gas Replacement: Up to the following rebate amounts per qualifying natural gas fryer.

Equipment Cost	Eligible Rebate
\$0 to \$1,000	\$500
\$1,001 to \$2,000	\$750
\$2,001 to \$3,000	\$1,500
\$3,001 to \$4,000	\$2,000
\$4,001 and up	\$3,000
 - One rebate allowance is authorized per qualifying appliance every 6 years per premise. Multiple appliances are authorized for the same type of natural gas fryer installed up to a capped total rebate amount of \$15,000 per year.
3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Fryer(s) must be ENERGY STAR certified.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full

7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Gas Space Conditioning Program

Program Participation Standards

- Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
- Rebates:
 - Gas Retrofit: \$500 per ton of installed qualifying air conditioning equipment.
 - Gas Replacement: \$150 per ton of installed qualifying air conditioning equipment
 - One rebate allowance is authorized per qualifying appliance every 6 years per premise. Multiple appliances are authorized for the same type of natural gas space conditioning installed.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

- Non-qualifying equipment:
 - Used or refurbished equipment.
 - Portable space conditioning equipment.
- There are no technical specifications on equipment eligibility with this program.
- The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
- No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
- PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
- PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial New Construction Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - \$2,500 per qualifying natural gas dryer system.
 - \$3,500 per qualifying natural gas fryer system.
 - \$500 per qualifying ton of natural gas space conditioning system.
 - \$2,000 per qualifying natural gas range/cooktop system.
 - Water Heating:
 - \$2,500 per qualifying natural gas ENERGY STAR tank water heating system.
 - \$3,500 per qualifying natural gas tankless water heating system.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
 - Outdoor kitchens.
 - Outdoor grills.
 - Firepit, fireplaces and fire logs.
4. Equipment eligibility requirements:
 - Natural gas central heating system must be a thermostatically controlled vented system with blower.
 - Tankless water heating system must provide a minimum of five GPM.
 - Appliance(s) must be ENERGY STAR certified with the exception of:
 - Water heaters with a thermal efficiency greater than 10 percent over current Florida Building Code and Federal Appliance Energy Efficiency Standards whichever is greater also qualify for rebate.
 - Tankless water heaters with an efficiency of at least 82 percent also qualify for rebate.
5. The builder or developer will receive the rebate by PGS based upon the actual energy efficiency measure(s) installed. In the event of a customer installation with no builder or developer involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - Appliances must be installed and in operational condition.
 - A complete and correct participant application has been submitted to the company.
 - Application must include:
 - All equipment model numbers
 - All equipment serial numbers

- Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
 8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Range/Cooktop Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Retrofit: \$2,000 per qualifying natural gas range/cooktop.
 - Replacement: Up to the following rebate amounts per qualifying natural gas range/cooktop.

Equipment Cost	Eligible Rebate
\$0 to \$1,500	\$750
\$1,501 to \$3,000	\$1,000
\$3,001 and up	\$1,500
 - One rebate allowance is authorized per qualifying appliance every 6 years per premise. Multiple appliances are authorized for the same type of natural gas range/cooktop installed up to a capped total rebate amount of \$15,000 per year.

The rebate paid cannot exceed the total cost of equipment, installation and any associated piping and/or venting costs.

3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Range(s) must be ENERGY STAR certified.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full
7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.

8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Retrofit Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Rebate amount paid up to the installation cost, including piping and venting where applicable.
 - \$100 per kW reduction for qualifying natural gas equipment.
3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. There are no technical specifications on equipment eligibility with this program.
5. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.
6. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

Program: Commercial Tankless Water Heater Program

Program Participation Standards

1. Participation is available to any existing PGS commercial/industrial customer located within PGS service area with the exception of natural gas fired cogeneration and interruptible customers which are excluded from ECCR clause recovery.
2. Rebates:
 - Gas Retrofit: \$3,500 per qualifying natural gas tankless water heater.
 - Gas Replacement: Up to the following rebate amounts per qualifying natural gas tankless water heater.

Equipment Cost	Eligible Rebate
\$0 to \$1,500	\$750
\$1,501 to \$3,000	\$1,000
\$3,001 and up	\$2,000
 - One rebate allowance is authorized per qualifying appliance every 10 years per premise. Multiple appliances are authorized for the same type of natural gas water heater installed up to a capped total rebate amount of \$15,000 per year.
3. Non-qualifying equipment:
 - Used or refurbished equipment.
4. Equipment eligibility requirements:
 - Tankless water heater must provide a minimum of five GPM.
 - Tankless water heater must be ENERGY STAR certified or have an efficiency of 82 percent or greater.
5. The contractor will subtract the rebate paid by PGS from the customer's total cost of equipment and installation. In the event of a customer installation with no contractor involvement, PGS will issue the rebate to the customer.
6. No payment shall be made by PGS until:
 - A complete and correct participant application has been submitted to the company within one year of the receipt purchase date.
 - Application must include:
 - Equipment purchase date
 - Equipment model number
 - Equipment serial number
 - Picture of equipment serial number
 - Picture of equipment after installation
 - Equipment receipts that show paid in full
 - Contractor Invoices (if used) that show paid in full

7. PGS reserves the right to ask for additional information in the performance of the office verification before rebate payment is made, including performing a field verification of the installation.

8. PGS will report the expenses and participation of this program through the company's annual Demand Side Management filings to the Commission.

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

Program Participation Standards

1. Measures for R&D can be residential or commercial in nature and may be either new in the marketplace or existing measures which meet the criteria below:
 - The proposed measure has the potential to affect PGS or its ratepayers.
 - Sufficient data is not currently available to evaluate the impact of the proposed measure.
 - Data on the proposed measure is available but is not relevant to the Florida climate zones.
2. Equipment eligibility requirements:
 - Most technology measures are eligible for consideration including energy efficient construction, heat recovery, space conditioning equipment, cooking, water heating, etc.
3. PGS will report the expenses and participation of this program through the company’s annual Demand Side Management filings to the Commission.