

September 5, 2014

**E-PORTAL/ELECTRONIC FILING**

Ms. Carlotta Stauffer, Clerk  
Florida Public Service Commission  
2540 Shumard Oak Boulevard  
Tallahassee, FL 32399-0850


Re: **New Filing: Petition of the Associated Gas Distributors of Florida for Approval of Natural Gas Energy Conservation Program for Residential Users.**

Dear Ms. Stauffer:

Attached for electronic filing, please find the Petition of the Associated Gas Distributors of Florida ("AGDF") for Approval of a new Compressed Natural Gas ("CNG") Home Refueling Energy Conservation Program for residential users. AGDF respectfully asks that this filing be accepted and a docket opened to address the AGDF's request.

As always, please do not hesitate to contact me if you have any questions whatsoever regarding this filing.

Sincerely,



Beth Keating  
Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301  
(850) 521-1706

**BEFORE THE FLORIDA PUBLIC SERVICE COMMISSION**

Petition of Associated Gas Distributors of Florida )  
for Approval of Natural Gas Energy Conservation ) Docket No.:  
Program for Residential Users. )  
 ) Filed: September 5, 2014

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**PETITION FOR APPROVAL OF A CNG HOME REFUELING ENERGY  
CONSERVATION PROGRAM FOR RESIDENTIAL CUSTOMERS**

In accordance with Rules 25-17.009 and 28-106.201, Florida Administrative Code, the Associated Gas Distributors of Florida ("AGDF" or "Petitioner")<sup>1</sup>, by and through its undersigned counsel, hereby petitions the Florida Public Service Commission ("Commission") on behalf of its members for approval of a Compressed Natural Gas (CNG) Home Refueling Energy Conservation Program (hereinafter referred to as "CNG Refueling Program") for residential users, and in support of this Petition states:

1. The exact name and address of the principal office of the Petitioner is as follows:

Associated Gas Distributors of Florida  
P.O. Box 11026  
Tallahassee, Florida 32302

2. Notices and communications with respect to this petition and docket should be addressed to the following:

Beth Keating  
Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301  
(850) 521-1706

G. David Rogers, Executive Director  
Associated Gas Distributors of Florida  
P.O. Box 11026  
Tallahassee, Florida 32302

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<sup>1</sup> As noted in Paragraph 3 hereof, for purposes of this Petition, the AGDF makes this request on behalf of select members, not its full membership.

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3. AGDF is a trade association representing the following investor-owned natural gas utilities, all of which are subject to the jurisdiction of the Florida Public Service Commission under Chapter 366, Florida Statutes. The members represented by AGDF are Florida City Gas ("City Gas"), Florida Public Utilities Company ("FPUC"), including Florida Public Utilities Company – Indiantown Division and Central Florida Gas Division ("FPUC-Indiantown" and "FPUC-CFG," respectively), Peoples Gas System ("Peoples Gas"), Sebring Gas System ("Sebring") and St. Joe Natural Gas Company ("St. Joe") (herein generally referred to as the "LDCs"). For purposes of this Petition, however, Peoples Gas and St. Joe do not join in the request set forth herein.

4. AGDF is a Florida Not-For-Profit representing the collective interests of its members both before the Federal Energy Regulatory Commission ("FERC") and the Commission. In recent years, the AGDF has worked to develop a series of demand side management programs, including a residential conservation program, a conservation demonstration and development program, and most recently a commercial conservation program.<sup>2</sup> Furthermore, in all of these areas, AGDF has led the industry's efforts in consumer education activities throughout the state and assists with the coordination of members' efforts in this regard.

5. AGDF files this petition on behalf of the members specified in Paragraph 3, each of whom would otherwise have standing in their own right to bring a similar petition. Furthermore, the relief requested herein does not require the participation of the individual members of the AGDF, and is consistent with and germane to the AGDF's organizational purpose. Standing for AGDF to file this petition is therefore appropriate pursuant to Rosenzweig v. Department of

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<sup>2</sup> See, Orders Nos. PSC-10-0113-PAA-EG, issued in Docket No. 090122-EG; PSC-10-0551-PAA-EG, issued in Docket No. 100186-EG; and PSC-14-0039-PAA-EG, as amended, issued in Docket No. 130167-EG.

Transportation, 979 So. 2d 1050 (Fla. 1<sup>st</sup> DCA 2008), and Farm Worker Rights Organization, Inc. v. Dept. of Health and Rehabilitative Services, 417 So.2d 753, (Fla. 1st DCA 1982).<sup>3</sup>

Moreover, this petition replaces multiple, separate petitions, which should facilitate the review process and contribute to administrative efficiencies.

6. As described in greater detail below, the CNG Refueling Program proposed herein is consistent with the State’s well-articulated policy to encourage CNG in the Florida Marketplace. This petition is also consistent with the Commission’s own energy efficiency policies and Commission orders recognizing the Legislature’s desire to promote CNG development.<sup>4</sup> Moreover, it is noteworthy that the CNG Refueling Program will: 1) advance the policy objectives set forth in Rule 25-17.001, Florida Administrative Code, as well as the Florida Energy Efficiency and Conservation Act (“FEECA”)<sup>5</sup>; 2) be directly monitored and yield measurable results; and 3) be cost-effective.<sup>6</sup>

## **I. BACKGROUND AND POLICY**

7. For its part, Florida has already implemented progressive policies to advance CNG and LNG vehicles. Florida leadership has proactively encouraged CNG as an emerging industry recognizing it as a “game changer” for economic development.<sup>7</sup> During the 2012 Florida

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<sup>3</sup> See also, Hunt v. Washington State Apple Adver. Comm’n, 432 U.S. 333 (1977) (setting forth a three prong test for associational standing); and Florida Home Builders Association vs. Department of Labor and Security, 412 So.2d 351 (Fla. 1982) (determining that a trade association had standing to initiate a rule challenge).

<sup>4</sup> See, Order No. PSC-13-0398-TRF-GU, issued August 29, 2013, in Docket No. 130147-GU, approving Florida City Gas’ NGV tariff modifications; and Order No. PSC-13-0395-TRF-GU, issued August 28, 2013, in Docket No. 130135-GU, approving Commercial Natural Gas Service Programs (NGV) for FPU, FPU-Indiantown, and the Florida Division of Chesapeake Utilities Corporation.

<sup>5</sup> Sections 366.80-366.85 and 403.519, Florida Statutes, (“Florida Energy Efficiency and Conservation Act.”)

<sup>6</sup> Order No. 22176, issued in Docket No. 890737-PU.

<sup>7</sup> For instance, following the passage of the motor tax fuel bill (*discussed herein*) in 2013, Senator Wilton Simpson commented that, “This legislation will pave the way for the increased use of natural gas; spurring economic growth, reducing our dependency on foreign oil, and providing a cleaner burning source of fuel.”

Legislative Session, changes to Section 334.044, F.S., were passed that required the development of the Freight Mobility and Trade Plan (“Trade Plan”). The statutory directive for the Trade Plan specified it should include “proposed policies and investments that promote,” among other things, “the increasing implementation” of CNG policies to reduce transportation costs for businesses and residents within the state.<sup>8</sup> Following on that initiative, the 2013 Legislature passed a significant Natural Gas Motor Fuel Act that provides incentives for end users. The new law became effective January 1, 2014, and established a fuel tax structure for natural gas used as a motor fuel similar to that for diesel fuel beginning January 1, 2019, thereby exempting natural gas fuel from fuel taxes for five years, and permanently exempts individual use/residential home fueling from fuel taxes. The bill also exempted natural gas fuel from state sales and use taxes and expanded the definition of “**energy efficiency improvement**” to include “**installation of systems for natural gas fuel**” under uses authorized by the Local Government Infrastructure Surtax. In addition, the new law called for the establishment of a natural gas fuel fleet vehicle rebate program under the Department of Agriculture and Consumer Services “. . .to help reduce transportation costs in this state and encourage freight mobility investments that contribute to the economic growth of the state.”<sup>9</sup> These actions by the Legislature clearly reflect that the policy of this State is to promote the use of natural gas as a vehicle fuel that can not only produce significant cost savings for consumers, but also provide significant environmental benefits.

8. Natural gas is a clean, abundant domestic source of energy for this State, as well as a clean and efficient fuel for transportation. Not only does the direct use of natural gas save money for residential and commercial customers, it can also produce significant environmental

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<sup>8</sup> Section 334.044(33) (a) (4), F.S.

<sup>9</sup> Chapter 2013-198, Laws of Florida; codified in Chapters 206, 212, and 337, Florida Statutes.

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benefits, consistent with the key considerations set forth in FEECA.<sup>10</sup> An added consideration is the fact that gas conservation programs make a substantive contribution towards achieving statewide carbon reduction, because natural gas appliances reduce source-based electric generation carbon emissions.<sup>11</sup>

9. Consistent with the statewide goals and support of CNG, AGDF seeks approval for the identified AGDF members to include a new conservation program for residential end users that will provide rebates for the installation of in-home fueling stations for CNG vehicles. The proposal is similar in many respects to the residential conservation programs approved by the Commission in Docket No. 100186-EG with some distinctions noted herein due to the appliance addressed by the program.

10. The goal of the program proposed herein is to increase the direct end-use of natural gas as an efficient vehicle transportation fuel. The program will facilitate the state's policy goals regarding natural gas use by enhancing residential customers' ability to install in-home CNG fueling appliances. Installation of such appliances will not only allow customers to more easily use their CNG vehicle, but also will provide an additional financial incentive for residential customers to select CNG vehicles when considering alternative fuel vehicle options.

11. Considering Florida's significant reliance upon natural gas for electric generation, the increased direct use of natural gas can be expected to reduce, over time, the total quantities of natural gas used in Florida. The CNG Refueling Program will fulfill, therefore, the state's liberally-construed objectives of: (1) reducing and controlling the growth rates of electric

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<sup>10</sup> See, Section 366.82 (3)(d), Florida Statutes.

<sup>11</sup> For instance, the FSEC has calculated that the carbon reduction for the CNG Home Refueling station versus an Electric Plug-in is 0.153 tons of CO<sup>2</sup> per year.

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consumption; (2) increasing the overall efficiency and cost-effectiveness of electricity and natural gas production and use; and (3) conserving expensive resources, particularly petroleum fuels.<sup>12</sup>

12. As AGDF has noted in the past, having common programs and incentives statewide for the LDCs enables AGDF to implement statewide advertising and promotional efforts, such as collaborative marketing campaigns, and other consumer education and outreach activities conducted on behalf of the LDCs. AGDF's experience has shown that the customers benefit from a consistent, unified marketing campaign on conservation programs. Such campaigns are best practices for consumer communication and result in greater likelihood of success in choice and implementation. AGDF therefore expects to include this new program in the established marketing strategy, which will achieve efficiencies and advertising cost savings that would not exist were such campaigns undertaken on an individual, company-by-company basis.

13. Consistent with the conservative approach AGDF has taken with past conservation programs, AGDF has projected a relatively low participation rate for this new program, particularly in the early years. The anticipated low participation rate does not, however, reduce the "value add" of this program, nor does it detract from the fact that this program is consistent with the energy policy goals set forth by the Florida Legislature. To the contrary, this new program will provide consumers with an option and an incentive to choose a CNG vehicle when they might otherwise be less inclined to choose a CNG vehicle due to limited fueling options. In fact, deployment of CNG vehicles at the individual consumer level has been inhibited by limited fueling options. The quandary for the market has, to date, been the proverbial "chicken or the

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<sup>12</sup> See, Section 366.81, Florida Statutes.

egg” situation – retail fueling stations are not being aggressively placed into service, because demand is low due to the limited number of vehicles. In turn, the consumer market for CNG vehicles has been hampered by the limited availability of fueling options, other than those available for commercial trucking and mass transit.

14. Providing an incentive for the in-home fueling appliance will make personal CNG vehicles a more viable option for consumers. As more CNG vehicles take the road, AGDF anticipates that increased visibility of CNG vehicles will lead to greater consumer interest levels in these alternative-fueled vehicles and, therefore, greater participation in the proposed CNG Home Refueling program. Thus, while the initial participation levels for the proposed program may be low, the long-term potential of the program to create a ground swell of support for the use of CNG as a viable and efficient fuel of choice for consumers is great.

15. AGDF emphasizes that the marketing and administrative costs associated with this new program are anticipated to be low as a result of the joint marketing strategy that the members already have in place; thus, the incremental costs associated with the program, which would be recovered through the conservation cost recovery clause, will be minimal, especially in the early years when AGDF projects that few rebates will be issued. Consequently, the fact that AGDF anticipates low participation rates, particularly in the early years, will have no direct financial impact, in and of itself, on customers.

16. Each of the member LDCs currently administers Commission-approved conservation programs and participates in the Energy Conservation Cost Recovery process, as provided in Rule 25-17.015, Florida Administrative Code. All of the LDCs currently offer conservation programs for residential customers. The Commission recently approved AGDF’s offering of



various commercial programs in Docket No. 130167-EG by Order No. PSC-14-0039-PAA-EG, issued January 14, 2014.<sup>13</sup> In addition, certain AGDF members also offer industrial conservation programs.

17. The increased focus on natural gas as an efficient and clean vehicle fuel highlights the importance and timeliness of this natural gas conservation program. As noted in the Commission's December 2012 Report on Electric Vehicle Recharging ("Report"), federal Corporate Average Fuel Economy standards ("CAFE standards") require that cars and light-duty trucks meet a fuel efficiency standard of 54.5 MPG by the year 2025.<sup>14</sup> As also noted in the Report, the CAFE standards include incentives for early adopters of advanced technologies for fuel efficient vehicles, including specific incentives to manufacturers for natural gas vehicles.<sup>15</sup>

18. With this Petition, AGDF provides the required information on the proposed residential CNG Refueling Program and includes data regarding its cost-effectiveness.

## **II. CNG HOME REFUELING CONSERVATION PROGRAM**

19. The CNG Refueling Program for which AGDF seeks approval would entail cash allowances (rebates) for the initial purchase and installation of CNG home refueling units only. Due to the fact that the CNG Home Refueling appliances are "emerging" technologies and the uncertainty surrounding future costs (which are expected to be lower) and availability of these appliances, the AGDF believes that it is appropriate to only seek cash allowances for the initial

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<sup>13</sup> As amended by Order No. PSC-14-0039A-PAA, issued January 17, 2014.

<sup>14</sup> Report, at Appendix B, pages 39-40.

<sup>15</sup> Id., at page 41.

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purchase and installation of the CNG home refueling appliances at this time. This approach is similar to the existing conservation programs that the Commission has previously approved for specific AGDF members for residential and commercial cooling programs. Therefore, the AGDF is not seeking cash allowances (rebates) for either the retention of existing CNG Home Refueling appliances or the replacement of electric car plug-in appliances with CNG Home Refueling appliances in the instant petition.

20. AGDF has utilized the Commission-approved cost effectiveness test methodologies (G-RIM Test and Participants Test) required by Rule 25-17.009, F.A.C., to determine the cost/benefit of the proposed CNG Refueling Program. AGDF is proposing a rebate amount of up to \$4,500 for the initial purchase and installation of a CNG Home Refueling appliance.<sup>16</sup> Attachment 1 is a composite document containing a summary of each AGDF member's G-RIM and Participants Tests results, using the proposed rebate amount, for the program, as well as the individual cost effectiveness test runs. As shown, given the proposed rebate level, the tests demonstrate positive cost/benefits for each AGDF member. The correlating individual LDC G-RIM and Participants Test runs are also provided with this filing on a DVD.

21. This program is part of a multi-year effort that began in 2009, whereby AGDF members have jointly participated in the compilation of the data necessary to properly assess a variety of conservation programs. This joint effort is reflected in the AGDF filings over the past few years in Dockets Nos. 090122-EG, 100186-EG, and 130167-EG. The LDC-specific data gathered by the AGDF members was then input to the same residential program cost model used to make the

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<sup>16</sup> AGDF proposes that the rebate amount be "up to" \$4,500, because it anticipates that, in time, the price of the in-home fueling appliance will decrease as other competitors enter the market.

appropriate cost/benefit analyses that supported the residential programs approved by the Commission in Docket No. 100186-EG.

22. However, this Program is somewhat different than the residential programs already approved by the Commission. The CNG Refueling Program specifically targets an appliance that requires the purchase of a certain type of vehicle, in this case a dedicated CNG vehicle and the comparable appliance is an electric “plug-in” appliance that also requires a dedicated electric vehicle. This is unlike any other existing residential program. For example, residential conservation programs targeting the water heater do not look at costs of infrastructure “downstream” of the water heater. The reason these costs are not included in the G-RIM and Participants Tests is that the water piping and faucets/fixtures that are installed are not dependent on whether the water heater is fueled by natural gas or electricity. In this example, the costs “downstream” of the water heater are the same, regardless of the fuel used to operate the water heater. As described above, this is not the case for the CNG Refueling Program. Specifically, an initial assumption was made that a CNG refueling unit would not be installed at a residence, unless the owner had also decided to purchase a CNG vehicle. Thus, a baseline assumption for the cost-effectiveness test runs was that the customer had already made a determination that he or she would purchase an alternative fuel vehicle. The model inputs therefore made a comparison of the incremental costs associated with the purchase, operation, and maintenance of a CNG vehicle, include the home refueling unit, against the purchase, operation, and maintenance of an electric vehicle recharged at the residence. This approach is appropriate and reasonable in that it better takes into account the full range of costs that are associated with the installation of a home refueling unit and makes the appropriate “apples to apples” comparison to

the alternative available. Unless the vehicle that serves as the impetus for the purchase of the unit is included in the analysis, it is impossible to make a true “apples to apples” cost analysis.

23. Given that the CNG Refueling Program is different than the existing residential conservation programs approved previously by the Commission, the AGDF has split the required data elements of the two tests (G-RIM and Participants) into two categories: 1) data elements that are consistent with those used in previous conservation program filings; and 2) data elements that are unique to the CNG Refueling Program.

