Woodland, O'Brien & Scott

Consultants to the Housing Industry

New Homeowner Energy Preference Survey
Closings March 2015 through February 2016

Specially Prepared for:

ESC
Energy Solutions Center

Prepared by:

Charlie Scott,
Woodland, O'Brien & Scott
Phone: 651 450-0098

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I. Introduction

Woodland, O'Brien & Scott is a management consulting and research firm specializing in providing counsel to real estate service companies nationwide, in the area of customer preferences, satisfaction and relations, with the specific objective of assisting clients to:

- understand current market absorption and customer preferences
- achieve high levels of customer satisfaction on a consistent basis
- increase customer referral sales as an integral part of the company's marketing efforts

To that end, Woodland, O'Brien & Scott solicits the feedback from current homeowners. This customer feedback serves as the basis for determining customer preference and attitudes for our clients' services.

This analysis and the findings have been prepared as a result of the feedback from new homeowners (existing homes or new construction) - customers who closed on their new residence generally from March 2015 through February 2016. Responses have been received from approximately 1.8% of those contacted (667 out of 37,121). Given this level of response, the results presented in this report may be considered representative of the reaction of the remaining homeowners during this timeframe.

Feedback for this study period was received from homeowners in 15 geographically distributed Metropolitan Statistical Areas (MSA details on page 5). Additional detailed results for each region and MSA are shown in the statistical reports and comment summaries. Going forward, up-to-date results and full details will available on our website at www.woodlandobrien.com.

All observations and recommendations are presented without the benefit of significant knowledge of ESC Member operations. Therefore, these results are unencumbered by any internal prejudices within those operations. We believe these finding should serve as a guide for management to better understand current energy source absorption, customer preferences, and serve as a quantitative benchmark for measuring future progress.

II. Statistical Methodology

A. Data Collection

Fifteen Metropolitan Statistical Areas (MSA's) were included in the sample. Each MSA was classified into one of five regional markets— Northeast, Midwest, Southeast, South and West. The Northeast market was divided into the original two markets from the 2011 study and the other 3 markets. Within each MSA, home addresses were generated as the sampling frame based on the closing date of new and existing home sales over the time frame 3/1/15 to 2/29/16[1]. A random sample of addresses was selected to have a survey mailed to them from each MSA's sampling frame. Final samples included all returned surveys from each MSA's random sample. Details of the MSA's and their respective sampling information are provided in the table on the next page.

B. Statistical Analysis Techniques

The population of interest for this study is households that were included in the original sampling frame from the 15 MSA's. Within each MSA, the sample responses were treated as a simple random sample (SRS) representative of the MSA's entire study range. Both the regional and national study results were computed based on a stratified random sample of the MSA's included in the study. Estimates and their associate Margin of Error (ME's) are weighted based on the number of transactions within each market. The only exception to this is preferred and current estimates of at least 1 gas appliance, all 4 gas appliances and all 4 electric appliances within each region. Those estimates are weighted equally for each survey response and then weighted by the regional transaction size for the national estimate. Estimates of the natural gas market share were computed using simulations of 10,000 trials based on projections of current and preferred energy sources. Margin of errors for all estimates were computed using a 95% confidence level.

C. Constraints of Study and Data Analysis

The sampling method for each MSA was based on a direct mail survey resulting in an expected response rate of 1-3%. Assuming that the households responding are representative of all households in the population, ME's are then computed and the resulting analysis are valid estimates of the true parameters of interest. To account for potential error in the ability of those respondents to represent the population of interest, a conservative estimate of the ME is reported. Some respondents failed to answer certain questions, or their answer choices were not anticipated, resulting in the omission of those responses from this report/analysis. All non-answered or unanticipated responses were omitted in this study, but were not removed from the Energy Solution Center website, thus creating slight statistical differences (within the margin of error) between this published report and the website statistics. It is assumed that these omitted responses are not in any way dependent upon the household's current and/or preferred energy. The question involving current fireplace energy source did not differentiate in choosing "No Fireplace" and leaving the question blank. Consequently, the estimated percent with a fireplace assumes a blank response refers to the homeowner not having a fireplace.

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1. Dover DE, Dothan AL and Jackson MS expanded the closing dates to include 3/1/14 to 2/29/16.

D. Metropolitan Statistical Areas Information

Region	MSA	Median Sale Price[1]	Transactions Selected	Mailed Surveys	# Responses/ Response Rate
NE	Dover	$191,500	2,121	2,121	57 2.7%
	Salisbury	$159,900	4,604	2,500	52 2.1%
	Allentown/ Bethlehem	$175,400	10,008	2,500	41 1.6%
	Buffalo	$124,500	6,999	2,500	30 1.2%
	Newark	$375,000	112,745	2,500	22 0.9%
MW	Grand Rapids	$149,800	9,874	2,500	38 1.5%
	Nashville	$204,700	37,930	2,500	46 1.8%
SE	Atlanta	$167,800	81,652	2,500	27 1.1%
	Dothan	$125,000	2,871	2,500	60 2.4%
	Tampa/ St. Petersburg	$179,900	48,845	2,500	50 2.0%
South	Jackson	$161,500	4,654	2,500	38 1.5%
	San Antonio	$195,500	30,288	2,500	48 1.9%
	Shreveport	$158,200	3,904	2,500	52 2.1%
West	Phoenix	$223,100	73,405	2,500	42 1.7%
	Portland	$326,700	39,162	2,500	64 2.6%

1. Median Sale Price provided by Axciom Corporation, 114 5th Ave., Suite 700, New York, NY 10011.

When referring to a market, the following geographical areas are used as defined by the Office of Management and Budget. Availability of Revised Delineations of Metropolitan Statistical Areas, Micropolitan Statistical Areas, and Combined Statistical Areas is available from the OMB web site at *https://www.whitehouse.gov/sites/default/files/omb/bulletins/2015/15-01.pdf*. The areas actually sampled from may differ from the listed MSA's below.

Region	MSA	Geographical Areas
NE	Dover	Kent County
	Salisbury	Sussex County, DE; Somerset County, MD; Wicomico County, MD; Worcester County, MD
	Allentown/ Bethlehem	Warren County, NJ; Carbon County, PA; Lehigh County, PA; Northampton County, PA
	Buffalo	Erie County, Niagara County
	Newark	Essex County, NJ; Hunterdon County, NJ; Morris County, NJ; Somerset County, NJ; Sussex County, NJ; Union County, NJ; Pike County, PA
MW	Grand Rapids	Barry County, Kent County, Montcalm County, Ottawa County
	Nashville	Cannon County, Cheatham County, Davidson County, Dickson County, Hickman County, Macon County, Maury County, Robertson County, Rutherford County, Smith County, Sumner County, Trousdale County, Williamson County, Wilson County
SE	Atlanta	Barrow County, Bartow County, Butts County, Carroll County, Cherokee County, Clayton County, Cobb County, Coweta County, Dawson County, DeKalb County, Douglas County, Fayette County, Forsyth County, Fulton County, Gwinnett County, Haralson County, Heard County, Henry County, Jasper County, Lamar County, Meriwether County, Morgan County, Newton County, Paulding County, Pickens County, Pike County, Rockdale County, Spalding County, Walton County
	Dothan	Geneva County, Henry County, Houston County
	Tampa/ St. Petersburg	Hernando County, Hillsborough County, Pasco County, Pinellas County
South	Jackson	Copiah County, Hinds County, Madison County, Rankin County, Simpson County, Yazoo County
	San Antonio	Atascosa County, Bandera County, Bexar County, Comal County, Guadalupe County, Kendall County, Medina County, Wilson County
	Shreveport	Bossier Parish, Caddo Parish, De Soto Parish, Webster Parish
West	Phoenix	Maricopa County, Pinal County
	Portland	Clackamas County, OR; Columbia County, OR; Multnomah County, OR; Washington County, OR; Yamhill County, OR; Clark County, WA; Skamania County, WA

E. Survey

Woodland, O'Brien & Scott
1329 County Road D Circle East
St. Paul, MN 55109

Standard
US Postage
PAID
Capitol Direct

Homeowner
1234 Main Street
Indianapolis, IN 46208

.....Thank you for your support!

Your responses will help one of these outstanding organizations.....

NO POSTAGE NECESSARY IF MAILED IN THE UNITED STATES

BUSINESS REPLY MAIL
FIRST-CLASS MAIL PERMIT NO 6911 ST PAUL MN

POSTAGE WILL BE PAID BY ADDRESSEE

WOODLAND, O'BRIEN & ASSOCIATES
1329 COUNTY ROAD D CIRCLE EAST
ST PAUL, MN 55109-6004

Please tell us about your energy preference.

Dear Homeowner,

A donation to a charity of your choice will be made as a way to thank you for your cooperation in this short survey. As a homeowner, we're looking for your feedback regarding your current and preferred energy sources.

Please take a moment to complete the short survey below or complete it online at www.wosenergy.com. Your opinion counts! We will donate money to the charity of your choice as selected at the end of the survey. We look forward to receiving your response as soon as possible as we'll be making the charity donation on June 30th. Limit one response per household.

Thank you again for your cooperation, we very much appreciate your time and effort. Enjoy your day!

Woodland, O'Brien & Scott and Energy Solutions Center

Please tear off and drop the postage paid card in the mail or complete the survey online at www.wosenergy.com

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Your Current Home Energy Sources - Please indicate what your **current** energy source is for the following:

Home Heating	□ Natural Gas	□ Electric	□ Propane	□ Wood	□ Oil	□ I don't know
Water Heater	□ Natural Gas	□ Electric	□ Propane		□ Oil	□ I don't know
Cooking / Stove	□ Natural Gas	□ Electric	□ Propane			□ I don't know
Clothes Dryer	□ Natural Gas	□ Electric	□ Propane			□ I don't know
Fireplace	□ Natural Gas	□ Electric	□ Propane	□ Wood		□ No Fireplace

If you had the **choice** of natural gas or electric for the following, which would you prefer?

Home Heating	□ Natural Gas	□ Electric	□ Doesn't matter
Water Heater	□ Natural Gas	□ Electric	□ Doesn't matter
Cooking / Stove	□ Natural Gas	□ Electric	□ Doesn't matter
Clothes Dryer	□ Natural Gas	□ Electric	□ Doesn't matter

Please share a few reasons why you have these preferences. _____

_____

Please share any dislikes with your current energy sources. _____

_____

For your **home heating**, which energy source would you recommend to a family member/friend? □ Natural Gas □ Electric □ Other

If other, please describe _____

For your home **water heater**, which energy source would you recommend to a family member/friend? □ Natural Gas □ Electric □ Other

If other, please describe _____

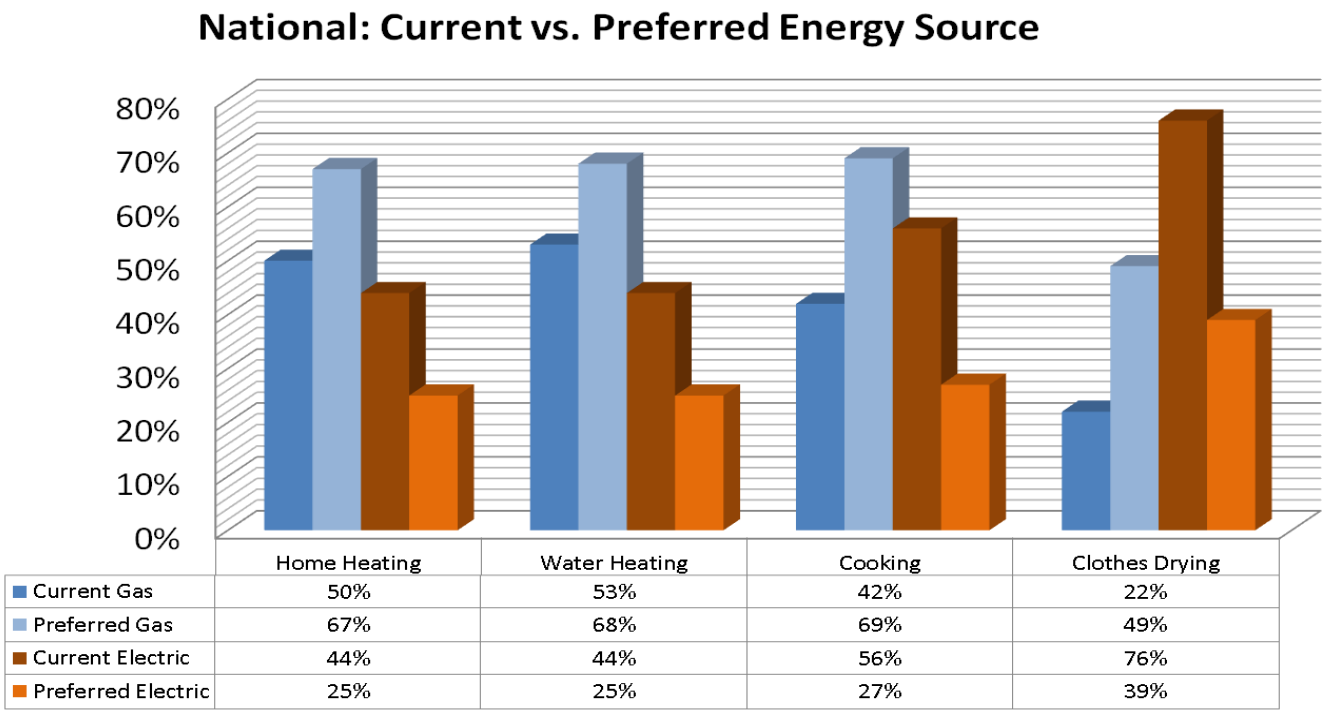
Please identify to which charity you would like your donation to be directed: (Please Check One)

□ Habitat for Humanity □ Treats for Troops □ Boys & Girls Clubs of America □ ASPCA (Am. Society Prevention Animal Cruelty)

Thank you! Please drop this postage paid business reply card in the mail today or reply online at www.wosenergy.com!

III. Findings

A. National Charts & Data



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	50%	53%	42%	22%
Preferred Gas	67%	68%	69%	49%
Current Electric	44%	44%	56%	76%
Preferred Electric	25%	25%	27%	39%

The collective responses for the 15 Metropolitan Statistical Area (MSA) surveyed indicate the current total market absorption for natural gas home heating is 50%. These new homeowners were also queried as to what energy source they preferred in their home. Natural gas was the most preferred heating source, adding 17 points to the current market share and reaching 67%. Electric heated home preference declined 19 points from the current market share to just 25%. These differences from current to preferred meet or exceed the margin of error and thus, at the highest level, assumption of this customer preference data would suggest that even though natural gas heated homes may have nearly equal market share; natural gas home heating market has significant opportunities for expansion. Please note that this 15 MSA study rolls up the results into a "National" projection. This report and projections are within the margin of error and consistent with the American Gas Association's, Residential Natural Gas Market Survey, January 2015.

When parsing the database by the survey respondents' current heating energy source, other telling customer preferences can be found. For example, 92% of the current natural gas heating respondents maintain their preference and willingness to recommend to family members natural gas heating. We call this the natural gas heating retention and recommendation rate.

On the other hand, the electric heating retention exercise shows a dramatically different result. Electric heating homeowner retention is just 48%. In other words, more than half of the current electric heating homeowners would prefer and recommend a different energy source.

All study participants (regardless of current heating source) were asked which energy source they would recommend to a family member or friend for heating. The biggest percentage, 70.6%, indicated they would recommend natural gas, while just 23.8% indicated they would recommend electric heating. This constitutes nearly a 3 to 1 natural gas heating willingness to refer advantage over electric heating to family members or friends.

Another significant finding involves "all" natural gas homes current market share versus the preferred energy source. According to the National Results, currently 13% of all respondents reside in an "all" natural gas home. However, 37% of the respondents prefer an "all" natural gas home, equating to almost a 300% natural gas market opportunity. Conversely, "all" electric homes were reported by 34% of the National Results respondents with just a 15% preference. This infers that all electric are being delivered to more than twice as many homeowners than they prefer.

In the 15 MSAs surveyed –

1) Homeowners of recently purchased homes chose a natural gas heated home almost equally to the number purchased by electric heat source.

2) More homeowners preferred natural gas heated homes than purchased natural gas homes. Sixty-seven percent of the respondent preferred natural gas versus 50% that actually had natural gas heat. This represents almost a 17% natural gas unmet customer preference.

3) Less than half of the homeowners who purchased an electric heated home prefer to have electric heat.

4) Homeowners with natural gas heated homes had nearly twice the willingness to recommend at 92%, than electric heat homeowners willingness to refer at 48%.

5) The greatest opportunity for natural gas expansion appears to be in cooking where natural gas is preferred by 69% compared to just 27% for electric cooking.

6) Thirteen percent of the homes currently are reported as 'all natural gas' yet, 37% of the respondents said they prefer an 'all nat. gas' home – a 275% increase! Thirty-four percent reported 'all electric' homes with only 15% preferring 'all electric," indicating that less than half of the all-electric homes prefer this house environment.

7) Customer comments are more positive in support of natural gas as an energy source for all appliances and are more emoting ("feel," "like," "efficient" etc.).

National – Data/Tables

Current Energy Source

Current energy data shows no statistical difference between natural gas and electric usage in home and water heating for the homes represented in this sample. Electric is currently the predominant energy source for cooking and clothes drying. It is estimated that 51% of homes nationally have a fireplace with a Margin of Error (ME) = ±7% and in those homes natural gas and wood serve as the primary source of energy for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking. Natural gas and electric are preferred at similar rates for clothes drying.

When preference is broken down by the homes' current energy source the data shows for home heating, water heating and cooking, preference for natural gas is significantly greater than preference for electric. For clothes drying, reliable estimates could not be made nationally due to limited data in some markets.

Projections

Projected market share for natural gas shows a definitive increase for home heating, water heating and cooking. Among households wanting at least 1 gas appliance and all gas there is a significant projected growth, while all electric preference shows a significant drop.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	50%	7%
	Electric	44%	
Water Heating	Natural Gas	53%	7%
	Electric	44%	
Cooking	Natural Gas	42%	7%
	Electric	56%	
Clothes Drying	Natural Gas	22%	7%
	Electric	76%	
Fireplace	Natural Gas	32%	13%
	Electric	18%	
	Wood	44%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	67%	7%
	Electric	25%	
Water Heating	Natural Gas	68%	7%
	Electric	25%	
Cooking	Natural Gas	69%	7%
	Electric	27%	
Clothes Drying	Natural Gas	49%	7%
	Electric	39%	