24. The data elements that are consistent with previous AGDF filings, as well as how the elements were derived are as follows:

- a) Residential electric rates: obtained for 2014 from each of the four major electric utilities web sites; electric rates used are for the “over 1000 kWh” rates;
- b) PGA Recovery Factor: used the 2013 average PGA rate for each utility (Docket No. 130003-GU); for those utilities that have exited the merchant function, the average standard residential rate offered by third-party marketers has been utilized;
- c) Costs for Service Lines, Meter and Meter Installation, Regulator and Regulator Installation were obtained (Schedule E-7 for the appropriate rate classification) from the most recent general rate increase filing for each AGDF member. Distribution main extension costs of \$500 per residence is used in the model and is the same amount used in the previous residential program filing;
- d) Administrative Costs – trended the costs (New Customer Admin Cost and Gas Facility O&M Cost) approved in the previous residential program filing for each utility (Docket No. 090122) for inflation from 2009 through 2014;

- e) Discount Rate reflects the average mid-point overall rate of return allowed for each utility from the December 31, 2013 Earnings Surveillance Report (most current report commonly available for all utilities);
- f) Depreciation rates are from the most recent Commission-approved Depreciation Study for each utility;
- g) Annual EC Program costs – derived from the most recent Commission-approved Energy Conservation Cost Recovery filing for each utility. Impacts calculated for residential customers, given participation levels projected through 2016 under the CNG Refueling Program for each utility. Methodology is consistent with that utilized and approved in Docket No. 130167-EG – “Petition for approval of natural gas energy conservation programs for commercial customers, by Associated Gas Distributors of Florida”; and
- h) General Inflation Rate; Customer Tax Rates, Fuel and O&M Escalators and Non-Fuel Gas and Electric Rate Escalators utilize the same factors as approved in Docket No. 100186-EG. These factors were contained in the Florida Solar Energy Center’s (“FSEC”) report, dated April 12, 2010, titled “Developing Natural Gas Cost Escalation Rates for the Associated Gas Distributors of Florida”.

25. The data elements that are unique for this filing are:

- a) Vehicle type – the dedicated natural gas vehicle used in the Tests is the Honda Civic, which gets an EPA estimated 27 miles/gallon equivalent in city driving and 38 miles/gallon equivalent for highway driving. The all-electric Nissan Leaf is used in the Tests, which gets an EPA estimated 129 miles/gallon equivalent in city driving

and 102 miles/gallon equivalent for highway driving. These vehicles were utilized because they are dedicated vehicles (required for electric “plug-in” capabilities), are comparable vehicles and are available for purchase in the current market.

- b) Annual consumption: there are two parts to this data element: 1) CNG Refueling appliance consumption; and 2) total home natural gas consumption. The CNG Refueling appliance consumption is calculated utilizing 15,000 annual driving miles for each vehicle described above (50% city / 50% highway miles). FSEC has calculated that a natural gas vehicle would use 609 therms per year and an electric vehicle would use 4,454 kWh per year for this driving range. The total home natural gas consumption is assumed to be for a home with the four typical appliances (furnace, tankless water heater, range and clothes dryer), using the annual therms approved in Docket No. 100186-EG, plus the CNG Refueling appliance consumption. Because an alternative fuel vehicle is considered to be a “high-end” product, it is appropriate to assume that the residential consumer would utilize the four “core” natural gas appliances in the home. The total projected consumption for the five appliances is 999 therms per year.
- c) Residential natural gas rates: most of the AGDF members have rates based on annual consumption. The residential rate selected for each utility is based on the annual consumption of 999 therms.
- d) MSRP for the dedicated natural gas Honda Civic is \$26,640. The MSRP for the Nissan Leaf S is \$28,980. Both prices are before any federal incentives, which are not included in the analysis due to the uncertainty of availability going forward.

- e) The Phill Home Refueling Unit, produced by BRC FuelMaker, assumed to be the unit installed at the residence, has an initial cost of \$4,500, with an installation cost of \$1,795 for piping, electrical connections and venting.<sup>17</sup>
- f) Recharging Equipment for Electric Vehicle - The Level 2 battery recharging wall unit is capable of fully recharging the Leaf's battery pack overnight. Level 2 units will add about 10 to 20 miles of range per hour compared to a Level 1 unit, which only adds about 2 to 5 miles of range per hour. The initial installation cost for the Electric Plug-in Level 2 unit is \$1,200, with no annual operations or maintenance cost for the plug-in unit itself.
- g) The CNG Refueling Unit operations and maintenance costs are based on replacing the compression module every eight (8) years, replacing the hose every four (4) years and 1,294 kWh of annual electricity usage for refueling the vehicle in order to drive 15,000 miles. The annual O&M cost for the CNG Refueling Unit is \$423.40 in the first year. As long as the maintenance procedures are followed, the unit is not expected to be replaced over the life of the model (20 years).
- h) The Electric recharging unit is virtually maintenance free. However, the Nissan Leaf may experience a significant loss of battery capacity within five (5) years so that the range is substantially reduced. In fact, the issue is so prevalent that Nissan has recently announced a battery replacement program for the Leaf such that an owner can pay "approximately \$100 per month" in order to get a new battery pack when the

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<sup>17</sup> See, for technical details, <http://www.brcfuelmaker.com/phill-domestico-prodotto-brc-fuel-maker.aspx> (note: website may initially appear in Italian, but English translation option is available). Pricing information is estimated based upon limited market experience of AGDF members.

battery capacity decreases below 75% of full capacity.<sup>18</sup> The annualized O&M cost for the vehicle's electric battery packs is \$900 in year one.

26. Based on the various inputs, the analysis results are presented in the form of the G-RIM and Participants Test scores, as shown in Attachment 1. As reflected therein, both the G-RIM and Participants Tests results for the proposed allowances exceed 1.0 (results above 1.0 are deemed to generate cost benefits) for each LDC. While there is some variation in the results among the member LDCs, this variation is due largely to the fact that the LDCs each have different rate structures and costs, as well as different projection rates for the proposed energy conservation rebate program. In sum, the test results clearly demonstrate that there are positive cost/benefits associated with the CNG Refueling Program for each LDC, which coincide with the significant policy benefits associated with implementation of the program statewide.

### **III. CONCLUSION**

27. In passing House Bill 579<sup>19</sup>, encouraging increased use of natural gas as a motor fuel, the Legislature anticipated “increased savings for drivers utilizing vehicles powered by natural gas fuel, an increase in conversions of vehicle fleets from being powered by traditional fuels to natural gas fuel, and an increase in natural gas refueling infrastructure across the state.”<sup>20</sup> The CNG Refueling Program proposed by AGDF in this petition is consistent with the directive of the Legislature and the Governor to promote CNG as an alternative fuel source. In addition,

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<sup>18</sup> See <http://www.nissanusa.com/electric-cars/leaf/charging-range/battery/> and <http://www.edmunds.com/car-news/nissan-leaf-owners-to-get-battery-replacement-option.html>.

<sup>19</sup> Codified at Chapter 2013-198, Laws of Florida.

<sup>20</sup> State of Florida, House of Representatives, Final Bill Analysis CS/C/HB 579 (2013).

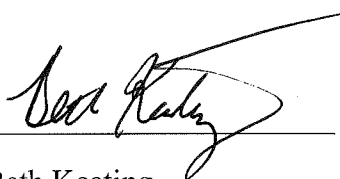


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this program complies with the Commission's historic tests for evaluating such programs and furthers the demand side management policy objectives found in current law, policies, and procedures. Commission approval of the program will enable the identified AGDF members to implement the CNG Refueling Program consistent with state policy. Moreover, Commission approval will allow AGDF to facilitate participation in the program through a homogeneous statewide marketing plan, which will further enhance the overall effectiveness of the programs.

WHEREFORE, the Associated Gas Distributors of Florida respectfully requests that the Commission enter its order granting this Petition and approve the proposed CNG Refueling Program as described herein.

RESPECTFULLY SUBMITTED this 5th day of September, 2014.

By: 

Beth Keating

Florida Bar No.0022756

Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301

Lila A. Jaber

Florida Bar No. 0881661

Gunster, Yoakley & Stewart, P.A.  
215 South Monroe St., Suite 601  
Tallahassee, FL 32301

*Attorneys for Associated Gas Distributors of  
Florida*

Attachment 1  
 Composite Test Results for AGDF Members  
 G-RIM and Participants Tests

AGDF Member	CNG Refueling Program Rebate Level	G-RIM Test Results	Participants Test Results
Florida City Gas	\$4,500	1.15	1.25
Florida Public Utilities	\$4,500	1.25	1.17
Florida Public Utilities – Indiantown Division	\$4,500	1.10	1.38
Florida Division of Chesapeake Utilities Corporation	\$4,500	1.16	1.07
Sebring Gas System	\$4,500	1.25	1.25

FLORIDA CITY GAS

## RIM Test - Results

**Appliance Type**  
**CNG - Refueling (1)**

**Gas Utility Rate - Florida City Gas**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

	Incremental Revenue Energy Charge	Incremental Revenue Cost of Gas	Incremental Revenue Customer Charge	Total Gas Revenue	Gas Supply Cost	Investment Carrying Cost	Incremental Customer Costs	Program Cost	Total Costs	
	Table 1	Table 1A	Table 2	Table 3	Table 4	Table 5				
	1	2	3	4	2 thru 4	6	7	8	9	6 thru 9
2014	\$306	\$372	\$88	\$766	\$372	\$108	\$22	\$4,500	\$5,003	
2015	\$321	\$390	\$88	\$799	\$390	\$104	\$23	\$0	\$518	
2016	\$336	\$409	\$88	\$833	\$409	\$101	\$24	\$0	\$535	
2017	\$352	\$429	\$88	\$869	\$429	\$98	\$25	\$0	\$552	
2018	\$369	\$450	\$88	\$907	\$450	\$95	\$25	\$0	\$570	
2019	\$387	\$471	\$88	\$946	\$471	\$92	\$26	\$0	\$590	
2020	\$406	\$494	\$88	\$988	\$494	\$89	\$27	\$0	\$610	
2021	\$425	\$518	\$88	\$1,031	\$518	\$86	\$28	\$0	\$632	
2022	\$446	\$543	\$88	\$1,077	\$543	\$84	\$29	\$0	\$656	
2023	\$467	\$569	\$88	\$1,125	\$569	\$81	\$30	\$0	\$680	
2024	\$490	\$597	\$88	\$1,175	\$597	\$78	\$31	\$0	\$706	
2025	\$514	\$626	\$88	\$1,227	\$626	\$76	\$32	\$0	\$734	
2026	\$538	\$656	\$88	\$1,282	\$656	\$74	\$33	\$0	\$762	
2027	\$564	\$688	\$88	\$1,340	\$688	\$71	\$34	\$0	\$793	
2028	\$592	\$721	\$88	\$1,400	\$721	\$69	\$35	\$0	\$825	
2029	\$620	\$756	\$88	\$1,464	\$756	\$67	\$36	\$0	\$858	
2030	\$650	\$792	\$88	\$1,530	\$792	\$65	\$37	\$0	\$894	
2031	\$682	\$830	\$88	\$1,600	\$830	\$63	\$39	\$0	\$932	
2032	\$715	\$871	\$88	\$1,673	\$871	\$61	\$40	\$0	\$971	
2033	\$749	\$913	\$88	\$1,749	\$913	\$59	\$41	\$0	\$1,012	

**Present Value  
of Benefits**

\$17,144

**Present Value  
of Costs**

\$14,901

**Benefit/Cost  
Ratio**

**1.15**

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Residential**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Fuel Rate Escalator	4.83%	Depreciation Rate - Supply Main	3.00%
Gas Energy Charge Escalator	4.83%	Depreciation Rate - Development Main	3.00%
Gas Customer Charge Escalator	0.00%	Depreciation Rate - Service Line	3.90%
O&M/Inflation Escalator	3.19%	Depreciation Rate - Meter	4.50%

Table 1

Revenue - Energy Charge			
1	2	3	2*3
Year	Therms	Base Rate	Total Charge
2014	609	\$0.5021	\$306
2015	609	\$0.5264	\$321
2016	609	\$0.5518	\$336
2017	609	\$0.5785	\$352
2018	609	\$0.6064	\$369
2019	609	\$0.6357	\$387
2020	609	\$0.6664	\$406
2021	609	\$0.6986	\$425
2022	609	\$0.7323	\$446
2023	609	\$0.7677	\$467
2024	609	\$0.8048	\$490
2025	609	\$0.8437	\$514
2026	609	\$0.8844	\$538
2027	609	\$0.9271	\$564
2028	609	\$0.9719	\$592
2029	609	\$1.0188	\$620
2030	609	\$1.0681	\$650
2031	609	\$1.1196	\$682
2032	609	\$1.1737	\$715
2033	609	\$1.2304	\$749

Table 1a

Revenue - Cost of Gas			
1	2	3	2*3
Year	Therms	Fuel Rate	Total Charge
2014	609	\$0.6117	\$372
2015	609	\$0.6412	\$390
2016	609	\$0.6722	\$409
2017	609	\$0.7047	\$429
2018	609	\$0.7387	\$450
2019	609	\$0.7744	\$471
2020	609	\$0.8118	\$494
2021	609	\$0.8510	\$518
2022	609	\$0.8921	\$543
2023	609	\$0.9352	\$569
2024	609	\$0.9803	\$597
2025	609	\$1.0277	\$626
2026	609	\$1.0773	\$656
2027	609	\$1.1294	\$688
2028	609	\$1.1839	\$721
2029	609	\$1.2411	\$756
2030	609	\$1.3010	\$792
2031	609	\$1.3639	\$830
2032	609	\$1.4297	\$871
2033	609	\$1.4988	\$913

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Table 2

Revenue - Customer Charge				
1	2	3	4	3*4
Year	Monthly Customer Charge	Annual Customer Charge	Ratio Therms To Total Consumed	Prorated Annual Customer Charge
2014	\$12.00	\$144.00	60.96%	\$88
2015	\$12.00	\$144.00	60.96%	\$88
2016	\$12.00	\$144.00	60.96%	\$88
2017	\$12.00	\$144.00	60.96%	\$88
2018	\$12.00	\$144.00	60.96%	\$88
2019	\$12.00	\$144.00	60.96%	\$88
2020	\$12.00	\$144.00	60.96%	\$88
2021	\$12.00	\$144.00	60.96%	\$88
2022	\$12.00	\$144.00	60.96%	\$88
2023	\$12.00	\$144.00	60.96%	\$88
2024	\$12.00	\$144.00	60.96%	\$88
2025	\$12.00	\$144.00	60.96%	\$88
2026	\$12.00	\$144.00	60.96%	\$88
2027	\$12.00	\$144.00	60.96%	\$88
2028	\$12.00	\$144.00	60.96%	\$88
2029	\$12.00	\$144.00	60.96%	\$88
2030	\$12.00	\$144.00	60.96%	\$88
2031	\$12.00	\$144.00	60.96%	\$88
2032	\$12.00	\$144.00	60.96%	\$88
2033	\$12.00	\$144.00	60.96%	\$88

Table 3

Gas Costs			
1	2	3	2*3
Year	Therms	Gas Supply Rate	Gas Supply Cost
2014	609	\$0.6117	\$372
2015	609	\$0.6412	\$390
2016	609	\$0.6722	\$409
2017	609	\$0.7047	\$429
2018	609	\$0.7387	\$450
2019	609	\$0.7744	\$471
2020	609	\$0.8118	\$494
2021	609	\$0.8510	\$518
2022	609	\$0.8921	\$543
2023	609	\$0.9352	\$569
2024	609	\$0.9803	\$597
2025	609	\$1.0277	\$626
2026	609	\$1.0773	\$656
2027	609	\$1.1294	\$688
2028	609	\$1.1839	\$721
2029	609	\$1.2411	\$756
2030	609	\$1.3010	\$792
2031	609	\$1.3639	\$830
2032	609	\$1.4297	\$871
2033	609	\$1.4988	\$913

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Table 4

Investment Carrying Costs								
1	2	3	4	5	6	7	8	6*7*8
Year	Supply Main	Development Main	Service Line	Meter	Total Investment	Cost of Debt	Ratio of Therms Consumed To Total	Investment Carrying Cost
2014	\$2,075	\$500	\$0	\$307	\$2,882	6.14%	60.96%	\$108
2015	\$2,013	\$485	\$0	\$293	\$2,791	6.14%	60.96%	\$104
2016	\$1,953	\$470	\$0	\$280	\$2,703	6.14%	60.96%	\$101
2017	\$1,894	\$456	\$0	\$267	\$2,617	6.14%	60.96%	\$98
2018	\$1,837	\$442	\$0	\$255	\$2,534	6.14%	60.96%	\$95
2019	\$1,782	\$429	\$0	\$244	\$2,455	6.14%	60.96%	\$92
2020	\$1,729	\$416	\$0	\$233	\$2,378	6.14%	60.96%	\$89
2021	\$1,677	\$404	\$0	\$223	\$2,304	6.14%	60.96%	\$86
2022	\$1,627	\$392	\$0	\$213	\$2,232	6.14%	60.96%	\$84
2023	\$1,578	\$380	\$0	\$203	\$2,161	6.14%	60.96%	\$81
2024	\$1,531	\$369	\$0	\$194	\$2,094	6.14%	60.96%	\$78
2025	\$1,485	\$358	\$0	\$185	\$2,028	6.14%	60.96%	\$76
2026	\$1,440	\$347	\$0	\$177	\$1,964	6.14%	60.96%	\$74
2027	\$1,397	\$337	\$0	\$169	\$1,903	6.14%	60.96%	\$71
2028	\$1,355	\$327	\$0	\$161	\$1,843	6.14%	60.96%	\$69
2029	\$1,314	\$317	\$0	\$154	\$1,785	6.14%	60.96%	\$67
2030	\$1,275	\$307	\$0	\$147	\$1,729	6.14%	60.96%	\$65
2031	\$1,237	\$298	\$0	\$140	\$1,675	6.14%	60.96%	\$63
2032	\$1,200	\$289	\$0	\$134	\$1,623	6.14%	60.96%	\$61
2033	\$1,164	\$280	\$0	\$128	\$1,572	6.14%	60.96%	\$59

Table 5

Incremental Customer Costs							
1	2	3	4	5=3*4	6	8=6*4	5+8
Year	Monthly Adm. Cost	Annual Adm. Cost	Ratio Therms To Total Consumed	Annual Adm. Cost	Annual O&M Cost	Annual O&M Ratio	Total Incremental Adm. & O&M Cost
2014	\$1.94	\$23	60.96%	\$14.02	\$13.59	8.3	\$22
2015	\$2.00	\$24	60.96%	\$14.63	\$14.02	8.5	\$23
2016	\$2.07	\$25	60.96%	\$15.24	\$14.47	8.8	\$24
2017	\$2.13	\$26	60.96%	\$15.85	\$14.93	9.1	\$25
2018	\$2.20	\$26	60.96%	\$15.85	\$15.41	9.4	\$25
2019	\$2.27	\$27	60.96%	\$16.46	\$15.90	9.7	\$26
2020	\$2.34	\$28	60.96%	\$17.07	\$16.41	10.0	\$27
2021	\$2.42	\$29	60.96%	\$17.68	\$16.93	10.3	\$28
2022	\$2.49	\$30	60.96%	\$18.29	\$17.47	10.6	\$29
2023	\$2.57	\$31	60.96%	\$18.90	\$18.03	11.0	\$30
2024	\$2.66	\$32	60.96%	\$19.51	\$18.60	11.3	\$31
2025	\$2.74	\$33	60.96%	\$20.12	\$19.20	11.7	\$32
2026	\$2.83	\$34	60.96%	\$20.72	\$19.81	12.1	\$33
2027	\$2.92	\$35	60.96%	\$21.33	\$20.44	12.5	\$34
2028	\$3.01	\$36	60.96%	\$21.94	\$21.09	12.9	\$35
2029	\$3.11	\$37	60.96%	\$22.55	\$21.77	13.3	\$36
2030	\$3.21	\$38	60.96%	\$23.16	\$22.46	13.7	\$37
2031	\$3.31	\$40	60.96%	\$24.38	\$23.18	14.1	\$39
2032	\$3.41	\$41	60.96%	\$24.99	\$23.92	14.6	\$40
2033	\$3.52	\$42	60.96%	\$25.60	\$24.68	15.0	\$41

## Participants Test - Results

**Appliance Type:**  
CNG - Refueling (1)

**Gas Utility Rate - Florida City Gas**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Benefits				Costs							
	Avoided Electric KWH/KW Cost	Gas Rebate	Avoided Electric Appliance O&M	TOTAL BENEFITS	Gas Equipment Cost	Electric Equipment & Installation Cost	Gas Installation Cost	Gas Appliance O & M	Gas Supply Cost	Gas Energy Charge	Gas Customer Charge	TOTAL COSTS
	Table 1								Table 2	Table 3	Table 4	
1	3	4	5	3 thru 5	7	8	9	10	11	12	13	7 thru 13
2014	\$647	\$4,500	\$900	\$6,047	\$31,140	(\$30,180)	\$1,795	\$437	\$382	\$313	\$90	\$3,977
2015	\$672	\$0	\$929	\$1,601	\$0	\$0	\$0	\$451	\$400	\$329	\$90	\$1,270
2016	\$699	\$0	\$958	\$1,657	\$0	\$0	\$0	\$465	\$419	\$344	\$90	\$1,319
2017	\$726	\$0	\$989	\$1,715	\$0	\$0	\$0	\$480	\$440	\$361	\$90	\$1,371
2018	\$755	\$0	\$1,020	\$1,775	\$0	\$0	\$0	\$495	\$461	\$378	\$90	\$1,425
2019	\$784	\$0	\$1,053	\$1,837	\$0	\$0	\$0	\$511	\$483	\$397	\$90	\$1,481
2020	\$815	\$0	\$1,087	\$1,901	\$0	\$0	\$0	\$528	\$507	\$416	\$90	\$1,540
2021	\$847	\$0	\$1,121	\$1,968	\$0	\$0	\$0	\$544	\$531	\$436	\$90	\$1,601
2022	\$880	\$0	\$1,157	\$2,037	\$0	\$0	\$0	\$562	\$557	\$457	\$90	\$1,666
2023	\$915	\$0	\$1,194	\$2,108	\$0	\$0	\$0	\$580	\$584	\$479	\$90	\$1,732
2024	\$950	\$0	\$1,232	\$2,182	\$0	\$0	\$0	\$598	\$612	\$502	\$90	\$1,802
2025	\$988	\$0	\$1,271	\$2,259	\$0	\$0	\$0	\$617	\$641	\$527	\$90	\$1,875
2026	\$1,026	\$0	\$1,312	\$2,338	\$0	\$0	\$0	\$637	\$672	\$552	\$90	\$1,951
2027	\$1,067	\$0	\$1,354	\$2,420	\$0	\$0	\$0	\$657	\$705	\$579	\$90	\$2,031
2028	\$1,108	\$0	\$1,397	\$2,505	\$0	\$0	\$0	\$678	\$739	\$607	\$90	\$2,114
2029	\$1,152	\$0	\$1,441	\$2,593	\$0	\$0	\$0	\$700	\$775	\$636	\$90	\$2,200
2030	\$1,197	\$0	\$1,487	\$2,684	\$0	\$0	\$0	\$722	\$812	\$667	\$90	\$2,291
2031	\$1,244	\$0	\$1,535	\$2,779	\$0	\$0	\$0	\$745	\$851	\$699	\$90	\$2,385
2032	\$1,293	\$0	\$1,584	\$2,877	\$0	\$0	\$0	\$769	\$892	\$733	\$90	\$2,484
2033	\$1,343	\$0	\$1,634	\$2,978	\$0	\$0	\$0	\$794	\$935	\$768	\$90	\$2,587

Present Value  
of Benefits \$36,348

Present Value  
of Costs \$29,068

Benefit/Cost Ratio	1.25
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**Associated Gas Distributors of Florida  
Residential Energy Conservation Program  
CNG - Refueling (1)**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Cost Per KWH	Annual KWH	Cost Per kW	Monthly Demand kW	Tax Rate	Electric Cost
A	B	C	D	E	F	(B*C+12*D*E)*(1+F)
2014	\$0.1417	4,454	\$0.00	0.00	2.5%	\$647
2015	\$0.1473	4,454	\$0.00	0.00	2.5%	\$672
2016	\$0.1531	4,454	\$0.00	0.00	2.5%	\$699
2017	\$0.1591	4,454	\$0.00	0.00	2.5%	\$726
2018	\$0.1653	4,454	\$0.00	0.00	2.5%	\$755
2019	\$0.1718	4,454	\$0.00	0.00	2.5%	\$784
2020	\$0.1785	4,454	\$0.00	0.00	2.5%	\$815
2021	\$0.1855	4,454	\$0.00	0.00	2.5%	\$847
2022	\$0.1928	4,454	\$0.00	0.00	2.5%	\$880
2023	\$0.2003	4,454	\$0.00	0.00	2.5%	\$915
2024	\$0.2082	4,454	\$0.00	0.00	2.5%	\$950
2025	\$0.2163	4,454	\$0.00	0.00	2.5%	\$988
2026	\$0.2248	4,454	\$0.00	0.00	2.5%	\$1,026
2027	\$0.2336	4,454	\$0.00	0.00	2.5%	\$1,067
2028	\$0.2428	4,454	\$0.00	0.00	2.5%	\$1,108
2029	\$0.2523	4,454	\$0.00	0.00	2.5%	\$1,152
2030	\$0.2622	4,454	\$0.00	0.00	2.5%	\$1,197
2031	\$0.2725	4,454	\$0.00	0.00	2.5%	\$1,244
2032	\$0.2832	4,454	\$0.00	0.00	2.5%	\$1,293
2033	\$0.2943	4,454	\$0.00	0.00	2.5%	\$1,343

Year	Cost Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.6117	609	2.5%	\$382
2015	\$0.6412	609	2.5%	\$400
2016	\$0.6722	609	2.5%	\$419
2017	\$0.7047	609	2.5%	\$440
2018	\$0.7387	609	2.5%	\$461
2019	\$0.7744	609	2.5%	\$483
2020	\$0.8118	609	2.5%	\$507
2021	\$0.8510	609	2.5%	\$531
2022	\$0.8921	609	2.5%	\$557
2023	\$0.9352	609	2.5%	\$584
2024	\$0.9803	609	2.5%	\$612
2025	\$1.0277	609	2.5%	\$641
2026	\$1.0773	609	2.5%	\$672
2027	\$1.1294	609	2.5%	\$705
2028	\$1.1839	609	2.5%	\$739
2029	\$1.2411	609	2.5%	\$775
2030	\$1.3010	609	2.5%	\$812
2031	\$1.3639	609	2.5%	\$851
2032	\$1.4297	609	2.5%	\$892
2033	\$1.4988	609	2.5%	\$935

Year	Rate Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.5021	609	2.5%	\$313
2015	\$0.5264	609	2.5%	\$329
2016	\$0.5518	609	2.5%	\$344
2017	\$0.5785	609	2.5%	\$361
2018	\$0.6064	609	2.5%	\$378
2019	\$0.6357	609	2.5%	\$397
2020	\$0.6664	609	2.5%	\$416
2021	\$0.6986	609	2.5%	\$436
2022	\$0.7323	609	2.5%	\$457
2023	\$0.7677	609	2.5%	\$479
2024	\$0.8048	609	2.5%	\$502
2025	\$0.8437	609	2.5%	\$527
2026	\$0.8844	609	2.5%	\$552
2027	\$0.9271	609	2.5%	\$579
2028	\$0.9719	609	2.5%	\$607
2029	\$1.0188	609	2.5%	\$636
2030	\$1.0681	609	2.5%	\$667
2031	\$1.1196	609	2.5%	\$699
2032	\$1.1737	609	2.5%	\$733
2033	\$1.2304	609	2.5%	\$768

Year	Monthly Customer Charge	Annual Customer Charge	Ratio - Appliance to Total	Tax Rate	Pro-Rated Customer Charge
A	B	C	D	E	C*D*(1+E)
2014	\$12.00	\$144.00	60.96%	2.5%	\$90
2015	\$12.00	\$144.00	60.96%	2.5%	\$90
2016	\$12.00	\$144.00	60.96%	2.5%	\$90
2017	\$12.00	\$144.00	60.96%	2.5%	\$90
2018	\$12.00	\$144.00	60.96%	2.5%	\$90
2019	\$12.00	\$144.00	60.96%	2.5%	\$90
2020	\$12.00	\$144.00	60.96%	2.5%	\$90
2021	\$12.00	\$144.00	60.96%	2.5%	\$90
2022	\$12.00	\$144.00	60.96%	2.5%	\$90
2023	\$12.00	\$144.00	60.96%	2.5%	\$90
2024	\$12.00	\$144.00	60.96%	2.5%	\$90
2025	\$12.00	\$144.00	60.96%	2.5%	\$90
2026	\$12.00	\$144.00	60.96%	2.5%	\$90
2027	\$12.00	\$144.00	60.96%	2.5%	\$90
2028	\$12.00	\$144.00	60.96%	2.5%	\$90
2029	\$12.00	\$144.00	60.96%	2.5%	\$90
2030	\$12.00	\$144.00	60.96%	2.5%	\$90
2031	\$12.00	\$144.00	60.96%	2.5%	\$90
2032	\$12.00	\$144.00	60.96%	2.5%	\$90
2033	\$12.00	\$144.00	60.96%	2.5%	\$90



**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

<b>Gas:</b>	<b>CNG - Refueling (1)</b>	
<b>Year:</b>	2014	
<b>CO2:</b>	3.04 tonnes CO2/year	
<b>Allowance:</b>	<b>\$4,500</b>	
<b>Gas Utility:</b>	Florida City Gas	
<b>I. Installed Cost Data</b>		
Equipment		\$31,140
Installation		\$1,795
Total Customer Cost		<u>\$32,935</u>
Replacement Installation		\$1,200
Total Replacement (incl Equip)		<u>\$32,340</u>
Utility Rebate		\$4,500
<b>II. Operating Data</b>		
Therms Consumed	609	
Total Building Therms	999	
O&M (excluding energy)	\$437	
<b>III. Rates and Charges</b>		
ECCR	\$0.0655	
Distribution Charge	\$0.4366	
Commodity Charge	\$0.6117	
Taxes & Fees	2.50%	
Customer Chg	\$12.00	
Average Life (years)	30	
Appliance Therms /Total Therms	60.96%	
EC Program Adm. Cost	\$0.12	
<b>IV. New Customer Installation Costs</b>		
Service Line	\$2,075	
Development Main	\$500	
Other	\$0	
Meter	\$307	
	Total	<u>\$2,882</u>
<b>V. New Customer Admin. Cost \$/month</b>		\$1.94

<b>Elec:</b>	<b>CNG - Refueling (1)</b>	
<b>CO2:</b>	3.19 tonnes CO2/year	
<b>Rate:</b>	Weighted Average	
<b>Bldg:</b>	Residential	
<b>VI. Electric Cost Data</b>		
Equipment		\$28,980
Installation		\$1,200
Breaker and Wiring Savings		\$0
Total Customer Cost		<u>\$30,180</u>
<b>VII. Energy Conserved Data</b>		
Monthly Demand kW		0.00
Annual kWh		4,454
O&M (excluding energy)		\$900
<b>VIII. Electric Rates and Charges</b>		
Electric Rate per kW		\$0.00
Electric Rate per kWh		\$0.14173
Electric Fuel rate		\$0.0435
Electric Base rate		\$0.0982
Electric Taxes & Fees		2.50%
Customer Chg		\$8.91
Average Life in Yrs		30

**FLORIDA PUBLIC UTILITIES COMPANY**

## RIM Test - Results

**Appliance Type**  
**CNG - Refueling (1)**

**Gas Utility Rate - Florida Public Utilities**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

	Incremental Revenue Energy Charge	Incremental Revenue Cost of Gas	Incremental Revenue Customer Charge	Total Gas Revenue	Gas Supply Cost	Investment Carrying Cost	Incremental Customer Costs	Program Cost	Total Costs
	Table 1	Table 1A	Table 2	2 thru 4	Table 3	Table 4	Table 5	9	6 thru 9
1	2	3	4	2 thru 4	6	7	8	9	6 thru 9
2014	\$360	\$383	\$80	\$823	\$383	\$42	\$45	\$4,500	\$4,970
2015	\$377	\$402	\$80	\$859	\$402	\$41	\$46	\$0	\$489
2016	\$395	\$421	\$80	\$897	\$421	\$40	\$47	\$0	\$509
2017	\$414	\$441	\$80	\$936	\$441	\$39	\$49	\$0	\$529
2018	\$434	\$463	\$80	\$978	\$463	\$38	\$50	\$0	\$551
2019	\$455	\$485	\$80	\$1,021	\$485	\$37	\$52	\$0	\$574
2020	\$477	\$508	\$80	\$1,066	\$508	\$36	\$53	\$0	\$598
2021	\$500	\$533	\$80	\$1,114	\$533	\$35	\$55	\$0	\$623
2022	\$525	\$559	\$80	\$1,164	\$559	\$34	\$57	\$0	\$650
2023	\$550	\$586	\$80	\$1,216	\$586	\$33	\$59	\$0	\$678
2024	\$577	\$614	\$80	\$1,271	\$614	\$32	\$61	\$0	\$707
2025	\$604	\$644	\$80	\$1,328	\$644	\$32	\$63	\$0	\$738
2026	\$634	\$675	\$80	\$1,389	\$675	\$31	\$65	\$0	\$770
2027	\$664	\$707	\$80	\$1,452	\$707	\$30	\$66	\$0	\$804
2028	\$696	\$741	\$80	\$1,518	\$741	\$29	\$69	\$0	\$840
2029	\$730	\$777	\$80	\$1,588	\$777	\$28	\$71	\$0	\$877
2030	\$765	\$815	\$80	\$1,660	\$815	\$28	\$73	\$0	\$916
2031	\$802	\$854	\$80	\$1,737	\$854	\$27	\$76	\$0	\$957
2032	\$841	\$895	\$80	\$1,817	\$895	\$26	\$78	\$0	\$1,000
2033	\$881	\$939	\$80	\$1,901	\$939	\$26	\$80	\$0	\$1,045

**Present Value  
of Benefits**

\$18,542

**Present Value  
of Costs**

\$14,841

**Benefit/Cost  
Ratio**

**1.25**

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Residential**

Other Equipment Included In Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Fuel Rate Escalator	4.83%	Depreciation Rate - Supply Main	2.50%
Gas Energy Charge Escalator	4.83%	Depreciation Rate - Development Main	2.50%
Gas Customer Charge Escalator	0.00%	Depreciation Rate - Service Line	3.40%
O&M/Inflation Escalator	3.19%	Depreciation Rate - Meter	3.40%

**Table 1**

Revenue - Energy Charge			
1	2	3	2*3
Year	Therms	Base Rate	Total Charge
2014	609	\$0.5908	\$360
2015	609	\$0.6194	\$377
2016	609	\$0.6493	\$395
2017	609	\$0.6807	\$414
2018	609	\$0.7135	\$434
2019	609	\$0.7480	\$455
2020	609	\$0.7841	\$477
2021	609	\$0.8220	\$500
2022	609	\$0.8617	\$525
2023	609	\$0.9033	\$550
2024	609	\$0.9469	\$577
2025	609	\$0.9927	\$604
2026	609	\$1.0406	\$634
2027	609	\$1.0909	\$664
2028	609	\$1.1436	\$696
2029	609	\$1.1988	\$730
2030	609	\$1.2567	\$765
2031	609	\$1.3174	\$802
2032	609	\$1.3811	\$841
2033	609	\$1.4478	\$881

**Table 1a**

Revenue - Cost of Gas			
1	2	3	2*3
Year	Therms	Fuel Rate	Total Charge
2014	609	\$0.6292	\$383
2015	609	\$0.6596	\$402
2016	609	\$0.6914	\$421
2017	609	\$0.7248	\$441
2018	609	\$0.7598	\$463
2019	609	\$0.7965	\$485
2020	609	\$0.8350	\$508
2021	609	\$0.8753	\$533
2022	609	\$0.9176	\$559
2023	609	\$0.9619	\$586
2024	609	\$1.0084	\$614
2025	609	\$1.0571	\$644
2026	609	\$1.1081	\$675
2027	609	\$1.1617	\$707
2028	609	\$1.2178	\$741
2029	609	\$1.2766	\$777
2030	609	\$1.3383	\$815
2031	609	\$1.4029	\$854
2032	609	\$1.4706	\$895
2033	609	\$1.5417	\$939