Preference for Current Energy Source

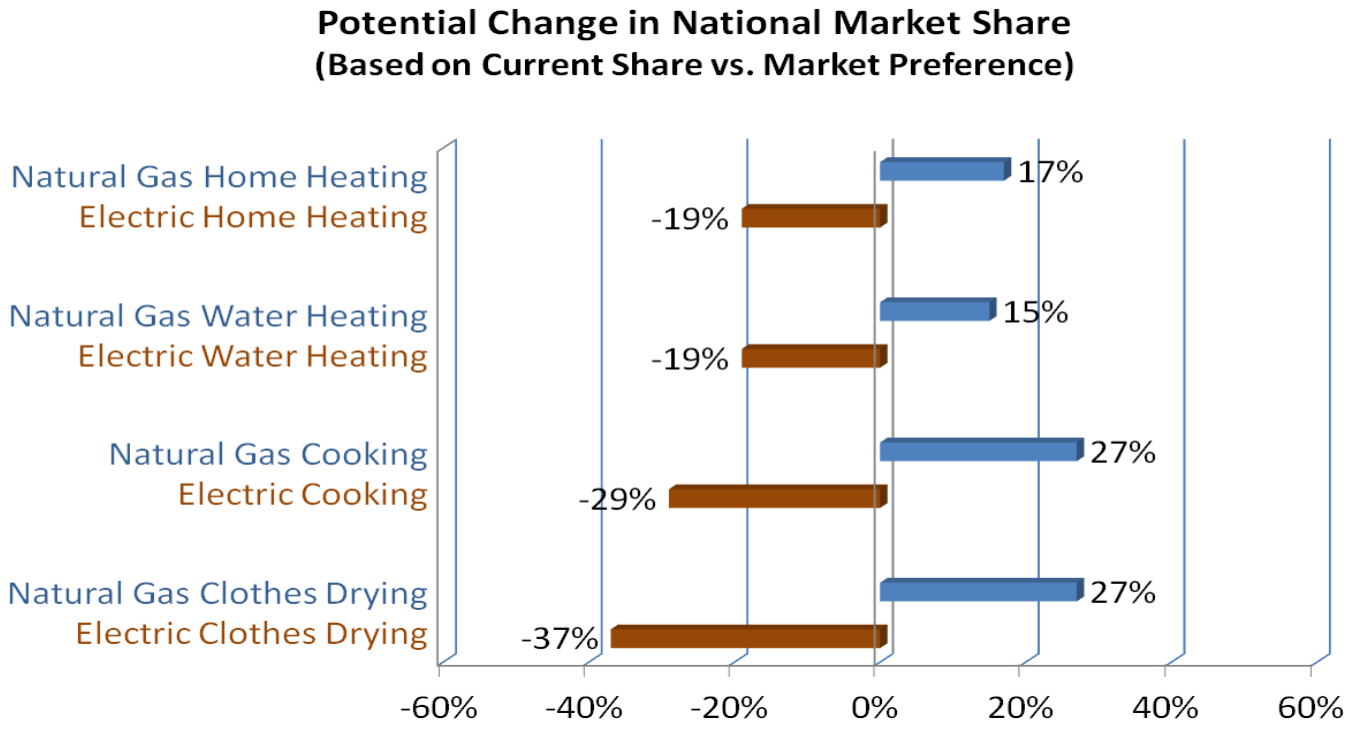
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	92%	10%
	Electric	48%	13%
Water Heating	Natural Gas	90%	10%
	Electric	44%	17%

Overall Energy Source

	Status	Estimate	±ME
At least 1 Gas	Current	53%	8%
	Preferred	79%	
All Gas	Current	13%	
	Preferred	37%	
All Electric	Current	34%	
	Preferred	15%	

1. Insufficient data to make valid estimate

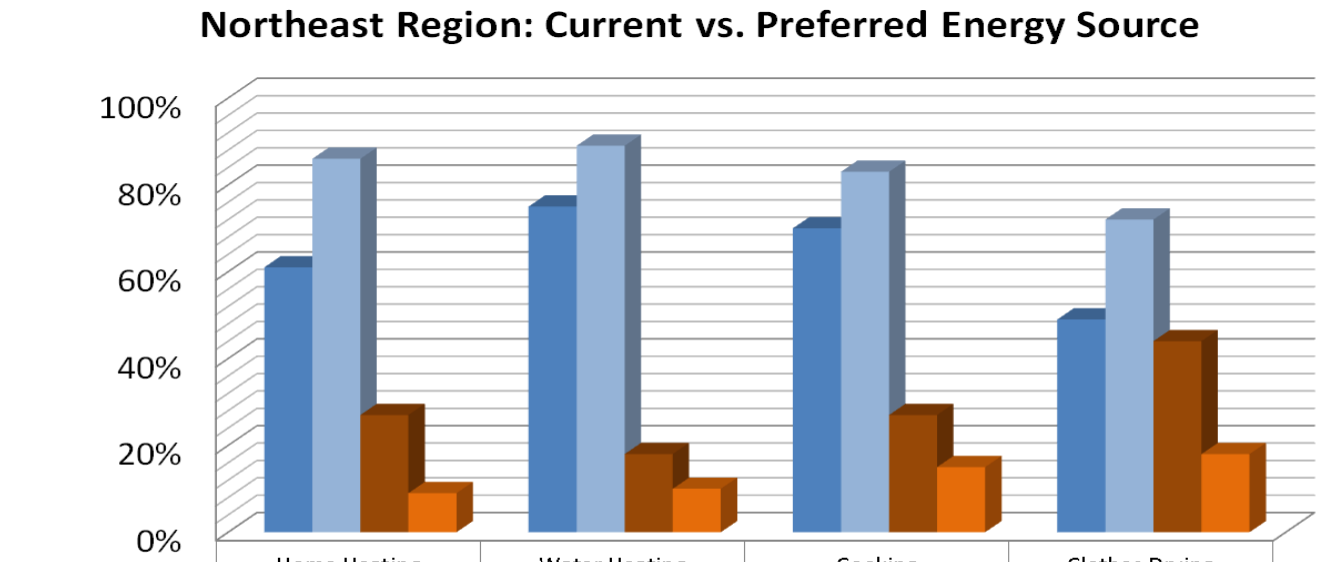
National Potential for Change in Market Share Chart:



2016 ESC Energy Preference vs. AGA 2015 Study			
Usage	Market Share ESC 2016	Market Share AGA 2015	ESC - AGA *(Margin of Error +/- 7%)*
Natura Gas Heating	50	51	-1
Natura Gas Cooking	42	36	+6
Natural Gas Water Heating	53	51	+2
Natural Gas Clothes Drying	22	16	+6

Source: American Gas Association, *Residential Natura Gas Market Study, January 2015*

B. Northeast Region – Chart/Data /Tables



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	61%	75%	70%	49%
Preferred Gas	86%	89%	83%	72%
Current Electric	27%	18%	27%	44%
Preferred Electric	9%	10%	15%	18%

The collective responses for the Northeast Region include 5 Metropolitan Statistical Areas (MSA): Dover, Salisbury, Allentown/Bethlehem, Buffalo and Newark. The MSAs surveyed indicate the current total market absorption for natural gas home heating is 34%. These new homeowners were also queried as to what energy source they preferred in their home. Natural gas is the most preferred heating source adding 39 points to the current market share and reaching 73%. Electric heated home preference declined 19 points from the current market share to just 21%. Both these differences from current to preferred basically meet or exceed the margin of error (10+/- and 11+/- respectively) and thus, at the highest level assumption of this customer preference data would suggest that natural gas heated homes have significant opportunities for expansion.

When parsing the database by the survey respondents' current heating energy source, other telling customer preferences can be found. For example, 97% of the current natural gas heating respondents maintain their willingness to recommend to family members natural gas heating. We call this the natural gas heating retention and recommendation rate.

On the other hand, the electric heating retention exercise shows a dramatically different result. Electric heating homeowner retention is just 46%. In other words, more than half of the current electric heating homeowners would prefer and recommend a different energy source to family and friends.

In regards to "all" natural gas home, this study indicated that the current market share of all natural gas homes is just 3%, with customer preference 10X higher at 31%. Furthermore, this Northeast study indicates "all" electric homes at 20%, and a lower customer preference at just 16%.

B. NE Region Markets – Data /Tables

Current Energy Source

Current energy data shows no statistical difference between natural gas and electric usage in clothes drying for the homes represented in this sample. Natural gas is currently the predominant energy source for home heating, water heating and cooking. It is estimated that 31% of homes regionally have a fireplace with a Margin of Error (ME) of ±18% and in those homes wood serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for all 4 appliances, with all differences being overwhelmingly significant over electric.

When preference is broken down by the homes current energy source the data shows for all appliances except clothes drying natural gas users are very satisfied with all over 90% preference while electric users are all observed to be under 40%. There was insufficient data to make estimates about natural gas user preference for clothes drying.

When asked what energy source you would recommend to a family member, natural gas was chosen 86% to electric's 9% for home heating. For water heating, natural gas was chosen 86% to electric's 10%. These estimates have a ME=±18%.

Projections

Projected market share for natural gas shows a definitive increase of for home heating and water heating. There is a projected increase in cooking, but it is insignificant. Among households wanting at least 1 gas appliance and all gas there is a significant projected growth, while all electric preference shows an insignificant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	61%	18%
	Electric	27%	
Water Heating	Natural Gas	75%	18%
	Electric	18%	
Cooking	Natural Gas	70%	18%
	Electric	27%	
Clothes Drying	Natural Gas	49%	18%
	Electric	44%	
Fireplace	Natural Gas	6%	36%
	Electric	17%	
	Wood	75%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	86%	18%
	Electric	9%	
Water Heating	Natural Gas	89%	18%
	Electric	10%	
Cooking	Natural Gas	83%	18%
	Electric	15%	
Clothes Drying	Natural Gas	72%	18%
	Electric	18%	

Preference for Current Energy Source

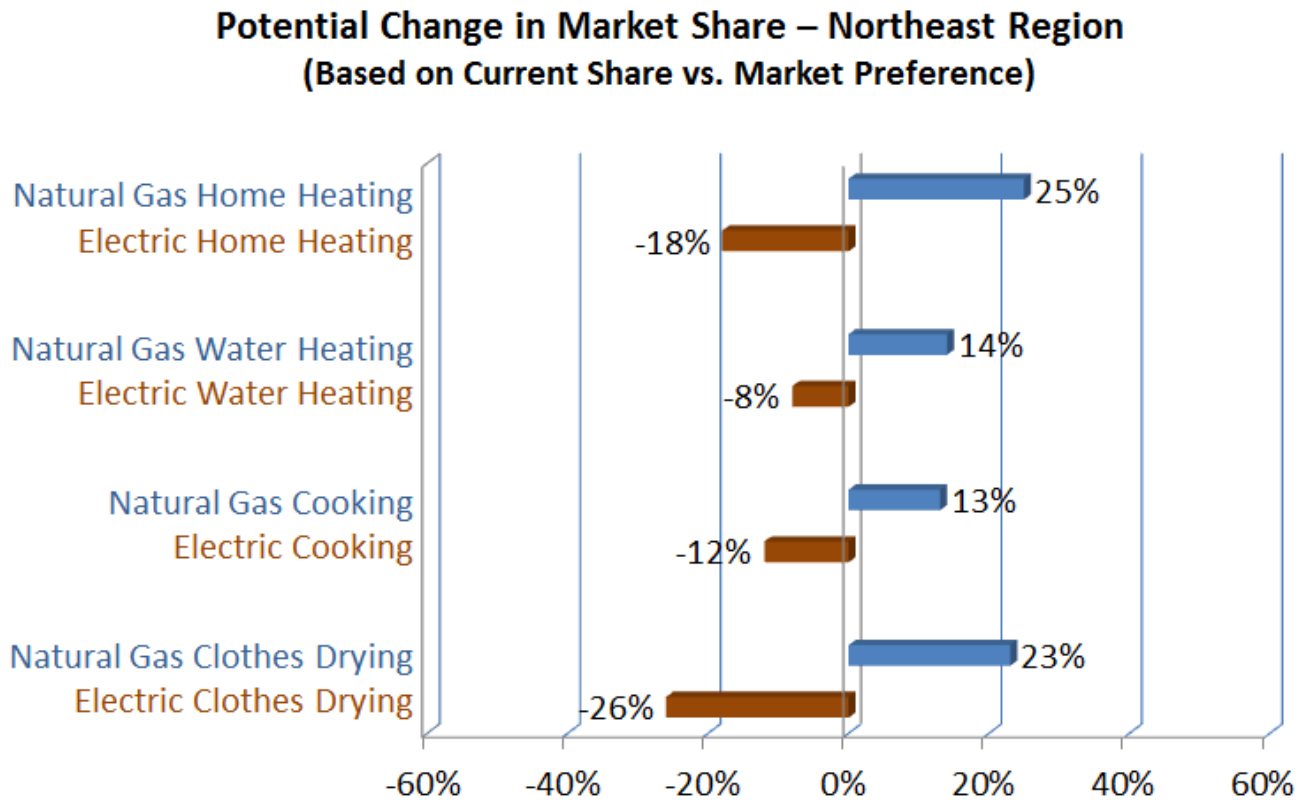
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	93%	23%
	Electric	31%	37%
Water Heating	Natural Gas	99%	20%
	Electric	31%	58%
Cooking	Natural Gas	94%	21%
	Electric	40%	41%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	36%	29%

Overall Energy Source

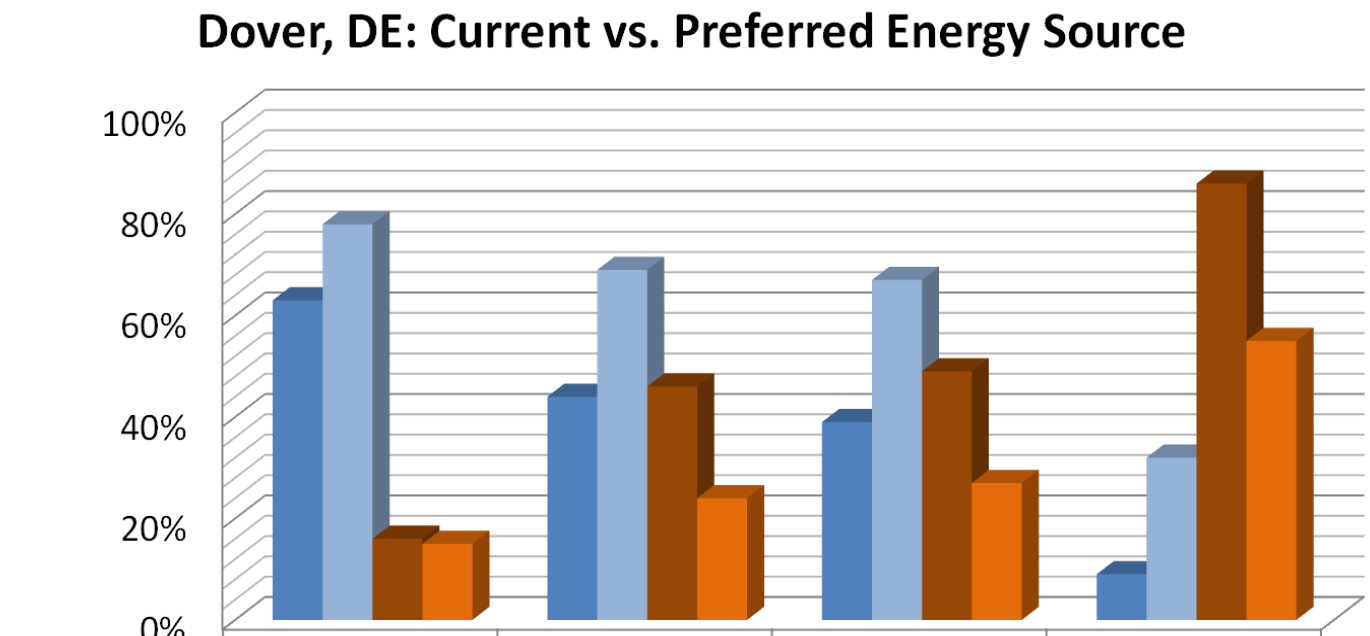
	Status	Estimate	±ME
At least 1 Gas	Current	65%	10%
	Preferred	92%	
All Gas	Current	29%	
	Preferred	54%	
All Electric	Current	16%	
	Preferred	3%	

1. Insufficient data to make valid estimate

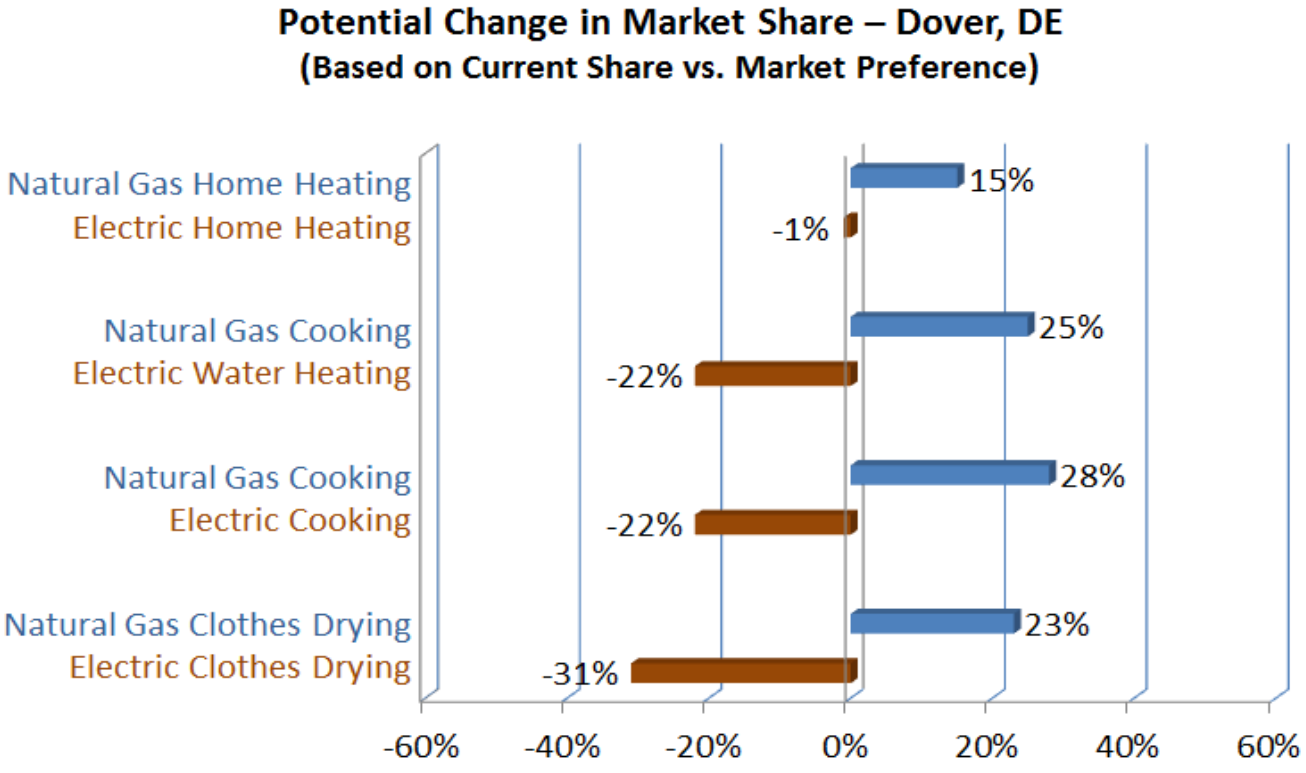
Northeast Region Potential for Change in Market Share Chart:



1. Market: Dover, MD-DE



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	63%	44%	39%	9%
Preferred Gas	78%	69%	67%	32%
Current Electric	16%	46%	49%	86%
Preferred Electric	15%	24%	27%	55%



Market: Dover – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in water heating and cooking. Electric is currently the predominant energy source for clothes drying, while natural gas is significantly greater in home heating. It is estimated that 54% of homes have a fireplace with a Margin of Error (ME) of ±12% and in those homes natural gas serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with a moderate lean towards electric for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for all 4 appliances.