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included In Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 2**

Revenue - Customer Charge				
1	2	3	4	3*4
Year	Monthly Customer Charge	Annual Customer Charge	Ratio Therms To Total Consumed	Prorated Annual Customer Charge
2014	\$11.00	\$132.00	60.96%	\$80
2015	\$11.00	\$132.00	60.96%	\$80
2016	\$11.00	\$132.00	60.96%	\$80
2017	\$11.00	\$132.00	60.96%	\$80
2018	\$11.00	\$132.00	60.96%	\$80
2019	\$11.00	\$132.00	60.96%	\$80
2020	\$11.00	\$132.00	60.96%	\$80
2021	\$11.00	\$132.00	60.96%	\$80
2022	\$11.00	\$132.00	60.96%	\$80
2023	\$11.00	\$132.00	60.96%	\$80
2024	\$11.00	\$132.00	60.96%	\$80
2025	\$11.00	\$132.00	60.96%	\$80
2026	\$11.00	\$132.00	60.96%	\$80
2027	\$11.00	\$132.00	60.96%	\$80
2028	\$11.00	\$132.00	60.96%	\$80
2029	\$11.00	\$132.00	60.96%	\$80
2030	\$11.00	\$132.00	60.96%	\$80
2031	\$11.00	\$132.00	60.96%	\$80
2032	\$11.00	\$132.00	60.96%	\$80
2033	\$11.00	\$132.00	60.96%	\$80

**Table 3**

Gas Costs			
1	2	3	2*3
Year	Therms	Gas Supply Rate	Gas Supply Cost
2014	609	\$0.6292	\$383
2015	609	\$0.6596	\$402
2016	609	\$0.6914	\$421
2017	609	\$0.7248	\$441
2018	609	\$0.7598	\$463
2019	609	\$0.7965	\$485
2020	609	\$0.8350	\$508
2021	609	\$0.8753	\$533
2022	609	\$0.9176	\$559
2023	609	\$0.9619	\$586
2024	609	\$1.0084	\$614
2025	609	\$1.0571	\$644
2026	609	\$1.1081	\$675
2027	609	\$1.1617	\$707
2028	609	\$1.2178	\$741
2029	609	\$1.2766	\$777
2030	609	\$1.3383	\$815
2031	609	\$1.4029	\$854
2032	609	\$1.4706	\$895
2033	609	\$1.5417	\$939

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Table 4

Investment Carrying Costs								
1	2	3	4	5	6	7	8	6*7*8
Year	Supply Main	Development Main	Service Line	Meter	Total Investment	Cost of Debt	Ratio of Therms Consumed To Total	Investment Carrying Cost
2014	\$318	\$500	\$0	\$172	\$990	7.01%	60.96%	\$42
2015	\$310	\$488	\$0	\$166	\$964	7.01%	60.96%	\$41
2016	\$302	\$476	\$0	\$160	\$938	7.01%	60.96%	\$40
2017	\$294	\$464	\$0	\$155	\$913	7.01%	60.96%	\$39
2018	\$287	\$452	\$0	\$150	\$889	7.01%	60.96%	\$38
2019	\$280	\$441	\$0	\$145	\$866	7.01%	60.96%	\$37
2020	\$273	\$430	\$0	\$140	\$843	7.01%	60.96%	\$36
2021	\$266	\$419	\$0	\$135	\$820	7.01%	60.96%	\$35
2022	\$259	\$409	\$0	\$130	\$798	7.01%	60.96%	\$34
2023	\$253	\$399	\$0	\$126	\$778	7.01%	60.96%	\$33
2024	\$247	\$389	\$0	\$122	\$758	7.01%	60.96%	\$32
2025	\$241	\$379	\$0	\$118	\$738	7.01%	60.96%	\$32
2026	\$235	\$370	\$0	\$114	\$719	7.01%	60.96%	\$31
2027	\$229	\$361	\$0	\$110	\$700	7.01%	60.96%	\$30
2028	\$223	\$352	\$0	\$106	\$681	7.01%	60.96%	\$29
2029	\$217	\$343	\$0	\$102	\$662	7.01%	60.96%	\$28
2030	\$212	\$334	\$0	\$99	\$645	7.01%	60.96%	\$28
2031	\$207	\$326	\$0	\$96	\$629	7.01%	60.96%	\$27
2032	\$202	\$318	\$0	\$93	\$613	7.01%	60.96%	\$26
2033	\$197	\$310	\$0	\$90	\$597	7.01%	60.96%	\$26

Table 5

Incremental Customer Costs							
1	2	3	4	5=3*4	6	8=6*4	5+8
Year	Monthly Adm. Cost	Annual Adm. Cost	Ratio Therms To Total Consumed	Annual Adm. Cost	Annual O&M Cost	Annual O&M Cost	Total Incremental Adm. & O&M Cost
2014	\$2.63	\$32	60.96%	\$19.51	\$41.11	25.1	\$45
2015	\$2.71	\$33	60.96%	\$20.12	\$42.42	25.9	\$46
2016	\$2.80	\$34	60.96%	\$20.72	\$43.77	26.7	\$47
2017	\$2.89	\$35	60.96%	\$21.33	\$45.17	27.5	\$49
2018	\$2.98	\$36	60.96%	\$21.94	\$46.61	28.4	\$50
2019	\$3.08	\$37	60.96%	\$22.55	\$48.10	29.3	\$52
2020	\$3.18	\$38	60.96%	\$23.16	\$49.63	30.3	\$53
2021	\$3.28	\$39	60.96%	\$23.77	\$51.22	31.2	\$55
2022	\$3.38	\$41	60.96%	\$24.99	\$52.85	32.2	\$57
2023	\$3.49	\$42	60.96%	\$25.60	\$54.54	33.2	\$59
2024	\$3.60	\$43	60.96%	\$26.21	\$56.28	34.3	\$61
2025	\$3.72	\$45	60.96%	\$27.43	\$58.07	35.4	\$63
2026	\$3.83	\$46	60.96%	\$28.04	\$59.92	36.5	\$65
2027	\$3.96	\$47	60.96%	\$28.65	\$61.84	37.7	\$66
2028	\$4.08	\$49	60.96%	\$29.87	\$63.81	38.9	\$69
2029	\$4.21	\$51	60.96%	\$31.09	\$65.84	40.1	\$71
2030	\$4.35	\$52	60.96%	\$31.70	\$67.94	41.4	\$73
2031	\$4.49	\$54	60.96%	\$32.92	\$70.11	42.7	\$76
2032	\$4.63	\$56	60.96%	\$34.14	\$72.35	44.1	\$78
2033	\$4.78	\$57	60.96%	\$34.74	\$74.66	45.5	\$80

## Participants Test - Results

Appliance Type:  
CNG - Refueling (1)

Gas Utility Rate - Florida Public Utilities  
Elec Utility Rate - Weighted Average  
Building Type - Residential

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Benefits				Costs							
	Avoided Electric KWH/KW Cost	Gas Rebate	Avoided Electric Appliance O&M	TOTAL BENEFITS	Gas Equipment Cost	Electric Equipment & Installation Cost	Gas Installation Cost	Gas Appliance O & M	Gas Supply Cost	Gas Energy Charge	Gas Customer Charge	TOTAL COSTS
	Table 1								Table 2	Table 3	Table 4	
	3	4	5	3 thru 5	7	8	9	10	11	12	13	7 thru 13
2014	\$647	\$4,500	\$900	\$6,047	\$31,140	(\$30,180)	\$1,795	\$465	\$393	\$369	\$82	\$4,063
2015	\$672	\$0	\$929	\$1,601	\$0	\$0	\$0	\$479	\$412	\$387	\$82	\$1,360
2016	\$699	\$0	\$958	\$1,657	\$0	\$0	\$0	\$495	\$432	\$405	\$82	\$1,414
2017	\$726	\$0	\$989	\$1,715	\$0	\$0	\$0	\$510	\$452	\$425	\$82	\$1,470
2018	\$755	\$0	\$1,020	\$1,775	\$0	\$0	\$0	\$527	\$474	\$445	\$82	\$1,529
2019	\$784	\$0	\$1,053	\$1,837	\$0	\$0	\$0	\$543	\$497	\$467	\$82	\$1,590
2020	\$815	\$0	\$1,087	\$1,901	\$0	\$0	\$0	\$561	\$521	\$489	\$82	\$1,654
2021	\$847	\$0	\$1,121	\$1,968	\$0	\$0	\$0	\$579	\$546	\$513	\$82	\$1,720
2022	\$880	\$0	\$1,157	\$2,037	\$0	\$0	\$0	\$597	\$573	\$538	\$82	\$1,790
2023	\$915	\$0	\$1,194	\$2,108	\$0	\$0	\$0	\$616	\$600	\$564	\$82	\$1,863
2024	\$950	\$0	\$1,232	\$2,182	\$0	\$0	\$0	\$636	\$629	\$591	\$82	\$1,939
2025	\$988	\$0	\$1,271	\$2,259	\$0	\$0	\$0	\$656	\$660	\$620	\$82	\$2,018
2026	\$1,026	\$0	\$1,312	\$2,338	\$0	\$0	\$0	\$677	\$692	\$649	\$82	\$2,101
2027	\$1,067	\$0	\$1,354	\$2,420	\$0	\$0	\$0	\$699	\$725	\$681	\$82	\$2,187
2028	\$1,108	\$0	\$1,397	\$2,505	\$0	\$0	\$0	\$721	\$760	\$714	\$82	\$2,277
2029	\$1,152	\$0	\$1,441	\$2,593	\$0	\$0	\$0	\$744	\$797	\$748	\$82	\$2,371
2030	\$1,197	\$0	\$1,487	\$2,684	\$0	\$0	\$0	\$768	\$835	\$784	\$82	\$2,470
2031	\$1,244	\$0	\$1,535	\$2,779	\$0	\$0	\$0	\$792	\$876	\$822	\$82	\$2,572
2032	\$1,293	\$0	\$1,584	\$2,877	\$0	\$0	\$0	\$817	\$918	\$862	\$82	\$2,680
2033	\$1,343	\$0	\$1,634	\$2,978	\$0	\$0	\$0	\$844	\$962	\$904	\$82	\$2,792

Present Value  
of Benefits \$36,348

Present Value  
of Costs \$31,051

Benefit/Cost Ratio	1.17
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**Associated Gas Distributors of Florida  
Residential Energy Conservation Program  
CNG - Refueling (1)**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Cost Per KWH	Annual KWH	Cost Per kW	Monthly Demand kW	Tax Rate	Electric Cost
A	B	C	D	E	F	(B*C+12*D*E)*(1+F)
2014	\$0.1417	4,454	\$0.00	0.00	2.5%	\$647
2015	\$0.1473	4,454	\$0.00	0.00	2.5%	\$672
2016	\$0.1531	4,454	\$0.00	0.00	2.5%	\$699
2017	\$0.1591	4,454	\$0.00	0.00	2.5%	\$726
2018	\$0.1653	4,454	\$0.00	0.00	2.5%	\$755
2019	\$0.1718	4,454	\$0.00	0.00	2.5%	\$784
2020	\$0.1785	4,454	\$0.00	0.00	2.5%	\$815
2021	\$0.1855	4,454	\$0.00	0.00	2.5%	\$847
2022	\$0.1928	4,454	\$0.00	0.00	2.5%	\$880
2023	\$0.2003	4,454	\$0.00	0.00	2.5%	\$915
2024	\$0.2082	4,454	\$0.00	0.00	2.5%	\$950
2025	\$0.2163	4,454	\$0.00	0.00	2.5%	\$988
2026	\$0.2248	4,454	\$0.00	0.00	2.5%	\$1,026
2027	\$0.2336	4,454	\$0.00	0.00	2.5%	\$1,067
2028	\$0.2428	4,454	\$0.00	0.00	2.5%	\$1,108
2029	\$0.2523	4,454	\$0.00	0.00	2.5%	\$1,152
2030	\$0.2622	4,454	\$0.00	0.00	2.5%	\$1,197
2031	\$0.2725	4,454	\$0.00	0.00	2.5%	\$1,244
2032	\$0.2832	4,454	\$0.00	0.00	2.5%	\$1,293
2033	\$0.2943	4,454	\$0.00	0.00	2.5%	\$1,343

Year	Cost Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.6292	609	2.5%	\$393
2015	\$0.6596	609	2.5%	\$412
2016	\$0.6914	609	2.5%	\$432
2017	\$0.7248	609	2.5%	\$452
2018	\$0.7598	609	2.5%	\$474
2019	\$0.7965	609	2.5%	\$497
2020	\$0.8350	609	2.5%	\$521
2021	\$0.8753	609	2.5%	\$546
2022	\$0.9176	609	2.5%	\$573
2023	\$0.9619	609	2.5%	\$600
2024	\$1.0084	609	2.5%	\$629
2025	\$1.0571	609	2.5%	\$660
2026	\$1.1081	609	2.5%	\$692
2027	\$1.1617	609	2.5%	\$725
2028	\$1.2178	609	2.5%	\$760
2029	\$1.2766	609	2.5%	\$797
2030	\$1.3383	609	2.5%	\$835
2031	\$1.4029	609	2.5%	\$876
2032	\$1.4706	609	2.5%	\$918
2033	\$1.5417	609	2.5%	\$962

Year	Rate Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.5908	609	2.5%	\$369
2015	\$0.6194	609	2.5%	\$397
2016	\$0.6493	609	2.5%	\$405
2017	\$0.6807	609	2.5%	\$425
2018	\$0.7135	609	2.5%	\$445
2019	\$0.7480	609	2.5%	\$467
2020	\$0.7841	609	2.5%	\$489
2021	\$0.8220	609	2.5%	\$513
2022	\$0.8617	609	2.5%	\$538
2023	\$0.9033	609	2.5%	\$564
2024	\$0.9469	609	2.5%	\$591
2025	\$0.9927	609	2.5%	\$620
2026	\$1.0406	609	2.5%	\$649
2027	\$1.0909	609	2.5%	\$681
2028	\$1.1436	609	2.5%	\$714
2029	\$1.1988	609	2.5%	\$748
2030	\$1.2567	609	2.5%	\$784
2031	\$1.3174	609	2.5%	\$822
2032	\$1.3811	609	2.5%	\$862
2033	\$1.4478	609	2.5%	\$904

Year	Monthly Customer Charge	Annual Customer Charge	Ratio - Appliance to Total	Tax Rate	Pro-Rated Customer Charge
A	B	C	D	E	C*D*(1+E)
2014	\$11.00	\$132.00	60.96%	2.5%	\$82
2015	\$11.00	\$132.00	60.96%	2.5%	\$82
2016	\$11.00	\$132.00	60.96%	2.5%	\$82
2017	\$11.00	\$132.00	60.96%	2.5%	\$82
2018	\$11.00	\$132.00	60.96%	2.5%	\$82
2019	\$11.00	\$132.00	60.96%	2.5%	\$82
2020	\$11.00	\$132.00	60.96%	2.5%	\$82
2021	\$11.00	\$132.00	60.96%	2.5%	\$82
2022	\$11.00	\$132.00	60.96%	2.5%	\$82
2023	\$11.00	\$132.00	60.96%	2.5%	\$82
2024	\$11.00	\$132.00	60.96%	2.5%	\$82
2025	\$11.00	\$132.00	60.96%	2.5%	\$82
2026	\$11.00	\$132.00	60.96%	2.5%	\$82
2027	\$11.00	\$132.00	60.96%	2.5%	\$82
2028	\$11.00	\$132.00	60.96%	2.5%	\$82
2029	\$11.00	\$132.00	60.96%	2.5%	\$82
2030	\$11.00	\$132.00	60.96%	2.5%	\$82
2031	\$11.00	\$132.00	60.96%	2.5%	\$82
2032	\$11.00	\$132.00	60.96%	2.5%	\$82
2033	\$11.00	\$132.00	60.96%	2.5%	\$82

## Residential Energy Conservation Program

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

<b>Gas:</b>	<b>CNG - Refueling (1)</b>	
<b>Year:</b>	2014	
<b>CO2:</b>	3.04 tonnes CO2/year	
<b>Allowance:</b>	<b>\$4,500</b>	
<b>Gas Utility:</b>	Florida Public Utilities	
<b>I. Installed Cost Data</b>		
Equipment		\$31,140
Installation		\$1,795
Total Customer Cost		\$32,935
Replacement Installation		\$1,200
Total Replacement (incl Equip)		\$32,340
Utility Rebate		\$4,500
<b>II. Operating Data</b>		
Therms Consumed	609	
Total Building Therms	999	
O&M (excluding energy)	\$465	
<b>III. Rates and Charges</b>		
ECCR	\$0.0926	
Distribution Charge	\$0.4983	
Commodity Charge	\$0.6292	
Taxes & Fees	2.50%	
Customer Chg	\$11.00	
Average Life (years)	30	
Appliance Therms /Total Therms	60.96%	
EC Program Adm. Cost	\$0.19	
<b>IV. New Customer Installation Costs</b>		
Service Line	\$318	
Development Main	\$500	
Other	\$0	
Meter	\$172	
	Total	\$990
<b>V. New Customer Admin. Cost \$/month</b>		<b>\$2.63</b>

<b>Elec:</b>	<b>CNG - Refueling (1)</b>	
<b>CO2:</b>	3.19 tonnes CO2/year	
<b>Rate:</b>	Weighted Average	
<b>Bldg:</b>	Residential	
<b>VI. Electric Cost Data</b>		
Equipment		\$28,980
Installation		\$1,200
Breaker and Wiring Savings		\$0
Total Customer Cost		\$30,180
<b>VII. Energy Conserved Data</b>		
Monthly Demand kW	0.00	
Annual kWh	4,454	
O&M (excluding energy)	\$900	
<b>VIII. Electric Rates and Charges</b>		
Electric Rate per kW	\$0.00	
Electric Rate per kWh	\$0.14173	
Electric Fuel rate	\$0.0435	
Electric Base rate	\$0.0982	
Electric Taxes & Fees	2.50%	
Customer Chg	\$8.91	
Average Life in Yrs	30	