Projections

Projected market share for natural gas shows a definitive increase for water heating, cooking and clothes drying. Among households wanting at least 1 gas appliance and all gas there is a moderate increase, while all electric preference shows no significant change.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	63%	13%
	Electric	16%	
Water Heating	Natural Gas	44%	13%
	Electric	46%	
Cooking	Natural Gas	39%	13%
	Electric	49%	
Clothes Drying	Natural Gas	9%	13%
	Electric	86%	
Fireplace	Natural Gas	55%	17%
	Electric	6%	
	Wood	26%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	78%	13%
	Electric	15%	
Water Heating	Natural Gas	69%	13%
	Electric	24%	
Cooking	Natural Gas	67%	13%
	Electric	27%	
Clothes Drying	Natural Gas	32%	13%
	Electric	55%	

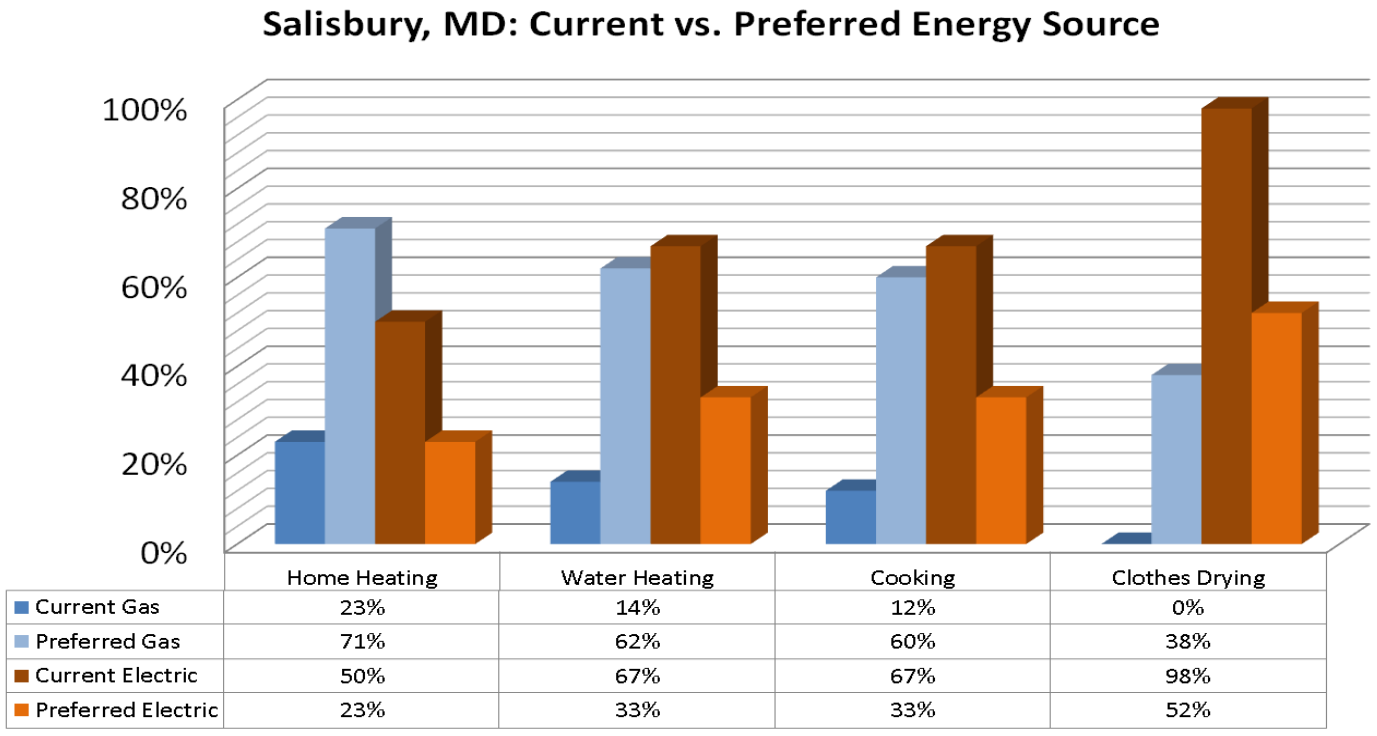
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	94%	16%
	Electric	67%	32%
Water Heating	Natural Gas	92%	20%
	Electric	46%	19%
Cooking	Natural Gas	95%	21%
	Electric	52%	19%
Clothes Drying	Natural Gas	80%	44%
	Electric	65%	14%

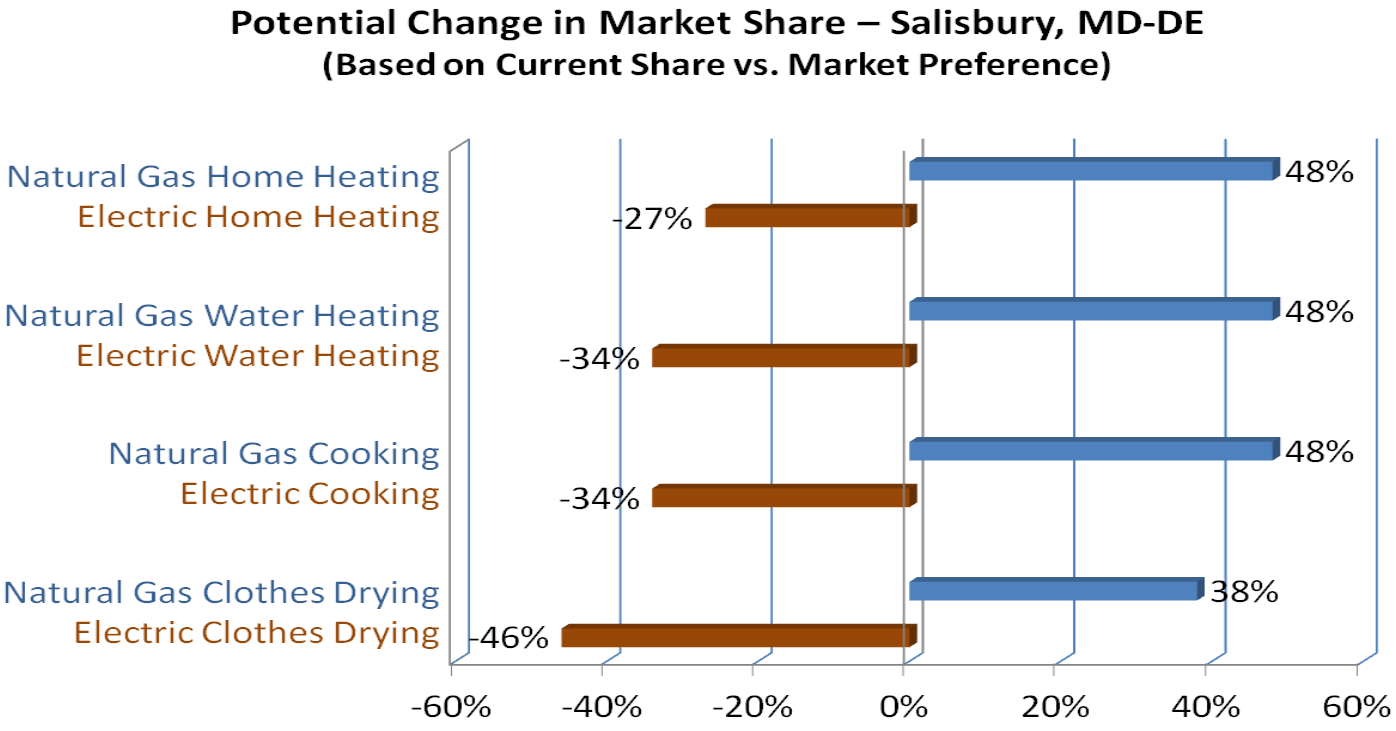
Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	63%	68%	14%
Water Heating	44%	64%	13%
Cooking	39%	62%	13%
Clothes Drying	9%	28%	12%

2. Market: Salisbury, MD-DE



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	23%	14%	12%	0%
Preferred Gas	71%	62%	60%	38%
Current Electric	50%	67%	67%	98%
Preferred Electric	23%	33%	33%	52%



Market: Salisbury – Data/Tables

Current Energy Source

Current energy data shows electric is significantly used as the predominant energy source for water heating, clothes drying and cooking. It is estimated that 60% of homes have a fireplace with a Margin of Error (ME) of ±14% and in those homes there is no significant difference between natural gas, electric and wood.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with a moderate lean towards electric for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are overwhelmingly more satisfied than those using electric for home heating, water heating and cooking. No comparison can be made for clothes drying.

Projections

Projected market share for natural gas shows a definitive increase for home heating, water heating, and cooking. Among households wanting at least 1 gas appliance and all gas there is a significant increase, while all electric preference shows a slight, but not significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	23%	14%
	Electric	50%	
Water Heating	Natural Gas	14%	14%
	Electric	67%	
Cooking	Natural Gas	12%	14%
	Electric	67%	
Clothes Drying	Natural Gas	0%	14%
	Electric	98%	
Fireplace	Natural Gas	23%	18%
	Electric	13%	
	Wood	26%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	71%	14%
	Electric	23%	
Water Heating	Natural Gas	62%	14%
	Electric	33%	
Cooking	Natural Gas	60%	14%
	Electric	33%	
Clothes Drying	Natural Gas	38%	14%
	Electric	52%	

Preference for Current Energy Source

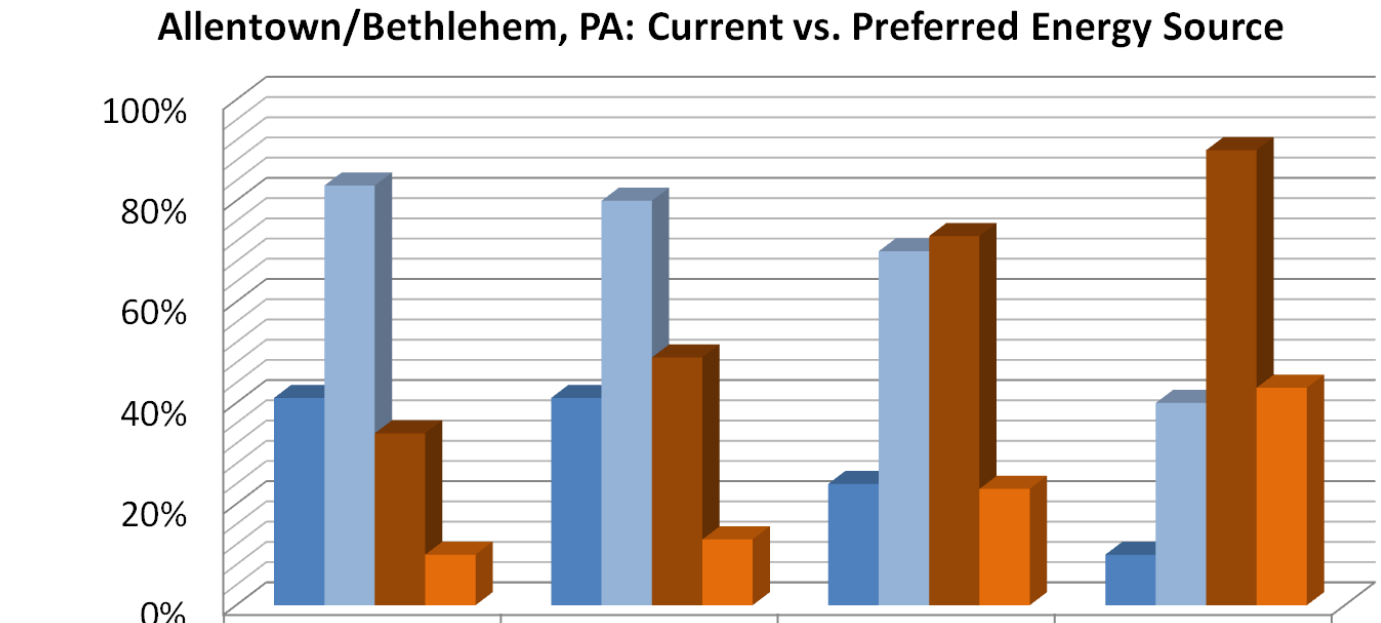
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	100%	28%
	Electric	42%	19%
Water Heating	Natural Gas	100%	37%
	Electric	47%	17%
Cooking	Natural Gas	100%	40%
	Electric	47%	17%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	54%	14%

Projected Natural Gas Market Share

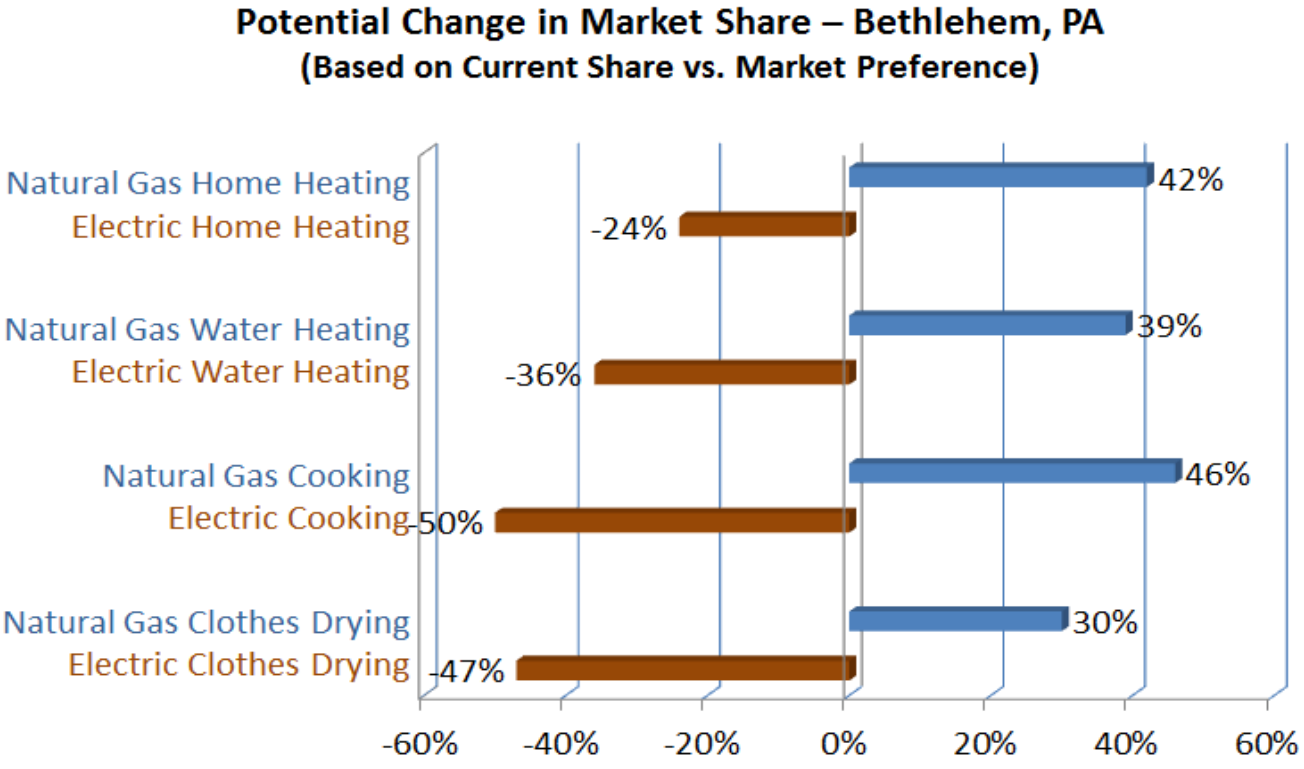
Appliance	Current	Projected	±ME
Home Heating	23%	62%	16%
Water Heating	14%	52%	15%
Cooking	12%	53%	16%
Clothes Drying[1]	0%	NA	NA

1. Insufficient data to make valid estimate

3. Market: Allentown/Bethlehem, PA



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	41%	41%	24%	10%
Preferred Gas	83%	80%	70%	40%
Current Electric	34%	49%	73%	90%
Preferred Electric	10%	13%	23%	43%



Market: Allentown/Bethlehem – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home heating and water heating. Electric is currently the predominant energy source for cooking and clothes drying. It is estimated that 49% of homes have a fireplace with a Margin of Error (ME) of ±15% and in those homes natural gas, electric and wood show no statistical difference.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with no statistical difference between natural gas and electric for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are significantly more satisfied than those using electric for home heating, water heating and cooking. While the same trend is observed for clothes drying, the difference is not significant.

Projections

Projected market share for natural gas shows a definitive increase in all 4 appliances. Among households wanting at least 1 gas appliance and all gas there is a significant increase, while all electric preference shows a decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	41%	15%
	Electric	34%	
Water Heating	Natural Gas	41%	15%
	Electric	49%	
Cooking	Natural Gas	24%	15%
	Electric	73%	
Clothes Drying	Natural Gas	10%	15%
	Electric	90%	
Fireplace	Natural Gas	25%	22%
	Electric	30%	
	Wood	40%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	83%	15%
	Electric	10%	
Water Heating	Natural Gas	80%	15%
	Electric	13%	
Cooking	Natural Gas	70%	15%
	Electric	23%	
Clothes Drying	Natural Gas	40%	15%
	Electric	43%	

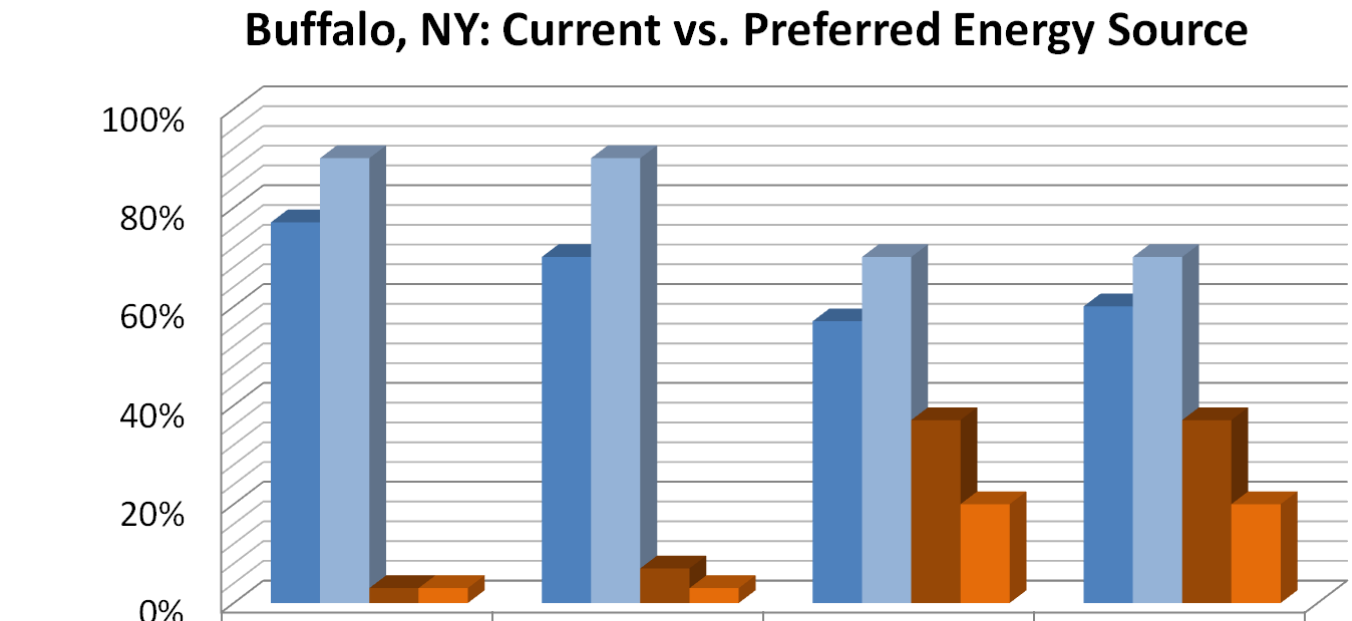
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	94%	24%
	Electric	15%	27%
Water Heating	Natural Gas	94%	24%
	Electric	16%	22%
Cooking	Natural Gas	100%	31%
	Electric	31%	18%
Clothes Drying	Natural Gas	75%	49%
	Electric	44%	16%