FLORIDA PUBLIC UTILITIES COMPANY  
INDIANTOWN DIVISION

## RIM Test - Results

**Appliance Type**  
**CNG - Refueling (1)**

**Gas Utility Rate - IndianTown Gas**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

	Incremental Revenue Energy Charge	Incremental Revenue Cost of Gas	Incremental Revenue Customer Charge	Total Gas Revenue	Gas Supply Cost	Investment Carrying Cost	Incremental Customer Costs	Program Cost	Total Costs	
	Table 1	Table 1A	Table 2		Table 3	Table 4	Table 5			
	1	2	3	4	2 thru 4	6	7	8	9	6 thru 9
2014		\$245	\$340	\$66	\$651	\$340	\$44	\$19	\$4,502	\$4,904
2015		\$257	\$356	\$66	\$679	\$356	\$42	\$20	\$2	\$420
2016		\$270	\$373	\$66	\$709	\$373	\$41	\$21	\$2	\$436
2017		\$283	\$392	\$66	\$740	\$392	\$39	\$21	\$2	\$454
2018		\$296	\$410	\$66	\$773	\$410	\$38	\$22	\$2	\$472
2019		\$311	\$430	\$66	\$807	\$430	\$36	\$23	\$2	\$491
2020		\$326	\$451	\$66	\$843	\$451	\$35	\$23	\$2	\$511
2021		\$341	\$473	\$66	\$880	\$473	\$34	\$24	\$2	\$532
2022		\$358	\$496	\$66	\$919	\$496	\$33	\$25	\$2	\$555
2023		\$375	\$520	\$66	\$961	\$520	\$32	\$25	\$2	\$578
2024		\$393	\$545	\$66	\$1,004	\$545	\$30	\$26	\$2	\$603
2025		\$412	\$571	\$66	\$1,049	\$571	\$29	\$27	\$2	\$629
2026		\$432	\$599	\$66	\$1,097	\$599	\$28	\$28	\$2	\$657
2027		\$453	\$627	\$66	\$1,146	\$627	\$27	\$29	\$2	\$686
2028		\$475	\$658	\$66	\$1,199	\$658	\$26	\$30	\$2	\$716
2029		\$498	\$690	\$66	\$1,253	\$690	\$26	\$31	\$2	\$748
2030		\$522	\$723	\$66	\$1,311	\$723	\$25	\$32	\$2	\$781
2031		\$547	\$758	\$66	\$1,371	\$758	\$24	\$33	\$2	\$816
2032		\$574	\$794	\$66	\$1,434	\$794	\$23	\$34	\$2	\$853
2033		\$601	\$833	\$66	\$1,500	\$833	\$22	\$35	\$2	\$892

Present Value  
of Benefits

\$14,646

Present Value  
of Costs

\$13,335

Benefit/Cost  
Ratio

1.10

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Residential**

Other Equipment Included In Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Fuel Rate Escalator	4.83%	Depreciation Rate - Supply Main	3.20%
Gas Energy Charge Escalator	4.83%	Depreciation Rate - Development Main	3.20%
Gas Customer Charge Escalator	0.00%	Depreciation Rate - Service Line	3.90%
O&M/Inflation Escalator	3.19%	Depreciation Rate - Meter	5.00%

**Table 1**

Revenue - Energy Charge			
1	2	3	2*3
Year	Therms	Base Rate	Total Charge
2014	609	\$0.4030	<b>\$245</b>
2015	609	\$0.4225	<b>\$257</b>
2016	609	\$0.4429	<b>\$270</b>
2017	609	\$0.4643	<b>\$283</b>
2018	609	\$0.4867	<b>\$296</b>
2019	609	\$0.5102	<b>\$311</b>
2020	609	\$0.5349	<b>\$326</b>
2021	609	\$0.5607	<b>\$341</b>
2022	609	\$0.5878	<b>\$358</b>
2023	609	\$0.6162	<b>\$375</b>
2024	609	\$0.6460	<b>\$393</b>
2025	609	\$0.6772	<b>\$412</b>
2026	609	\$0.7099	<b>\$432</b>
2027	609	\$0.7442	<b>\$453</b>
2028	609	\$0.7801	<b>\$475</b>
2029	609	\$0.8178	<b>\$498</b>
2030	609	\$0.8573	<b>\$522</b>
2031	609	\$0.8987	<b>\$547</b>
2032	609	\$0.9421	<b>\$574</b>
2033	609	\$0.9876	<b>\$601</b>

**Table 1a**

Revenue - Cost of Gas			
1	2	3	2*3
Year	Therms	Fuel Rate	Total Charge
2014	609	\$0.5582	<b>\$340</b>
2015	609	\$0.5851	<b>\$356</b>
2016	609	\$0.6134	<b>\$373</b>
2017	609	\$0.6430	<b>\$392</b>
2018	609	\$0.6741	<b>\$410</b>
2019	609	\$0.7066	<b>\$430</b>
2020	609	\$0.7408	<b>\$451</b>
2021	609	\$0.7765	<b>\$473</b>
2022	609	\$0.8141	<b>\$496</b>
2023	609	\$0.8534	<b>\$520</b>
2024	609	\$0.8946	<b>\$545</b>
2025	609	\$0.9378	<b>\$571</b>
2026	609	\$0.9831	<b>\$599</b>
2027	609	\$1.0306	<b>\$627</b>
2028	609	\$1.0804	<b>\$658</b>
2029	609	\$1.1325	<b>\$690</b>
2030	609	\$1.1872	<b>\$723</b>
2031	609	\$1.2446	<b>\$758</b>
2032	609	\$1.3047	<b>\$794</b>
2033	609	\$1.3677	<b>\$833</b>

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included In Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 2**

Revenue - Customer Charge				
1	2	3	4	3*4
Year	Monthly Customer Charge	Annual Customer Charge	Ratio Therms To Total Consumed	Prorated Annual Customer Charge
2014	\$9.00	\$108.00	60.96%	<b>\$66</b>
2015	\$9.00	\$108.00	60.96%	<b>\$66</b>
2016	\$9.00	\$108.00	60.96%	<b>\$66</b>
2017	\$9.00	\$108.00	60.96%	<b>\$66</b>
2018	\$9.00	\$108.00	60.96%	<b>\$66</b>
2019	\$9.00	\$108.00	60.96%	<b>\$66</b>
2020	\$9.00	\$108.00	60.96%	<b>\$66</b>
2021	\$9.00	\$108.00	60.96%	<b>\$66</b>
2022	\$9.00	\$108.00	60.96%	<b>\$66</b>
2023	\$9.00	\$108.00	60.96%	<b>\$66</b>
2024	\$9.00	\$108.00	60.96%	<b>\$66</b>
2025	\$9.00	\$108.00	60.96%	<b>\$66</b>
2026	\$9.00	\$108.00	60.96%	<b>\$66</b>
2027	\$9.00	\$108.00	60.96%	<b>\$66</b>
2028	\$9.00	\$108.00	60.96%	<b>\$66</b>
2029	\$9.00	\$108.00	60.96%	<b>\$66</b>
2030	\$9.00	\$108.00	60.96%	<b>\$66</b>
2031	\$9.00	\$108.00	60.96%	<b>\$66</b>
2032	\$9.00	\$108.00	60.96%	<b>\$66</b>
2033	\$9.00	\$108.00	60.96%	<b>\$66</b>

**Table 3**

Gas Costs			
1	2	3	2*3
Year	Therms	Gas Supply Rate	Gas Supply Cost
2014	609	\$0.5582	<b>\$340</b>
2015	609	\$0.5851	<b>\$356</b>
2016	609	\$0.6134	<b>\$373</b>
2017	609	\$0.6430	<b>\$392</b>
2018	609	\$0.6741	<b>\$410</b>
2019	609	\$0.7066	<b>\$430</b>
2020	609	\$0.7408	<b>\$451</b>
2021	609	\$0.7765	<b>\$473</b>
2022	609	\$0.8141	<b>\$496</b>
2023	609	\$0.8534	<b>\$520</b>
2024	609	\$0.8946	<b>\$545</b>
2025	609	\$0.9378	<b>\$571</b>
2026	609	\$0.9831	<b>\$599</b>
2027	609	\$1.0306	<b>\$627</b>
2028	609	\$1.0804	<b>\$658</b>
2029	609	\$1.1325	<b>\$690</b>
2030	609	\$1.1872	<b>\$723</b>
2031	609	\$1.2446	<b>\$758</b>
2032	609	\$1.3047	<b>\$794</b>
2033	609	\$1.3677	<b>\$833</b>

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average  
Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 4**

<b>Investment Carrying Costs</b>								
1	2	3	4	5	6	7	8	6*7*8
Year	Supply Main	Development Main	Service Line	Meter	Total Investment	Cost of Debt	Ratio of Therms Consumed To Total	Investment Carrying Cost
2014	\$200	\$500	\$0	\$163	\$863	8.28%	60.96%	<b>\$44</b>
2015	\$194	\$484	\$0	\$155	\$833	8.28%	60.96%	<b>\$42</b>
2016	\$188	\$469	\$0	\$147	\$804	8.28%	60.96%	<b>\$41</b>
2017	\$182	\$454	\$0	\$140	\$776	8.28%	60.96%	<b>\$39</b>
2018	\$176	\$439	\$0	\$133	\$748	8.28%	60.96%	<b>\$38</b>
2019	\$170	\$425	\$0	\$126	\$721	8.28%	60.96%	<b>\$36</b>
2020	\$165	\$411	\$0	\$120	\$696	8.28%	60.96%	<b>\$35</b>
2021	\$160	\$398	\$0	\$114	\$672	8.28%	60.96%	<b>\$34</b>
2022	\$155	\$385	\$0	\$108	\$648	8.28%	60.96%	<b>\$33</b>
2023	\$150	\$373	\$0	\$103	\$626	8.28%	60.96%	<b>\$32</b>
2024	\$145	\$361	\$0	\$98	\$604	8.28%	60.96%	<b>\$30</b>
2025	\$140	\$349	\$0	\$93	\$582	8.28%	60.96%	<b>\$29</b>
2026	\$136	\$338	\$0	\$88	\$562	8.28%	60.96%	<b>\$28</b>
2027	\$132	\$327	\$0	\$84	\$543	8.28%	60.96%	<b>\$27</b>
2028	\$128	\$317	\$0	\$80	\$525	8.28%	60.96%	<b>\$26</b>
2029	\$124	\$307	\$0	\$76	\$507	8.28%	60.96%	<b>\$26</b>
2030	\$120	\$297	\$0	\$72	\$489	8.28%	60.96%	<b>\$25</b>
2031	\$116	\$287	\$0	\$68	\$471	8.28%	60.96%	<b>\$24</b>
2032	\$112	\$278	\$0	\$65	\$455	8.28%	60.96%	<b>\$23</b>
2033	\$108	\$269	\$0	\$62	\$439	8.28%	60.96%	<b>\$22</b>

**Table 5**

<b>Incremental Customer Costs</b>								
1	2	3	4	5=3*4	6	8=6*4	5+8	
Year	Monthly Adm. Cost	Annual Adm. Cost	Ratio Therms To Total Consumed	Annual Ratio Adm. Cost	Annual O&M Cost	Annual Ratio O&M Cost	Total Incremental Adm. & O&M Cost	
2014	\$2.03	\$24	60.96%	\$14.63	\$7.33	4.5	<b>\$19</b>	
2015	\$2.09	\$25	60.96%	\$15.24	\$7.56	4.6	<b>\$20</b>	
2016	\$2.16	\$26	60.96%	\$15.85	\$7.81	4.8	<b>\$21</b>	
2017	\$2.23	\$27	60.96%	\$16.46	\$8.05	4.9	<b>\$21</b>	
2018	\$2.30	\$28	60.96%	\$17.07	\$8.31	5.1	<b>\$22</b>	
2019	\$2.38	\$29	60.96%	\$17.68	\$8.58	5.2	<b>\$23</b>	
2020	\$2.45	\$29	60.96%	\$17.68	\$8.85	5.4	<b>\$23</b>	
2021	\$2.53	\$30	60.96%	\$18.29	\$9.13	5.6	<b>\$24</b>	
2022	\$2.61	\$31	60.96%	\$18.90	\$9.42	5.7	<b>\$25</b>	
2023	\$2.69	\$32	60.96%	\$19.51	\$9.72	5.9	<b>\$25</b>	
2024	\$2.78	\$33	60.96%	\$20.12	\$10.03	6.1	<b>\$26</b>	
2025	\$2.87	\$34	60.96%	\$20.72	\$10.35	6.3	<b>\$27</b>	
2026	\$2.96	\$36	60.96%	\$21.94	\$10.68	6.5	<b>\$28</b>	
2027	\$3.05	\$37	60.96%	\$22.55	\$11.03	6.7	<b>\$29</b>	
2028	\$3.15	\$38	60.96%	\$23.16	\$11.38	6.9	<b>\$30</b>	
2029	\$3.25	\$39	60.96%	\$23.77	\$11.74	7.2	<b>\$31</b>	
2030	\$3.36	\$40	60.96%	\$24.38	\$12.11	7.4	<b>\$32</b>	
2031	\$3.46	\$42	60.96%	\$25.60	\$12.50	7.6	<b>\$33</b>	
2032	\$3.57	\$43	60.96%	\$26.21	\$12.90	7.9	<b>\$34</b>	
2033	\$3.69	\$44	60.96%	\$26.82	\$13.31	8.1	<b>\$35</b>	

## Participants Test - Results

Appliance Type:  
CNG - Refueling (1)

Gas Utility Rate - IndianTown Gas  
Elec Utility Rate - Weighted Average  
Building Type - Residential

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Benefits				Costs							
	Avoided Electric KWH/KW Cost	Gas Rebate	Avoided Electric Appliance O&M	TOTAL BENEFITS	Gas Equipment Cost	Electric Equipment & Installation Cost	Gas Installation Cost	Gas Appliance O & M	Gas Supply Cost	Gas Energy Charge	Gas Customer Charge	TOTAL COSTS
	Table 1								Table 2	Table 3	Table 4	
	3	4	5	3 thru 5	7	8	9	10	11	12	13	7 thru 13
2014	\$647	\$4,500	\$900	\$6,047	\$31,140	(\$30,180)	\$1,795	\$431	\$348	\$252	\$67	\$3,853
2015	\$672	\$0	\$929	\$1,601	\$0	\$0	\$0	\$444	\$365	\$264	\$67	\$1,141
2016	\$699	\$0	\$958	\$1,657	\$0	\$0	\$0	\$459	\$383	\$276	\$67	\$1,185
2017	\$726	\$0	\$989	\$1,715	\$0	\$0	\$0	\$473	\$401	\$290	\$67	\$1,232
2018	\$755	\$0	\$1,020	\$1,775	\$0	\$0	\$0	\$488	\$421	\$304	\$67	\$1,280
2019	\$784	\$0	\$1,053	\$1,837	\$0	\$0	\$0	\$504	\$441	\$318	\$67	\$1,331
2020	\$815	\$0	\$1,087	\$1,901	\$0	\$0	\$0	\$520	\$462	\$334	\$67	\$1,384
2021	\$847	\$0	\$1,121	\$1,968	\$0	\$0	\$0	\$537	\$485	\$350	\$67	\$1,439
2022	\$880	\$0	\$1,157	\$2,037	\$0	\$0	\$0	\$554	\$508	\$367	\$67	\$1,496
2023	\$915	\$0	\$1,194	\$2,108	\$0	\$0	\$0	\$571	\$533	\$385	\$67	\$1,556
2024	\$950	\$0	\$1,232	\$2,182	\$0	\$0	\$0	\$590	\$558	\$403	\$67	\$1,619
2025	\$988	\$0	\$1,271	\$2,259	\$0	\$0	\$0	\$608	\$585	\$423	\$67	\$1,684
2026	\$1,026	\$0	\$1,312	\$2,338	\$0	\$0	\$0	\$628	\$614	\$443	\$67	\$1,752
2027	\$1,067	\$0	\$1,354	\$2,420	\$0	\$0	\$0	\$648	\$643	\$464	\$67	\$1,823
2028	\$1,108	\$0	\$1,397	\$2,505	\$0	\$0	\$0	\$669	\$674	\$487	\$67	\$1,897
2029	\$1,152	\$0	\$1,441	\$2,593	\$0	\$0	\$0	\$690	\$707	\$510	\$67	\$1,974
2030	\$1,197	\$0	\$1,487	\$2,684	\$0	\$0	\$0	\$712	\$741	\$535	\$67	\$2,055
2031	\$1,244	\$0	\$1,535	\$2,779	\$0	\$0	\$0	\$735	\$777	\$561	\$67	\$2,140
2032	\$1,293	\$0	\$1,584	\$2,877	\$0	\$0	\$0	\$758	\$814	\$588	\$67	\$2,228
2033	\$1,343	\$0	\$1,634	\$2,978	\$0	\$0	\$0	\$782	\$854	\$616	\$67	\$2,320

Present Value  
of Benefits \$36,348

Present Value  
of Costs \$26,381

Benefit/Cost Ratio	1.38
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**Associated Gas Distributors of Florida  
Residential Energy Conservation Program  
CNG - Refueling (1)**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Cost Per KWH	Annual KWH	Cost Per kW	Monthly Demand kW	Tax Rate	Electric Cost
A	B	C	D	E	F	$(B \cdot C + 12 \cdot D \cdot E) \cdot (1 + F)$
2014	\$0.1417	4,454	\$0.00	0.00	2.5%	<b>\$647</b>
2015	\$0.1473	4,454	\$0.00	0.00	2.5%	<b>\$672</b>
2016	\$0.1531	4,454	\$0.00	0.00	2.5%	<b>\$699</b>
2017	\$0.1591	4,454	\$0.00	0.00	2.5%	<b>\$726</b>
2018	\$0.1653	4,454	\$0.00	0.00	2.5%	<b>\$755</b>
2019	\$0.1718	4,454	\$0.00	0.00	2.5%	<b>\$784</b>
2020	\$0.1785	4,454	\$0.00	0.00	2.5%	<b>\$815</b>
2021	\$0.1855	4,454	\$0.00	0.00	2.5%	<b>\$847</b>
2022	\$0.1928	4,454	\$0.00	0.00	2.5%	<b>\$880</b>
2023	\$0.2003	4,454	\$0.00	0.00	2.5%	<b>\$915</b>
2024	\$0.2082	4,454	\$0.00	0.00	2.5%	<b>\$950</b>
2025	\$0.2163	4,454	\$0.00	0.00	2.5%	<b>\$988</b>
2026	\$0.2248	4,454	\$0.00	0.00	2.5%	<b>\$1,026</b>
2027	\$0.2336	4,454	\$0.00	0.00	2.5%	<b>\$1,067</b>
2028	\$0.2428	4,454	\$0.00	0.00	2.5%	<b>\$1,108</b>
2029	\$0.2523	4,454	\$0.00	0.00	2.5%	<b>\$1,152</b>
2030	\$0.2622	4,454	\$0.00	0.00	2.5%	<b>\$1,197</b>
2031	\$0.2725	4,454	\$0.00	0.00	2.5%	<b>\$1,244</b>
2032	\$0.2832	4,454	\$0.00	0.00	2.5%	<b>\$1,293</b>
2033	\$0.2943	4,454	\$0.00	0.00	2.5%	<b>\$1,343</b>