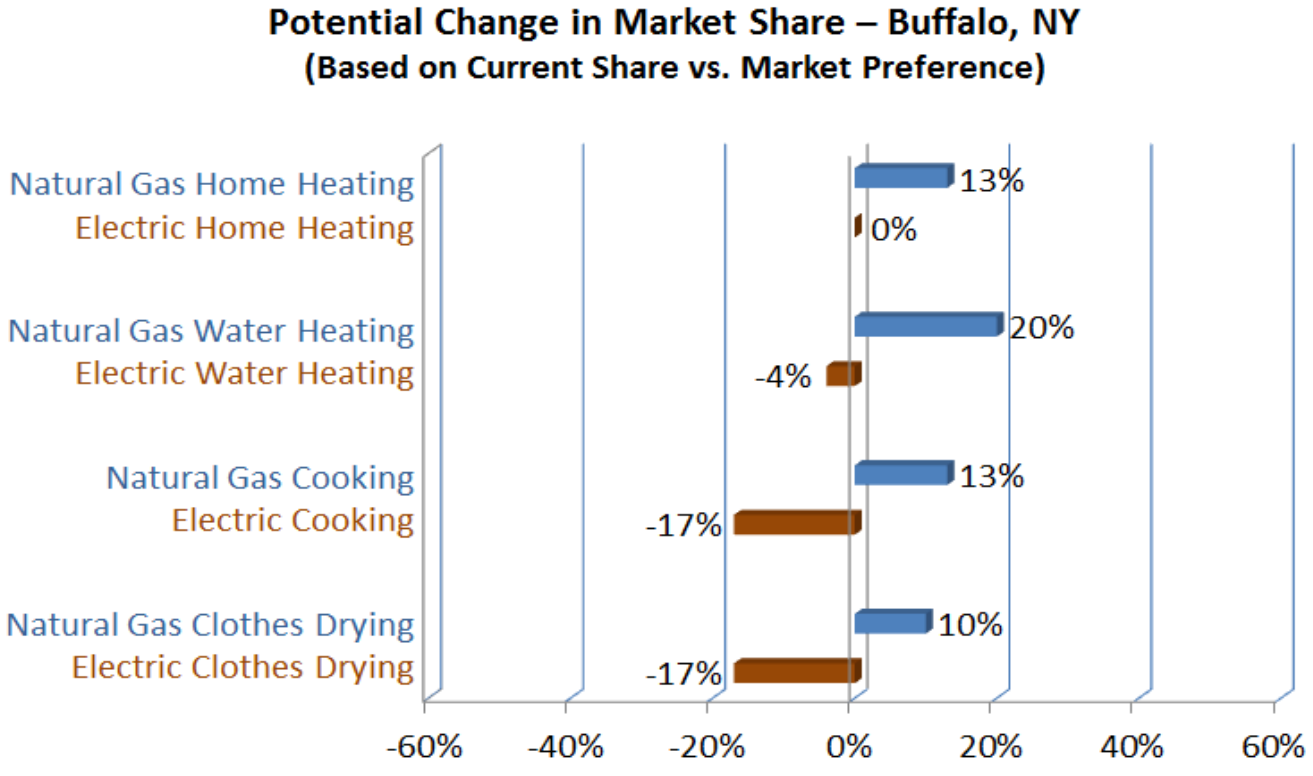
Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	41%	84%	15%
Water Heating	41%	82%	13%
Cooking	24%	69%	15%
Clothes Drying	10%	40%	15%

4. Market: Buffalo, NY



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	77%	70%	57%	60%
Preferred Gas	90%	90%	70%	70%
Current Electric	3%	7%	37%	37%
Preferred Electric	3%	3%	20%	20%



Market: Buffalo – Data/Tables

Current Energy Source

Current energy data shows natural gas is used significantly more for home and water heating. Usage of natural gas is also observed to be higher for cooking and clothes drying, but the difference is not significant. It is estimated that 63% of homes have a fireplace with a Margin of Error (ME) of ±18% and in those homes natural gas and wood serve as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for all 4 appliances with no one in the sample preferring electric for home and water heating.

When preference is broken down by the homes current energy source those using natural gas are very satisfied for all 4 appliances and significantly more satisfied than electric users in cooking and clothes drying. No valid comparisons can be made for home or water heating.

Projections

Projected market share for natural gas shows no definitive increase for any of the appliances due to the fact that natural gas is already so prevalent. There is an observed increase among households wanting at least 1 gas appliance and all gas, but it is not a significant different. All electric preference shows no significant change.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	77%	18%
	Electric	3%	
Water Heating	Natural Gas	70%	18%
	Electric	7%	
Cooking	Natural Gas	57%	18%
	Electric	37%	
Clothes Drying	Natural Gas	60%	18%
	Electric	37%	
Fireplace	Natural Gas	53%	22%
	Electric	11%	
	Wood	37%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	90%	18%
	Electric	3%	
Water Heating	Natural Gas	90%	18%
	Electric	3%	
Cooking	Natural Gas	70%	18%
	Electric	20%	
Clothes Drying	Natural Gas	70%	18%
	Electric	20%	

Preference for Current Energy Source

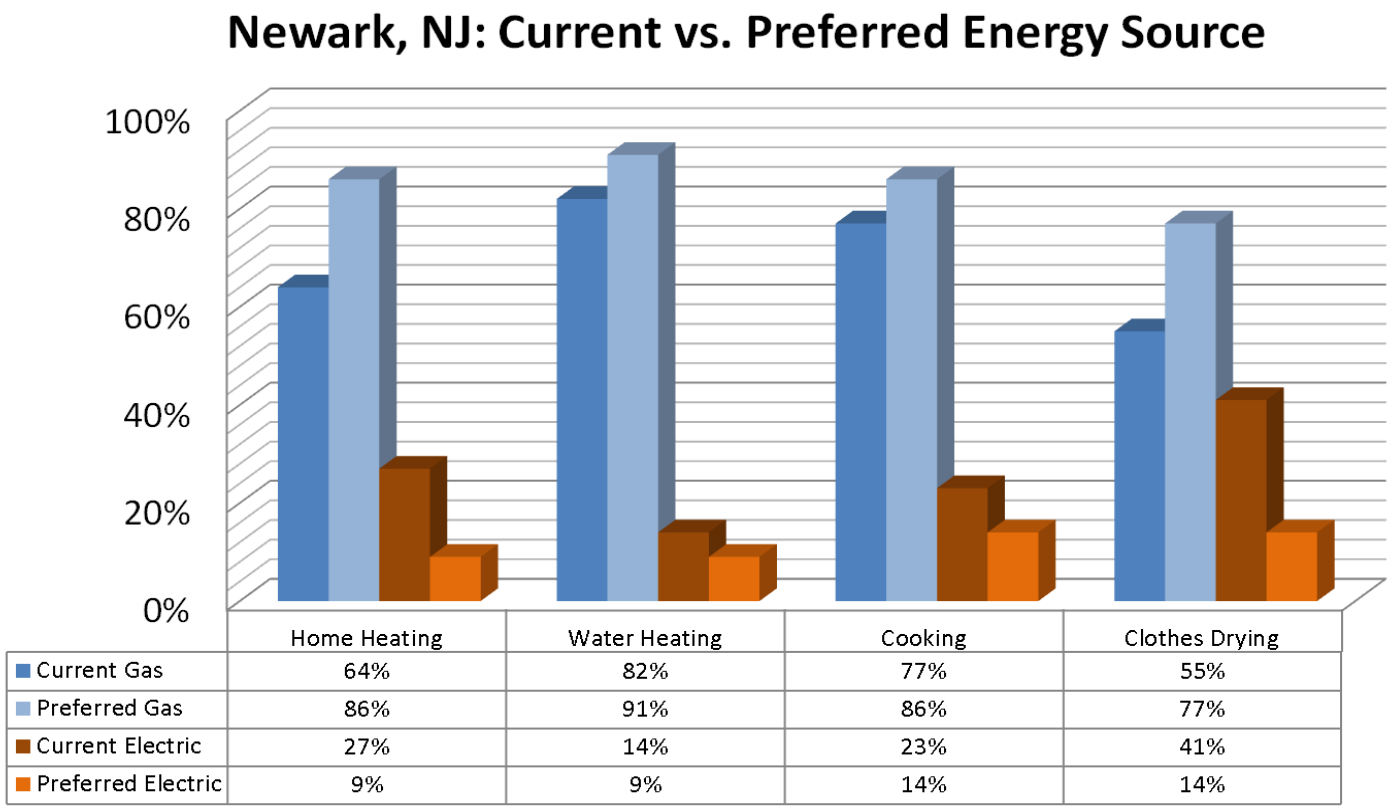
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	91%	20%
	Electric[1]	NA	NA
Water Heating	Natural Gas	90%	21%
	Electric[1]	NA	NA
Cooking	Natural Gas	82%	24%
	Electric	36%	30%
Clothes Drying	Natural Gas	94%	23%
	Electric	55%	30%