Year	Cost Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	$B \cdot C \cdot (1 + D)$
2014	\$0.5582	609	2.5%	<b>\$348</b>
2015	\$0.5851	609	2.5%	<b>\$365</b>
2016	\$0.6134	609	2.5%	<b>\$383</b>
2017	\$0.6430	609	2.5%	<b>\$401</b>
2018	\$0.6741	609	2.5%	<b>\$421</b>
2019	\$0.7066	609	2.5%	<b>\$441</b>
2020	\$0.7408	609	2.5%	<b>\$462</b>
2021	\$0.7765	609	2.5%	<b>\$485</b>
2022	\$0.8141	609	2.5%	<b>\$508</b>
2023	\$0.8534	609	2.5%	<b>\$533</b>
2024	\$0.8946	609	2.5%	<b>\$558</b>
2025	\$0.9378	609	2.5%	<b>\$585</b>
2026	\$0.9831	609	2.5%	<b>\$614</b>
2027	\$1.0306	609	2.5%	<b>\$643</b>
2028	\$1.0804	609	2.5%	<b>\$674</b>
2029	\$1.1325	609	2.5%	<b>\$707</b>
2030	\$1.1872	609	2.5%	<b>\$741</b>
2031	\$1.2446	609	2.5%	<b>\$777</b>
2032	\$1.3047	609	2.5%	<b>\$814</b>
2033	\$1.3677	609	2.5%	<b>\$854</b>

Year	Rate Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	$B \cdot C \cdot (1 + D)$
2014	\$0.4030	609	2.5%	<b>\$252</b>
2015	\$0.4225	609	2.5%	<b>\$264</b>
2016	\$0.4429	609	2.5%	<b>\$276</b>
2017	\$0.4643	609	2.5%	<b>\$290</b>
2018	\$0.4867	609	2.5%	<b>\$304</b>
2019	\$0.5102	609	2.5%	<b>\$318</b>
2020	\$0.5349	609	2.5%	<b>\$334</b>
2021	\$0.5607	609	2.5%	<b>\$350</b>
2022	\$0.5878	609	2.5%	<b>\$367</b>
2023	\$0.6162	609	2.5%	<b>\$385</b>
2024	\$0.6460	609	2.5%	<b>\$403</b>
2025	\$0.6772	609	2.5%	<b>\$423</b>
2026	\$0.7099	609	2.5%	<b>\$443</b>
2027	\$0.7442	609	2.5%	<b>\$464</b>
2028	\$0.7801	609	2.5%	<b>\$487</b>
2029	\$0.8178	609	2.5%	<b>\$510</b>
2030	\$0.8573	609	2.5%	<b>\$535</b>
2031	\$0.8987	609	2.5%	<b>\$561</b>
2032	\$0.9421	609	2.5%	<b>\$588</b>
2033	\$0.9876	609	2.5%	<b>\$616</b>

Year	Monthly Customer Charge	Annual Customer Charge	Ratio - Appliance to Total	Tax Rate	Pro-Rated Customer Charge
A	B	C	D	E	$C \cdot D \cdot (1 + E)$
2014	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2015	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2016	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2017	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2018	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2019	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2020	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2021	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2022	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2023	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2024	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2025	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2026	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2027	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2028	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2029	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2030	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2031	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2032	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>
2033	\$9.00	\$108.00	60.96%	2.5%	<b>\$67</b>

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

<b>Gas:</b>	<b>CNG - Refueling (1)</b>	
<b>Year:</b>	2014	
<b>CO2:</b>	3.04 tonnes CO2/year	
<b>Allowance:</b>	<b>\$4,500</b>	
<b>Gas Utility:</b>	<b>IndianTown Gas</b>	
<b>I. Installed Cost Data</b>		
Equipment		\$31,140
Installation		\$1,795
Total Customer Cost		<u>\$32,935</u>
Replacement Installation		\$1,200
Total Replacement (incl Equip)		<u>\$32,340</u>
Utility Rebate		\$4,500
<b>II. Operating Data</b>		
Therms Consumed	609	
Total Building Therms	999	
O&M (excluding energy)	\$431	
<b>III. Rates and Charges</b>		
ECCR	\$0.0247	
Distribution Charge	\$0.3784	
Commodity Charge	\$0.5582	
Taxes & Fees	2.50%	
Customer Chg	\$9.00	
Average Life (years)	30	
Appliance Therms /Total Therms	60.96%	
EC Program Adm. Cost	\$1.68	
<b>IV. New Customer Installation Costs</b>		
Service Line	\$200	
Development Main	\$500	
Other	\$0	
Meter	\$163	
Total		<u>\$863</u>
<b>V. New Customer Admin. Cost \$/month</b>		\$2.03

<b>Elec:</b>	<b>CNG - Refueling (1)</b>	
<b>CO2:</b>	3.19 tonnes CO2/year	
<b>Rate:</b>	Weighted Average	
<b>Bldg:</b>	Residential	
<b>VI. Electric Cost Data</b>		
Equipment		\$28,980
Installation		\$1,200
Breaker and Wiring Savings		\$0
Total Customer Cost		<u>\$30,180</u>
<b>VII. Energy Conserved Data</b>		
Monthly Demand kW	0.00	
Annual kWh	4,454	
O&M (excluding energy)	\$900	
<b>VIII. Electric Rates and Charges</b>		
Electric Rate per kW	\$0.00	
Electric Rate per kWh	\$0.14173	
Electric Fuel rate	\$0.0435	
Electric Base rate	\$0.0982	
Electric Taxes & Fees	2.50%	
Customer Chg	\$8.91	
Average Life in Yrs	30	

FLORIDA DIVISION OF  
CHESAPEAKE UTILITIES CORP



## RIM Test - Results

**Appliance Type**  
**CNG - Refueling (1)**

**Gas Utility Rate - CPK Central FL Gas**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

	Incremental Revenue Energy Charge	Incremental Revenue Cost of Gas	Incremental Revenue Customer Charge	Total Gas Revenue	Gas Supply Cost	Investment Carrying Cost	Incremental Customer Costs	Program Cost	Total Costs	
	Table 1	Table 1A	Table 2	Table 3	Table 4	Table 5				
	1	2	3	4	2 thru 4	6	7	8	9	6 thru 9
2014	\$243	\$528	\$256	\$1,028	\$528	\$118	\$34	\$4,500	\$5,180	
2015	\$255	\$554	\$256	\$1,065	\$554	\$114	\$35	\$0	\$702	
2016	\$267	\$580	\$256	\$1,104	\$580	\$110	\$36	\$0	\$726	
2017	\$280	\$608	\$256	\$1,145	\$608	\$106	\$37	\$0	\$751	
2018	\$294	\$638	\$256	\$1,188	\$638	\$102	\$38	\$0	\$779	
2019	\$308	\$669	\$256	\$1,233	\$669	\$98	\$39	\$0	\$807	
2020	\$323	\$701	\$256	\$1,280	\$701	\$95	\$41	\$0	\$837	
2021	\$338	\$735	\$256	\$1,329	\$735	\$92	\$42	\$0	\$869	
2022	\$355	\$770	\$256	\$1,381	\$770	\$88	\$43	\$0	\$902	
2023	\$372	\$807	\$256	\$1,436	\$807	\$85	\$44	\$0	\$937	
2024	\$390	\$846	\$256	\$1,493	\$846	\$82	\$46	\$0	\$975	
2025	\$409	\$887	\$256	\$1,552	\$887	\$79	\$47	\$0	\$1,014	
2026	\$428	\$930	\$256	\$1,615	\$930	\$76	\$49	\$0	\$1,056	
2027	\$449	\$975	\$256	\$1,681	\$975	\$74	\$51	\$0	\$1,100	
2028	\$471	\$1,022	\$256	\$1,749	\$1,022	\$71	\$52	\$0	\$1,146	
2029	\$494	\$1,072	\$256	\$1,821	\$1,072	\$69	\$54	\$0	\$1,194	
2030	\$517	\$1,123	\$256	\$1,897	\$1,123	\$66	\$56	\$0	\$1,245	
2031	\$542	\$1,178	\$256	\$1,976	\$1,178	\$64	\$58	\$0	\$1,299	
2032	\$569	\$1,234	\$256	\$2,059	\$1,234	\$61	\$59	\$0	\$1,355	
2033	\$596	\$1,294	\$256	\$2,146	\$1,294	\$59	\$61	\$0	\$1,414	

Present Value  
of Benefits

\$21,861

Present Value  
of Costs

\$18,835

Benefit/Cost  
Ratio

**1.16**

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Residential**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Fuel Rate Escalator	4.83%	Depreciation Rate - Supply Main	3.30%
Gas Energy Charge Escalator	4.83%	Depreciation Rate - Development Main	3.30%
Gas Customer Charge Escalator	0.00%	Depreciation Rate - Service Line	3.60%
O&M/Inflation Escalator	3.19%	Depreciation Rate - Meter	4.00%

**Table 1**

<b>Revenue - Energy Charge</b>			
1	2	3	2*3
Year	Therms	Base Rate	Total Charge
2014	609	\$0.3995	<b>\$243</b>
2015	609	\$0.4188	<b>\$255</b>
2016	609	\$0.4391	<b>\$267</b>
2017	609	\$0.4603	<b>\$280</b>
2018	609	\$0.4825	<b>\$294</b>
2019	609	\$0.5058	<b>\$308</b>
2020	609	\$0.5302	<b>\$323</b>
2021	609	\$0.5558	<b>\$338</b>
2022	609	\$0.5827	<b>\$355</b>
2023	609	\$0.6108	<b>\$372</b>
2024	609	\$0.6403	<b>\$390</b>
2025	609	\$0.6713	<b>\$409</b>
2026	609	\$0.7037	<b>\$428</b>
2027	609	\$0.7377	<b>\$449</b>
2028	609	\$0.7733	<b>\$471</b>
2029	609	\$0.8106	<b>\$494</b>
2030	609	\$0.8498	<b>\$517</b>
2031	609	\$0.8908	<b>\$542</b>
2032	609	\$0.9339	<b>\$569</b>
2033	609	\$0.9790	<b>\$596</b>

**Table 1a**

<b>Revenue - Cost of Gas</b>			
1	2	3	2*3
Year	Therms	Fuel Rate	Total Charge
2014	609	\$0.8674	<b>\$528</b>
2015	609	\$0.9093	<b>\$554</b>
2016	609	\$0.9532	<b>\$580</b>
2017	609	\$0.9992	<b>\$608</b>
2018	609	\$1.0475	<b>\$638</b>
2019	609	\$1.0981	<b>\$669</b>
2020	609	\$1.1511	<b>\$701</b>
2021	609	\$1.2067	<b>\$735</b>
2022	609	\$1.2650	<b>\$770</b>
2023	609	\$1.3261	<b>\$807</b>
2024	609	\$1.3902	<b>\$846</b>
2025	609	\$1.4573	<b>\$887</b>
2026	609	\$1.5277	<b>\$930</b>
2027	609	\$1.6015	<b>\$975</b>
2028	609	\$1.6788	<b>\$1,022</b>
2029	609	\$1.7599	<b>\$1,072</b>
2030	609	\$1.8449	<b>\$1,123</b>
2031	609	\$1.9340	<b>\$1,178</b>
2032	609	\$2.0274	<b>\$1,234</b>
2033	609	\$2.1254	<b>\$1,294</b>

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 2**

<b>Revenue - Customer Charge</b>				
1	2	3	4	3*4
Year	Monthly Customer Charge	Annual Customer Charge	Ratio Therms To Total Consumed	Prorated Annual Customer Charge
2014	\$35.04	\$420.48	60.96%	<b>\$256</b>
2015	\$35.04	\$420.48	60.96%	<b>\$256</b>
2016	\$35.04	\$420.48	60.96%	<b>\$256</b>
2017	\$35.04	\$420.48	60.96%	<b>\$256</b>
2018	\$35.04	\$420.48	60.96%	<b>\$256</b>
2019	\$35.04	\$420.48	60.96%	<b>\$256</b>
2020	\$35.04	\$420.48	60.96%	<b>\$256</b>
2021	\$35.04	\$420.48	60.96%	<b>\$256</b>
2022	\$35.04	\$420.48	60.96%	<b>\$256</b>
2023	\$35.04	\$420.48	60.96%	<b>\$256</b>
2024	\$35.04	\$420.48	60.96%	<b>\$256</b>
2025	\$35.04	\$420.48	60.96%	<b>\$256</b>
2026	\$35.04	\$420.48	60.96%	<b>\$256</b>
2027	\$35.04	\$420.48	60.96%	<b>\$256</b>
2028	\$35.04	\$420.48	60.96%	<b>\$256</b>
2029	\$35.04	\$420.48	60.96%	<b>\$256</b>
2030	\$35.04	\$420.48	60.96%	<b>\$256</b>
2031	\$35.04	\$420.48	60.96%	<b>\$256</b>
2032	\$35.04	\$420.48	60.96%	<b>\$256</b>
2033	\$35.04	\$420.48	60.96%	<b>\$256</b>

**Table 3**

<b>Gas Costs</b>			
1	2	3	2*3
Year	Therms	Gas Supply Rate	Gas Supply Cost
2014	609	\$0.8674	<b>\$528</b>
2015	609	\$0.9093	<b>\$554</b>
2016	609	\$0.9532	<b>\$580</b>
2017	609	\$0.9992	<b>\$608</b>
2018	609	\$1.0475	<b>\$638</b>
2019	609	\$1.0981	<b>\$669</b>
2020	609	\$1.1511	<b>\$701</b>
2021	609	\$1.2067	<b>\$735</b>
2022	609	\$1.2650	<b>\$770</b>
2023	609	\$1.3261	<b>\$807</b>
2024	609	\$1.3902	<b>\$846</b>
2025	609	\$1.4573	<b>\$887</b>
2026	609	\$1.5277	<b>\$930</b>
2027	609	\$1.6015	<b>\$975</b>
2028	609	\$1.6788	<b>\$1,022</b>
2029	609	\$1.7599	<b>\$1,072</b>
2030	609	\$1.8449	<b>\$1,123</b>
2031	609	\$1.9340	<b>\$1,178</b>
2032	609	\$2.0274	<b>\$1,234</b>
2033	609	\$2.1254	<b>\$1,294</b>

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average  
Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Table 4

Investment Carrying Costs								
1	2	3	4	5	6	7	8	6*7*8
Year	Supply Main	Development Main	Service Line	Meter	Total Investment	Cost of Debt	Ratio of Therms Consumed To Total	Investment Carrying Cost
2014	\$1,275	\$500	\$0	\$1,197	\$2,972	6.52%	60.96%	\$118
2015	\$1,233	\$484	\$0	\$1,149	\$2,866	6.52%	60.96%	\$114
2016	\$1,192	\$468	\$0	\$1,103	\$2,763	6.52%	60.96%	\$110
2017	\$1,153	\$453	\$0	\$1,059	\$2,665	6.52%	60.96%	\$106
2018	\$1,115	\$438	\$0	\$1,017	\$2,570	6.52%	60.96%	\$102
2019	\$1,078	\$424	\$0	\$976	\$2,478	6.52%	60.96%	\$98
2020	\$1,042	\$410	\$0	\$937	\$2,389	6.52%	60.96%	\$95
2021	\$1,008	\$396	\$0	\$900	\$2,304	6.52%	60.96%	\$92
2022	\$975	\$383	\$0	\$864	\$2,222	6.52%	60.96%	\$88
2023	\$943	\$370	\$0	\$829	\$2,142	6.52%	60.96%	\$85
2024	\$912	\$358	\$0	\$796	\$2,066	6.52%	60.96%	\$82
2025	\$882	\$346	\$0	\$764	\$1,992	6.52%	60.96%	\$79
2026	\$853	\$335	\$0	\$733	\$1,921	6.52%	60.96%	\$76
2027	\$825	\$324	\$0	\$704	\$1,853	6.52%	60.96%	\$74
2028	\$798	\$313	\$0	\$676	\$1,787	6.52%	60.96%	\$71
2029	\$772	\$303	\$0	\$649	\$1,724	6.52%	60.96%	\$69
2030	\$747	\$293	\$0	\$623	\$1,663	6.52%	60.96%	\$66
2031	\$722	\$283	\$0	\$598	\$1,603	6.52%	60.96%	\$64
2032	\$698	\$274	\$0	\$574	\$1,546	6.52%	60.96%	\$61
2033	\$675	\$265	\$0	\$551	\$1,491	6.52%	60.96%	\$59

Table 5

Incremental Customer Costs							
1	2	3	4	5=3*4	6	8=6*4	5+8
Year	Monthly Adm. Cost	Annual Adm. Cost	Ratio Therms To Total Consumed	Annual Ratio Adm. Cost	Annual O&M Cost	Annual Ratio O&M Cost	Total Incremental Adm. & O&M Cost
2014	\$2.91	\$35	60.96%	\$21.33	\$20.26	12.3	\$34
2015	\$3.00	\$36	60.96%	\$21.94	\$20.91	12.7	\$35
2016	\$3.10	\$37	60.96%	\$22.55	\$21.57	13.2	\$36
2017	\$3.20	\$38	60.96%	\$23.16	\$22.26	13.6	\$37
2018	\$3.30	\$40	60.96%	\$24.38	\$22.97	14.0	\$38
2019	\$3.40	\$41	60.96%	\$24.99	\$23.70	14.4	\$39
2020	\$3.51	\$42	60.96%	\$25.60	\$24.46	14.9	\$41
2021	\$3.63	\$44	60.96%	\$26.82	\$25.24	15.4	\$42
2022	\$3.74	\$45	60.96%	\$27.43	\$26.05	15.9	\$43
2023	\$3.86	\$46	60.96%	\$28.04	\$26.88	16.4	\$44
2024	\$3.98	\$48	60.96%	\$29.26	\$27.73	16.9	\$46
2025	\$4.11	\$49	60.96%	\$29.87	\$28.62	17.4	\$47
2026	\$4.24	\$51	60.96%	\$31.09	\$29.53	18.0	\$49
2027	\$4.38	\$53	60.96%	\$32.31	\$30.47	18.6	\$51
2028	\$4.52	\$54	60.96%	\$32.92	\$31.45	19.2	\$52
2029	\$4.66	\$56	60.96%	\$34.14	\$32.45	19.8	\$54
2030	\$4.81	\$58	60.96%	\$35.35	\$33.48	20.4	\$56
2031	\$4.96	\$60	60.96%	\$36.57	\$34.55	21.1	\$58
2032	\$5.12	\$61	60.96%	\$37.18	\$35.65	21.7	\$59
2033	\$5.28	\$63	60.96%	\$38.40	\$36.79	22.4	\$61

## Participants Test - Results

Appliance Type:  
CNG - Refueling (1)

Gas Utility Rate - CPK Central FL Gas  
Elec Utility Rate - Weighted Average  
Building Type - Residential

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Benefits				Costs							
	Avoided Electric KWH/KW Cost	Gas Rebate	Avoided Electric Appliance O&M	TOTAL BENEFITS	Gas Equipment Cost	Electric Equipment & Installation Cost	Gas Installation Cost	Gas Appliance O & M	Gas Supply Cost	Gas Energy Charge	Gas Customer Charge	TOTAL COSTS
	Table 1								Table 2	Table 3	Table 4	
	3	4	5	3 thru 5	7	8	9	10	11	12	13	7 thru 13
2014	\$647	\$4,500	\$900	\$6,047	\$31,140	(\$30,180)	\$1,795	\$444	\$541	\$249	\$263	\$4,252
2015	\$672	\$0	\$929	\$1,601	\$0	\$0	\$0	\$458	\$567	\$261	\$263	\$1,549
2016	\$699	\$0	\$958	\$1,657	\$0	\$0	\$0	\$472	\$595	\$274	\$263	\$1,604
2017	\$726	\$0	\$989	\$1,715	\$0	\$0	\$0	\$487	\$624	\$287	\$263	\$1,661
2018	\$755	\$0	\$1,020	\$1,775	\$0	\$0	\$0	\$503	\$654	\$301	\$263	\$1,721
2019	\$784	\$0	\$1,053	\$1,837	\$0	\$0	\$0	\$519	\$685	\$316	\$263	\$1,783
2020	\$815	\$0	\$1,087	\$1,901	\$0	\$0	\$0	\$536	\$718	\$331	\$263	\$1,848
2021	\$847	\$0	\$1,121	\$1,968	\$0	\$0	\$0	\$553	\$753	\$347	\$263	\$1,915
2022	\$880	\$0	\$1,157	\$2,037	\$0	\$0	\$0	\$570	\$789	\$364	\$263	\$1,986
2023	\$915	\$0	\$1,194	\$2,108	\$0	\$0	\$0	\$589	\$828	\$381	\$263	\$2,060
2024	\$950	\$0	\$1,232	\$2,182	\$0	\$0	\$0	\$607	\$868	\$400	\$263	\$2,137
2025	\$988	\$0	\$1,271	\$2,259	\$0	\$0	\$0	\$627	\$909	\$419	\$263	\$2,218
2026	\$1,026	\$0	\$1,312	\$2,338	\$0	\$0	\$0	\$647	\$953	\$439	\$263	\$2,302
2027	\$1,067	\$0	\$1,354	\$2,420	\$0	\$0	\$0	\$667	\$999	\$460	\$263	\$2,390
2028	\$1,108	\$0	\$1,397	\$2,505	\$0	\$0	\$0	\$689	\$1,048	\$483	\$263	\$2,482
2029	\$1,152	\$0	\$1,441	\$2,593	\$0	\$0	\$0	\$711	\$1,098	\$506	\$263	\$2,578
2030	\$1,197	\$0	\$1,487	\$2,684	\$0	\$0	\$0	\$733	\$1,151	\$530	\$263	\$2,678
2031	\$1,244	\$0	\$1,535	\$2,779	\$0	\$0	\$0	\$757	\$1,207	\$556	\$263	\$2,782
2032	\$1,293	\$0	\$1,584	\$2,877	\$0	\$0	\$0	\$781	\$1,265	\$583	\$263	\$2,892
2033	\$1,343	\$0	\$1,634	\$2,978	\$0	\$0	\$0	\$806	\$1,326	\$611	\$263	\$3,006

Present Value  
of Benefits \$36,348

Present Value  
of Costs \$34,036

Benefit/Cost Ratio	1.07
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**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**CNG - Refueling (1)**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Cost Per KWH	Annual KWH	Cost Per kW	Monthly Demand kW	Tax Rate	Electric Cost
A	B	C	D	E	F	(B*C+12*D*E)*(1+F)
2014	\$0.1417	4,454	\$0.00	0.00	2.5%	\$647
2015	\$0.1473	4,454	\$0.00	0.00	2.5%	\$672
2016	\$0.1531	4,454	\$0.00	0.00	2.5%	\$699
2017	\$0.1591	4,454	\$0.00	0.00	2.5%	\$726
2018	\$0.1653	4,454	\$0.00	0.00	2.5%	\$755
2019	\$0.1718	4,454	\$0.00	0.00	2.5%	\$784
2020	\$0.1785	4,454	\$0.00	0.00	2.5%	\$815
2021	\$0.1855	4,454	\$0.00	0.00	2.5%	\$847
2022	\$0.1928	4,454	\$0.00	0.00	2.5%	\$880
2023	\$0.2003	4,454	\$0.00	0.00	2.5%	\$915
2024	\$0.2082	4,454	\$0.00	0.00	2.5%	\$950
2025	\$0.2163	4,454	\$0.00	0.00	2.5%	\$988
2026	\$0.2248	4,454	\$0.00	0.00	2.5%	\$1,026
2027	\$0.2336	4,454	\$0.00	0.00	2.5%	\$1,067
2028	\$0.2428	4,454	\$0.00	0.00	2.5%	\$1,108
2029	\$0.2523	4,454	\$0.00	0.00	2.5%	\$1,152
2030	\$0.2622	4,454	\$0.00	0.00	2.5%	\$1,197
2031	\$0.2725	4,454	\$0.00	0.00	2.5%	\$1,244
2032	\$0.2832	4,454	\$0.00	0.00	2.5%	\$1,293
2033	\$0.2943	4,454	\$0.00	0.00	2.5%	\$1,343

Year	Cost Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.8674	609	2.5%	\$541
2015	\$0.9093	609	2.5%	\$567
2016	\$0.9532	609	2.5%	\$595
2017	\$0.9992	609	2.5%	\$624
2018	\$1.0475	609	2.5%	\$654
2019	\$1.0981	609	2.5%	\$685
2020	\$1.1511	609	2.5%	\$718
2021	\$1.2067	609	2.5%	\$753
2022	\$1.2650	609	2.5%	\$789
2023	\$1.3261	609	2.5%	\$828
2024	\$1.3902	609	2.5%	\$868
2025	\$1.4573	609	2.5%	\$909
2026	\$1.5277	609	2.5%	\$953
2027	\$1.6015	609	2.5%	\$999
2028	\$1.6788	609	2.5%	\$1,048
2029	\$1.7599	609	2.5%	\$1,098
2030	\$1.8449	609	2.5%	\$1,151
2031	\$1.9340	609	2.5%	\$1,207
2032	\$2.0274	609	2.5%	\$1,265
2033	\$2.1254	609	2.5%	\$1,326

Year	Rate Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.3995	609	2.5%	\$249
2015	\$0.4188	609	2.5%	\$261
2016	\$0.4391	609	2.5%	\$274
2017	\$0.4603	609	2.5%	\$287
2018	\$0.4825	609	2.5%	\$301
2019	\$0.5058	609	2.5%	\$316
2020	\$0.5302	609	2.5%	\$331
2021	\$0.5558	609	2.5%	\$347
2022	\$0.5827	609	2.5%	\$364
2023	\$0.6108	609	2.5%	\$381
2024	\$0.6403	609	2.5%	\$400
2025	\$0.6713	609	2.5%	\$419
2026	\$0.7037	609	2.5%	\$439
2027	\$0.7377	609	2.5%	\$460
2028	\$0.7733	609	2.5%	\$483
2029	\$0.8106	609	2.5%	\$506
2030	\$0.8498	609	2.5%	\$530
2031	\$0.8908	609	2.5%	\$556
2032	\$0.9339	609	2.5%	\$583
2033	\$0.9790	609	2.5%	\$611

Year	Monthly Customer Charge	Annual Customer Charge	Ratio - Appliance to Total	Tax Rate	Pro-Rated Customer Charge
A	B	C	D	E	C*D*(1+E)
2014	\$35.04	\$420.48	60.96%	2.5%	\$263
2015	\$35.04	\$420.48	60.96%	2.5%	\$263
2016	\$35.04	\$420.48	60.96%	2.5%	\$263
2017	\$35.04	\$420.48	60.96%	2.5%	\$263
2018	\$35.04	\$420.48	60.96%	2.5%	\$263
2019	\$35.04	\$420.48	60.96%	2.5%	\$263
2020	\$35.04	\$420.48	60.96%	2.5%	\$263
2021	\$35.04	\$420.48	60.96%	2.5%	\$263
2022	\$35.04	\$420.48	60.96%	2.5%	\$263
2023	\$35.04	\$420.48	60.96%	2.5%	\$263
2024	\$35.04	\$420.48	60.96%	2.5%	\$263
2025	\$35.04	\$420.48	60.96%	2.5%	\$263
2026	\$35.04	\$420.48	60.96%	2.5%	\$263
2027	\$35.04	\$420.48	60.96%	2.5%	\$263
2028	\$35.04	\$420.48	60.96%	2.5%	\$263
2029	\$35.04	\$420.48	60.96%	2.5%	\$263
2030	\$35.04	\$420.48	60.96%	2.5%	\$263
2031	\$35.04	\$420.48	60.96%	2.5%	\$263
2032	\$35.04	\$420.48	60.96%	2.5%	\$263
2033	\$35.04	\$420.48	60.96%	2.5%	\$263

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

<b>Gas:</b>	<b>CNG - Refueling (1)</b>	
<b>Year:</b>	2014	
<b>CO2:</b>	3.04 tonnes CO2/year	
<b>Allowance:</b>	<b>\$4,500</b>	
<b>Gas Utility:</b>	CPK Central FL Gas	
<b>I. Installed Cost Data</b>		
Equipment		\$31,140
Installation		\$1,795
Total Customer Cost		<u>\$32,935</u>
Replacement Installation		\$1,200
Total Replacement (incl Equip)		<u>\$32,340</u>
Utility Rebate		\$4,500
<b>II. Operating Data</b>		
Therms Consumed	609	
Total Building Therms	999	
O&M (excluding energy)	\$444	
<b>III. Rates and Charges</b>		
ECCR	\$0.0799	
Distribution Charge	\$0.3196	
Commodity Charge	\$0.8674	
Taxes & Fees	2.50%	
Customer Chg	\$35.04	
Average Life (years)	30	
Appliance Therms /Total Therms	60.96%	
EC Program Adm. Cost	\$0.28	
<b>IV. New Customer Installation Costs</b>		
Service Line	\$1,275	
Development Main	\$500	
Other	\$0	
Meter	\$1,197	
Total		\$2,972
<b>V. New Customer Admin. Cost \$/month</b>		\$2.91

<b>Elec:</b>	<b>CNG - Refueling (1)</b>	
<b>CO2:</b>	3.19 tonnes CO2/year	
<b>Rate:</b>	Weighted Average	
<b>Bldg:</b>	Residential	
<b>VI. Electric Cost Data</b>		
Equipment		\$28,980
Installation		\$1,200
Breaker and Wiring Savings		\$0
Total Customer Cost		<u>\$30,180</u>
<b>VII. Energy Conserved Data</b>		
Monthly Demand kW	0.00	
Annual kWh	4,454	
O&M (excluding energy)	\$900	
<b>VIII. Electric Rates and Charges</b>		
Electric Rate per kW	\$0.00	
Electric Rate per kWh	\$0.14173	
Electric Fuel rate	\$0.0435	
Electric Base rate	\$0.0982	
Electric Taxes & Fees	2.50%	
Customer Chg	\$8.91	
Average Life in Yrs	30	

# SEBRING GAS SYSTEM

## RIM Test - Results

**Appliance Type**  
**CNG - Refueling (1)**

**Gas Utility Rate - Sebring Gas**  
**Elec Utility Rate - Weighted Average**  
**Building Type - Residential**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

	Incremental Revenue Energy Charge	Incremental Revenue Cost of Gas	Incremental Revenue Customer Charge	Total Gas Revenue	Gas Supply Cost	Investment Carrying Cost	Incremental Customer Costs	Program Cost	Total Costs	
	Table 1	Table 1A	Table 2		Table 3	Table 4	Table 5			
	1	2	3	4	2 thru 4	6	7	8	9	6 thru 9
2014		\$337	\$340	\$88	\$765	\$340	\$66	\$23	\$4,504	\$4,933
2015		\$354	\$357	\$88	\$798	\$357	\$64	\$24	\$4	\$448
2016		\$371	\$374	\$88	\$832	\$374	\$62	\$25	\$4	\$464
2017		\$389	\$392	\$88	\$868	\$392	\$60	\$26	\$4	\$481
2018		\$407	\$411	\$88	\$906	\$411	\$58	\$27	\$4	\$499
2019		\$427	\$431	\$88	\$945	\$431	\$56	\$27	\$4	\$518
2020		\$448	\$451	\$88	\$987	\$451	\$54	\$28	\$4	\$538
2021		\$469	\$473	\$88	\$1,030	\$473	\$52	\$29	\$4	\$559
2022		\$492	\$496	\$88	\$1,076	\$496	\$51	\$30	\$4	\$581
2023		\$516	\$520	\$88	\$1,124	\$520	\$49	\$31	\$4	\$604
2024		\$541	\$545	\$88	\$1,174	\$545	\$48	\$32	\$4	\$629
2025		\$567	\$571	\$88	\$1,226	\$571	\$46	\$33	\$4	\$655
2026		\$594	\$599	\$88	\$1,281	\$599	\$45	\$34	\$4	\$682
2027		\$623	\$628	\$88	\$1,339	\$628	\$43	\$35	\$4	\$710
2028		\$653	\$658	\$88	\$1,399	\$658	\$42	\$36	\$4	\$740
2029		\$685	\$690	\$88	\$1,462	\$690	\$41	\$37	\$4	\$772
2030		\$718	\$723	\$88	\$1,529	\$723	\$39	\$39	\$4	\$805
2031		\$752	\$758	\$88	\$1,598	\$758	\$38	\$40	\$4	\$840
2032		\$789	\$795	\$88	\$1,671	\$795	\$37	\$41	\$4	\$877
2033		\$827	\$833	\$88	\$1,748	\$833	\$36	\$43	\$4	\$916

Present Value  
of Benefits

\$17,129

Present Value  
of Costs

\$13,729

Benefit/Cost  
Ratio

1.25



**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Residential**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

Fuel Rate Escalator	4.83%	Depreciation Rate - Supply Main	2.90%
Gas Energy Charge Escalator	4.83%	Depreciation Rate - Development Main	2.90%
Gas Customer Charge Escalator	0.00%	Depreciation Rate - Service Line	3.10%
O&M/Inflation Escalator	3.19%	Depreciation Rate - Meter	4.00%

**Table 1**

Revenue - Energy Charge			
1	2	3	2*3
Year	Therms	Base Rate	Total Charge
2014	609	\$0.5542	\$337
2015	609	\$0.5809	\$354
2016	609	\$0.6090	\$371
2017	609	\$0.6384	\$389
2018	609	\$0.6692	\$407
2019	609	\$0.7015	\$427
2020	609	\$0.7354	\$448
2021	609	\$0.7710	\$469
2022	609	\$0.8082	\$492
2023	609	\$0.8472	\$516
2024	609	\$0.8881	\$541
2025	609	\$0.9310	\$567
2026	609	\$0.9760	\$594
2027	609	\$1.0232	\$623
2028	609	\$1.0726	\$653
2029	609	\$1.1244	\$685
2030	609	\$1.1787	\$718
2031	609	\$1.2356	\$752
2032	609	\$1.2953	\$789
2033	609	\$1.3579	\$827

**Table 1a**

Revenue - Cost of Gas			
1	2	3	2*3
Year	Therms	Fuel Rate	Total Charge
2014	609	\$0.5586	\$340
2015	609	\$0.5856	\$357
2016	609	\$0.6138	\$374
2017	609	\$0.6435	\$392
2018	609	\$0.6746	\$411
2019	609	\$0.7072	\$431
2020	609	\$0.7413	\$451
2021	609	\$0.7771	\$473
2022	609	\$0.8146	\$496
2023	609	\$0.8540	\$520
2024	609	\$0.8952	\$545
2025	609	\$0.9385	\$571
2026	609	\$0.9838	\$599
2027	609	\$1.0313	\$628
2028	609	\$1.0811	\$658
2029	609	\$1.1334	\$690
2030	609	\$1.1881	\$723
2031	609	\$1.2455	\$758
2032	609	\$1.3056	\$795
2033	609	\$1.3687	\$833

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 2**

Revenue - Customer Charge				
1	2	3	4	3*4
Year	Monthly Customer Charge	Annual Customer Charge	Ratio Therms To Total Consumed	Prorated Annual Customer Charge
2014	\$12.00	\$144.00	60.96%	\$88
2015	\$12.00	\$144.00	60.96%	\$88
2016	\$12.00	\$144.00	60.96%	\$88
2017	\$12.00	\$144.00	60.96%	\$88
2018	\$12.00	\$144.00	60.96%	\$88
2019	\$12.00	\$144.00	60.96%	\$88
2020	\$12.00	\$144.00	60.96%	\$88
2021	\$12.00	\$144.00	60.96%	\$88
2022	\$12.00	\$144.00	60.96%	\$88
2023	\$12.00	\$144.00	60.96%	\$88
2024	\$12.00	\$144.00	60.96%	\$88
2025	\$12.00	\$144.00	60.96%	\$88
2026	\$12.00	\$144.00	60.96%	\$88
2027	\$12.00	\$144.00	60.96%	\$88
2028	\$12.00	\$144.00	60.96%	\$88
2029	\$12.00	\$144.00	60.96%	\$88
2030	\$12.00	\$144.00	60.96%	\$88
2031	\$12.00	\$144.00	60.96%	\$88
2032	\$12.00	\$144.00	60.96%	\$88
2033	\$12.00	\$144.00	60.96%	\$88

**Table 3**

Gas Costs			
1	2	3	2*3
Year	Therms	Gas Supply Rate	Gas Supply Cost
2014	609	\$0.5586	\$340
2015	609	\$0.5856	\$357
2016	609	\$0.6138	\$374
2017	609	\$0.6435	\$392
2018	609	\$0.6746	\$411
2019	609	\$0.7072	\$431
2020	609	\$0.7413	\$451
2021	609	\$0.7771	\$473
2022	609	\$0.8146	\$496
2023	609	\$0.8540	\$520
2024	609	\$0.8952	\$545
2025	609	\$0.9385	\$571
2026	609	\$0.9838	\$599
2027	609	\$1.0313	\$628
2028	609	\$1.0811	\$658
2029	609	\$1.1334	\$690
2030	609	\$1.1881	\$723
2031	609	\$1.2455	\$758
2032	609	\$1.3056	\$795
2033	609	\$1.3687	\$833

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

**Appliance Type**  
CNG - Refueling (1)

**Utility Rate - Weighted Average**  
**Building Type - Large Commercial Hospitality**

Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)

**Table 4**

<b>Investment Carrying Costs</b>								
1	2	3	4	5	6	7	8	6*7*8
Year	Supply Main	Development Main	Service Line	Meter	Total Investment	Cost of Debt	Ratio of Therms Consumed To Total	Investment Carrying Cost
2014	\$500	\$500	\$0	\$335	\$1,335	8.07%	60.96%	\$66
2015	\$486	\$486	\$0	\$322	\$1,294	8.07%	60.96%	\$64
2016	\$472	\$472	\$0	\$309	\$1,253	8.07%	60.96%	\$62
2017	\$458	\$458	\$0	\$297	\$1,213	8.07%	60.96%	\$60
2018	\$445	\$445	\$0	\$285	\$1,175	8.07%	60.96%	\$58
2019	\$432	\$432	\$0	\$274	\$1,138	8.07%	60.96%	\$56
2020	\$419	\$419	\$0	\$263	\$1,101	8.07%	60.96%	\$54
2021	\$407	\$407	\$0	\$252	\$1,066	8.07%	60.96%	\$52
2022	\$395	\$395	\$0	\$242	\$1,032	8.07%	60.96%	\$51
2023	\$384	\$384	\$0	\$232	\$1,000	8.07%	60.96%	\$49
2024	\$373	\$373	\$0	\$223	\$969	8.07%	60.96%	\$48
2025	\$362	\$362	\$0	\$214	\$938	8.07%	60.96%	\$46
2026	\$352	\$352	\$0	\$205	\$909	8.07%	60.96%	\$45
2027	\$342	\$342	\$0	\$197	\$881	8.07%	60.96%	\$43
2028	\$332	\$332	\$0	\$189	\$853	8.07%	60.96%	\$42
2029	\$322	\$322	\$0	\$181	\$825	8.07%	60.96%	\$41
2030	\$313	\$313	\$0	\$174	\$800	8.07%	60.96%	\$39
2031	\$304	\$304	\$0	\$167	\$775	8.07%	60.96%	\$38
2032	\$295	\$295	\$0	\$160	\$750	8.07%	60.96%	\$37
2033	\$286	\$286	\$0	\$154	\$726	8.07%	60.96%	\$36

**Table 5**

<b>Incremental Customer Costs</b>							
1	2	3	4	5=3*4	6	8=6*4	5+8
Year	Monthly Adm. Cost	Annual Adm. Cost	Ratio Therms To Total Consumed	Annual Ratio Adm. Cost	Annual O&M Cost	Annual Ratio O&M Cost	Total Incremental Adm. & O&M Cost
2014	\$2.41	\$29	60.96%	\$17.68	\$9.43	5.7	\$23
2015	\$2.49	\$30	60.96%	\$18.29	\$9.73	5.9	\$24
2016	\$2.57	\$31	60.96%	\$18.90	\$10.04	6.1	\$25
2017	\$2.65	\$32	60.96%	\$19.51	\$10.36	6.3	\$26
2018	\$2.73	\$33	60.96%	\$20.12	\$10.69	6.5	\$27
2019	\$2.82	\$34	60.96%	\$20.72	\$11.03	6.7	\$27
2020	\$2.91	\$35	60.96%	\$21.33	\$11.39	6.9	\$28
2021	\$3.00	\$36	60.96%	\$21.94	\$11.75	7.2	\$29
2022	\$3.10	\$37	60.96%	\$22.55	\$12.12	7.4	\$30
2023	\$3.20	\$38	60.96%	\$23.16	\$12.51	7.6	\$31
2024	\$3.30	\$40	60.96%	\$24.38	\$12.91	7.9	\$32
2025	\$3.40	\$41	60.96%	\$24.99	\$13.32	8.1	\$33
2026	\$3.51	\$42	60.96%	\$25.60	\$13.75	8.4	\$34
2027	\$3.62	\$43	60.96%	\$26.21	\$14.18	8.6	\$35
2028	\$3.74	\$45	60.96%	\$27.43	\$14.64	8.9	\$36
2029	\$3.86	\$46	60.96%	\$28.04	\$15.10	9.2	\$37
2030	\$3.98	\$48	60.96%	\$29.26	\$15.59	9.5	\$39
2031	\$4.11	\$49	60.96%	\$29.87	\$16.08	9.8	\$40
2032	\$4.24	\$51	60.96%	\$31.09	\$16.60	10.1	\$41
2033	\$4.38	\$53	60.96%	\$32.31	\$17.12	10.4	\$43

## Participants Test - Results

Appliance Type:  
CNG - Refueling (1)

Gas Utility Rate - Sebring Gas  
Elec Utility Rate - Weighted Average  
Building Type - Residential

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Benefits				Costs							
	Avoided Electric KWH/KW Cost	Gas Rebate	Avoided Electric Appliance O&M	TOTAL BENEFITS	Gas Equipment Cost	Electric Equipment & Installation Cost	Gas Installation Cost	Gas Appliance O & M	Gas Supply Cost	Gas Energy Charge	Gas Customer Charge	TOTAL COSTS
	Table 1								Table 2	Table 3	Table 4	
1	3	4	5	3 thru 5	7	8	9	10	11	12	13	7 thru 13
2014	\$647	\$4,500	\$900	\$6,047	\$31,140	(\$30,180)	\$1,795	\$433	\$349	\$346	\$90	\$3,972
2015	\$672	\$0	\$929	\$1,601	\$0	\$0	\$0	\$447	\$365	\$363	\$90	\$1,265
2016	\$699	\$0	\$958	\$1,657	\$0	\$0	\$0	\$461	\$383	\$380	\$90	\$1,314
2017	\$726	\$0	\$989	\$1,715	\$0	\$0	\$0	\$476	\$402	\$398	\$90	\$1,366
2018	\$755	\$0	\$1,020	\$1,775	\$0	\$0	\$0	\$491	\$421	\$418	\$90	\$1,419
2019	\$784	\$0	\$1,053	\$1,837	\$0	\$0	\$0	\$506	\$441	\$438	\$90	\$1,476
2020	\$815	\$0	\$1,087	\$1,901	\$0	\$0	\$0	\$523	\$463	\$459	\$90	\$1,534
2021	\$847	\$0	\$1,121	\$1,968	\$0	\$0	\$0	\$539	\$485	\$481	\$90	\$1,595
2022	\$880	\$0	\$1,157	\$2,037	\$0	\$0	\$0	\$556	\$508	\$504	\$90	\$1,659
2023	\$915	\$0	\$1,194	\$2,108	\$0	\$0	\$0	\$574	\$533	\$529	\$90	\$1,726
2024	\$950	\$0	\$1,232	\$2,182	\$0	\$0	\$0	\$593	\$559	\$554	\$90	\$1,795
2025	\$988	\$0	\$1,271	\$2,259	\$0	\$0	\$0	\$611	\$586	\$581	\$90	\$1,868
2026	\$1,026	\$0	\$1,312	\$2,338	\$0	\$0	\$0	\$631	\$614	\$609	\$90	\$1,944
2027	\$1,067	\$0	\$1,354	\$2,420	\$0	\$0	\$0	\$651	\$644	\$639	\$90	\$2,023
2028	\$1,108	\$0	\$1,397	\$2,505	\$0	\$0	\$0	\$672	\$675	\$669	\$90	\$2,106
2029	\$1,152	\$0	\$1,441	\$2,593	\$0	\$0	\$0	\$693	\$707	\$702	\$90	\$2,192
2030	\$1,197	\$0	\$1,487	\$2,684	\$0	\$0	\$0	\$715	\$741	\$736	\$90	\$2,282
2031	\$1,244	\$0	\$1,535	\$2,779	\$0	\$0	\$0	\$738	\$777	\$771	\$90	\$2,377
2032	\$1,293	\$0	\$1,584	\$2,877	\$0	\$0	\$0	\$762	\$815	\$808	\$90	\$2,475
2033	\$1,343	\$0	\$1,634	\$2,978	\$0	\$0	\$0	\$786	\$854	\$847	\$90	\$2,578

Present Value  
of Benefits \$36,348

Present Value  
of Costs \$28,969

Benefit/Cost Ratio	1.25
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**Associated Gas Distributors of Florida  
Residential Energy Conservation Program  
CNG - Refueling (1)**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

Year	Cost Per KWH	Annual KWH	Cost Per kW	Monthly Demand kW	Tax Rate	Electric Cost
A	B	C	D	E	F	(B*C+12*D*E)*(1+F)
2014	\$0.1417	4,454	\$0.00	0.00	2.5%	\$647
2015	\$0.1473	4,454	\$0.00	0.00	2.5%	\$672
2016	\$0.1531	4,454	\$0.00	0.00	2.5%	\$699
2017	\$0.1591	4,454	\$0.00	0.00	2.5%	\$726
2018	\$0.1653	4,454	\$0.00	0.00	2.5%	\$755
2019	\$0.1718	4,454	\$0.00	0.00	2.5%	\$784
2020	\$0.1785	4,454	\$0.00	0.00	2.5%	\$815
2021	\$0.1855	4,454	\$0.00	0.00	2.5%	\$847
2022	\$0.1928	4,454	\$0.00	0.00	2.5%	\$880
2023	\$0.2003	4,454	\$0.00	0.00	2.5%	\$915
2024	\$0.2082	4,454	\$0.00	0.00	2.5%	\$950
2025	\$0.2163	4,454	\$0.00	0.00	2.5%	\$988
2026	\$0.2248	4,454	\$0.00	0.00	2.5%	\$1,026
2027	\$0.2336	4,454	\$0.00	0.00	2.5%	\$1,067
2028	\$0.2428	4,454	\$0.00	0.00	2.5%	\$1,108
2029	\$0.2523	4,454	\$0.00	0.00	2.5%	\$1,152
2030	\$0.2622	4,454	\$0.00	0.00	2.5%	\$1,197
2031	\$0.2725	4,454	\$0.00	0.00	2.5%	\$1,244
2032	\$0.2832	4,454	\$0.00	0.00	2.5%	\$1,293
2033	\$0.2943	4,454	\$0.00	0.00	2.5%	\$1,343

Year	Cost Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.5586	609	2.5%	\$349
2015	\$0.5856	609	2.5%	\$365
2016	\$0.6138	609	2.5%	\$383
2017	\$0.6435	609	2.5%	\$402
2018	\$0.6746	609	2.5%	\$421
2019	\$0.7072	609	2.5%	\$441
2020	\$0.7413	609	2.5%	\$463
2021	\$0.7771	609	2.5%	\$485
2022	\$0.8146	609	2.5%	\$508
2023	\$0.8540	609	2.5%	\$533
2024	\$0.8952	609	2.5%	\$559
2025	\$0.9385	609	2.5%	\$586
2026	\$0.9838	609	2.5%	\$614
2027	\$1.0313	609	2.5%	\$644
2028	\$1.0811	609	2.5%	\$675
2029	\$1.1334	609	2.5%	\$707
2030	\$1.1881	609	2.5%	\$741
2031	\$1.2455	609	2.5%	\$777
2032	\$1.3056	609	2.5%	\$815
2033	\$1.3687	609	2.5%	\$854

Year	Rate Per Therm	Annual Therms	Tax Rate	Gas Cost
A	B	C	D	B*C*(1+D)
2014	\$0.5542	609	2.5%	\$346
2015	\$0.5809	609	2.5%	\$363
2016	\$0.6090	609	2.5%	\$380
2017	\$0.6384	609	2.5%	\$398
2018	\$0.6692	609	2.5%	\$418
2019	\$0.7015	609	2.5%	\$438
2020	\$0.7354	609	2.5%	\$459
2021	\$0.7710	609	2.5%	\$481
2022	\$0.8082	609	2.5%	\$504
2023	\$0.8472	609	2.5%	\$529
2024	\$0.8881	609	2.5%	\$554
2025	\$0.9310	609	2.5%	\$581
2026	\$0.9760	609	2.5%	\$609
2027	\$1.0232	609	2.5%	\$639
2028	\$1.0726	609	2.5%	\$669
2029	\$1.1244	609	2.5%	\$702
2030	\$1.1787	609	2.5%	\$736
2031	\$1.2356	609	2.5%	\$771
2032	\$1.2953	609	2.5%	\$808
2033	\$1.3579	609	2.5%	\$847

Year	Monthly Customer Charge	Annual Customer Charge	Ratio - Appliance to Total	Tax Rate	Pro-Rated Customer Charge
A	B	C	D	E	C*D*(1+E)
2014	\$12.00	\$144.00	60.96%	2.5%	\$90
2015	\$12.00	\$144.00	60.96%	2.5%	\$90
2016	\$12.00	\$144.00	60.96%	2.5%	\$90
2017	\$12.00	\$144.00	60.96%	2.5%	\$90
2018	\$12.00	\$144.00	60.96%	2.5%	\$90
2019	\$12.00	\$144.00	60.96%	2.5%	\$90
2020	\$12.00	\$144.00	60.96%	2.5%	\$90
2021	\$12.00	\$144.00	60.96%	2.5%	\$90
2022	\$12.00	\$144.00	60.96%	2.5%	\$90
2023	\$12.00	\$144.00	60.96%	2.5%	\$90
2024	\$12.00	\$144.00	60.96%	2.5%	\$90
2025	\$12.00	\$144.00	60.96%	2.5%	\$90
2026	\$12.00	\$144.00	60.96%	2.5%	\$90
2027	\$12.00	\$144.00	60.96%	2.5%	\$90
2028	\$12.00	\$144.00	60.96%	2.5%	\$90
2029	\$12.00	\$144.00	60.96%	2.5%	\$90
2030	\$12.00	\$144.00	60.96%	2.5%	\$90
2031	\$12.00	\$144.00	60.96%	2.5%	\$90
2032	\$12.00	\$144.00	60.96%	2.5%	\$90
2033	\$12.00	\$144.00	60.96%	2.5%	\$90

**Associated Gas Distributors of Florida  
Residential Energy Conservation Program**

*Other Equipment Included in Analysis: Water Heating - Tankless (1), Cooking Equipment (1), Furnace (1), Clothes Drying (1)*

<b>Gas:</b>	<b>CNG - Refueling (1)</b>
<b>Year:</b>	<b>2014</b>
<b>CO2:</b>	<b>3.04 tonnes CO2/year</b>
<b>Allowance:</b>	<b>\$4,500</b>
<b>Gas Utility:</b>	<b>Sebring Gas</b>
<b>I. Installed Cost Data</b>	
Equipment	\$31,140
Installation	\$1,795
Total Customer Cost	<u>\$32,935</u>
Replacement Installation	\$1,200
Total Replacement (incl Equip)	<u>\$32,340</u>
Utility Rebate	\$4,500
<b>II. Operating Data</b>	
Therms Consumed	609
Total Building Therms	999
O&M (excluding energy)	\$433
<b>III. Rates and Charges</b>	
ECCR	\$0.0609
Distribution Charge	\$0.4933
Commodity Charge	\$0.5586
Taxes & Fees	2.50%
Customer Chg	\$12.00
Average Life (years)	30
Appliance Therms /Total Therms	60.96%
EC Program Adm. Cost	\$3.90
<b>IV. New Customer Installation Costs</b>	
Service Line	\$500
Development Main	\$500
Other	\$0
Meter	\$335
Total	<u>\$1,335</u>
<b>V. New Customer Admin. Cost \$/month</b>	<b>\$2.41</b>

<b>Elec:</b>	<b>CNG - Refueling (1)</b>
<b>CO2:</b>	<b>3.19 tonnes CO2/year</b>
<b>Rate:</b>	<b>Weighted Average</b>
<b>Bldg:</b>	<b>Residential</b>
<b>VI. Electric Cost Data</b>	
Equipment	\$28,980
Installation	\$1,200
Breaker and Wiring Savings	\$0
Total Customer Cost	<u>\$30,180</u>
<b>VII. Energy Conserved Data</b>	
Monthly Demand kW	0.00
Annual kWh	4,454
O&M (excluding energy)	\$900
<b>VIII. Electric Rates and Charges</b>	
Electric Rate per kW	\$0.00
Electric Rate per kWh	\$0.14173
Electric Fuel rate	\$0.0435
Electric Base rate	\$0.0982
Electric Taxes & Fees	2.50%
Customer Chg	\$8.91
Average Life in Yrs	30