Projected Natural Gas Market Share

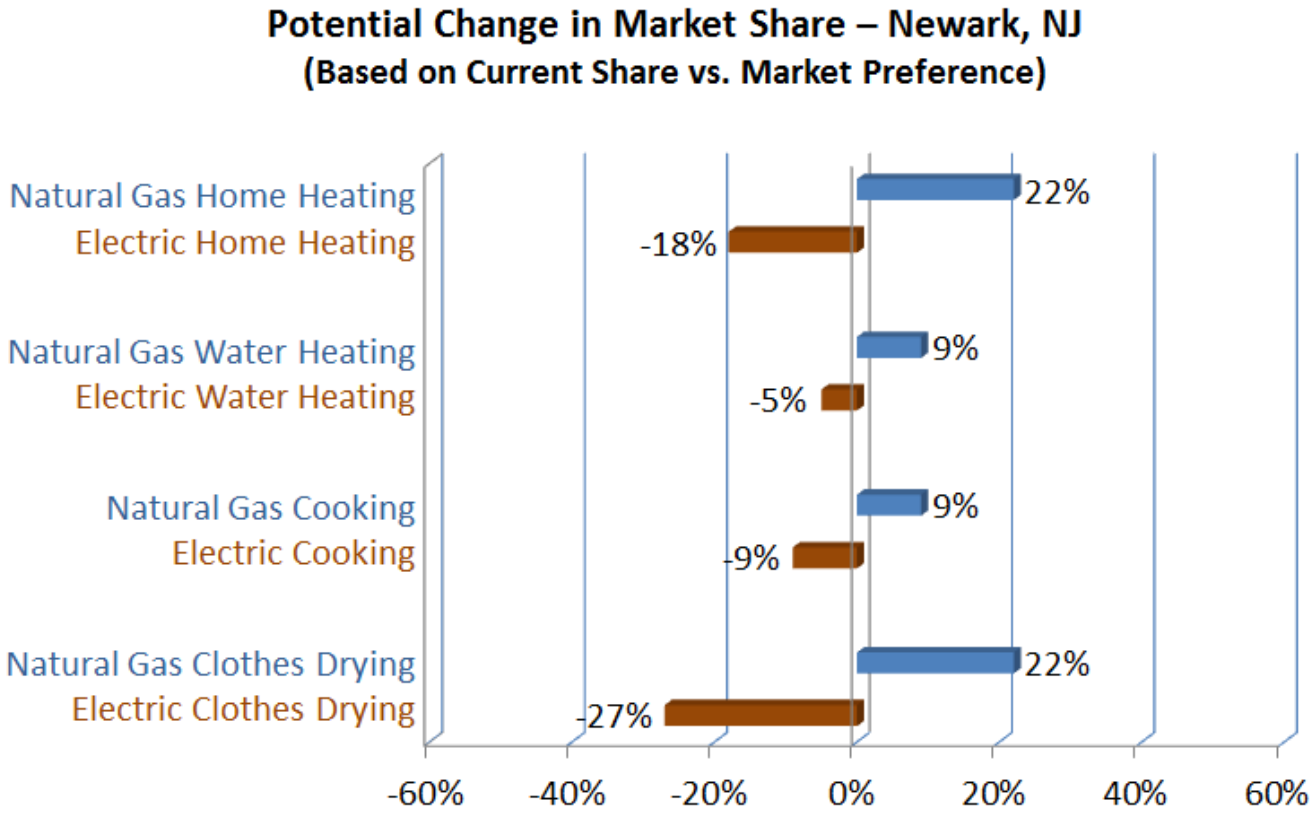
Appliance	Current	Projected	±ME
Home Heating	77%	82%	12%
Water Heating	70%	79%	14%
Cooking	57%	69%	18%
Clothes Drying	60%	66%	17%

1. Insufficient data to make valid estimate

5. Market: Newark, NJ



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	64%	82%	77%	55%
Preferred Gas	86%	91%	86%	77%
Current Electric	27%	14%	23%	41%
Preferred Electric	9%	9%	14%	14%



Market: Newark – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home heating and clothes drying. Natural gas is currently the predominant energy source for water heating and cooking. It is estimated that 28% of homes have a fireplace with a Margin of Error (ME) of ±21% and in those homes wood serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is significantly natural gas for all 4 appliances with electric only getting at most 14% preference for each of the appliances.

When preference is broken down by the homes current energy source those using natural gas are very satisfied while electric users do not prefer their energy source as well.

Projections

Projected market share for natural gas shows a definitive increase for home heating and clothes drying. Among households wanting all gas there is a 32% increase, while all electric preference shows no significant change from 9% current to 0% preferred. Due to large current natural gas usage, the at least 1 gas option did not increase significantly from the current 86% to the preferred 100%.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	64%	21%
	Electric	27%	
Water Heating	Natural Gas	82%	21%
	Electric	14%	
Cooking	Natural Gas	77%	21%
	Electric	23%	
Clothes Drying	Natural Gas	55%	21%
	Electric	41%	
Fireplace	Natural Gas	0%	40%
	Electric	17%	
	Wood	83%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	86%	21%
	Electric	9%	
Water Heating	Natural Gas	91%	21%
	Electric	9%	
Cooking	Natural Gas	86%	21%
	Electric	14%	
Clothes Drying	Natural Gas	77%	21%
	Electric	14%	

Preference for Current Energy Source

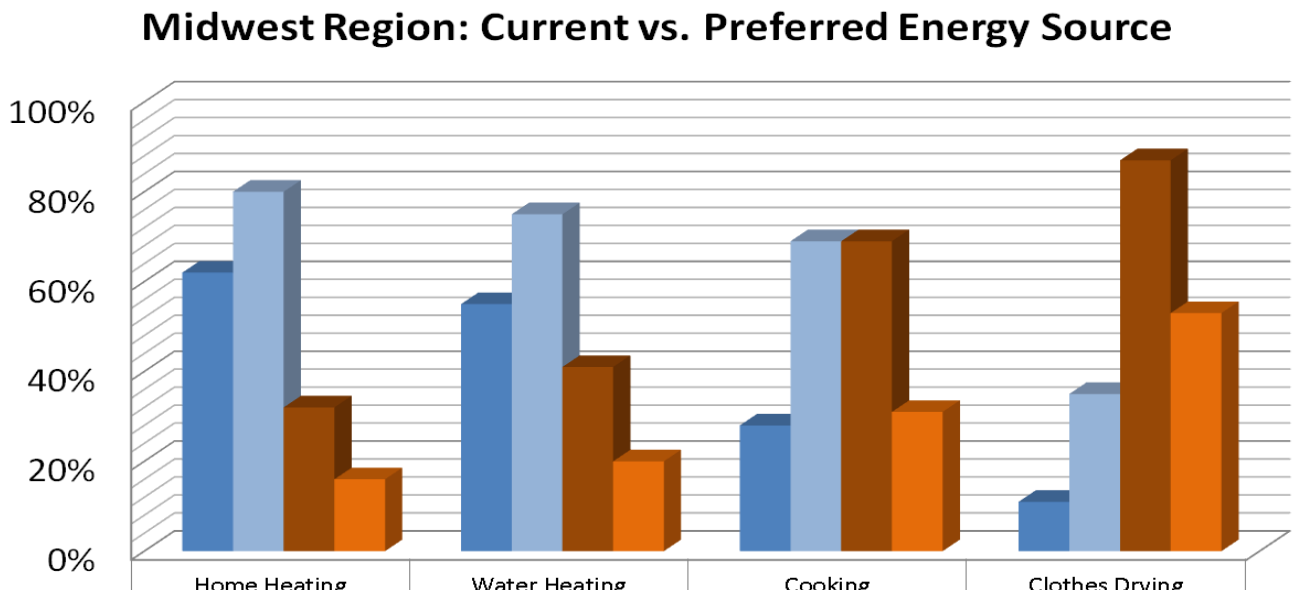
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	93%	26%
	Electric	33%	40%
Water Heating	Natural Gas	100%	23%
	Electric[1]	33%	57%
Cooking	Natural Gas	94%	24%
	Electric	40%	44%
Clothes Drying	Natural Gas	100%	28%
	Electric	33%	33%

Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	64%	84%	16%
Water Heating	82%	94%	16%
Cooking	77%	87%	13%
Clothes Drying	55%	80%	17%

1. Insufficient data to make valid estimate

D. Midwest Region Graphs/Data/Tables



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	62%	55%	28%	11%
Preferred Gas	80%	75%	69%	35%
Current Electric	32%	41%	69%	87%
Preferred Electric	16%	20%	31%	53%

The collective responses for the Midwest Region include 2 Metropolitan Statistical Areas (MSA): Grand Rapids and Nashville. These two sample MSAs surveyed indicate the current total market absorption for natural gas home heating is 62%. These new homeowners were also queried as to what energy source they preferred in their home. Natural gas is the most preferred heating source adding 18 points to the current market share and reaching 80%. Electric heated home usage is 32% and loses 1 out of two in the preference rating to just 16% preference. The gas heating current market share versus customer preference exceeds the margin of error (12+/-) and thus, at the highest level assumption of this customer preference data would suggest that natural gas heated homes have significant opportunities for expansion.

When parsing the database by the survey respondents' current heating energy source, other telling customer preferences can be found. For example, 89% of the current natural gas heating respondents maintain their willingness to recommend to family members natural gas heating. We call this the natural gas heating retention and recommendation rate.

On the other hand, the electric heating retention exercise shows a dramatically different result. Electric heating homeowner retention is just 32%. In other words, more the Midwest appears to be a maximum electric market share based strictly upon electric customer retention..

In regards to "all" natural gas home, this study indicated that the current market share of all natural gas homes is just 15%, with customer preference 2.5X higher at 39%. Furthermore, this Midwest study indicates "all" electric homes market share at 14%, and a lower customer preference at just 7%.

Midwest Data:

Current Energy Source

Current energy data shows natural gas is currently the predominant energy source for home, while electric is the largest source for cooking and clothes drying. It is estimated that 70% of homes have a fireplace with a Margin of Error (ME) of ±12% and in those homes natural gas serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is significantly natural gas for home heating, water heating and cooking. Electric is preferred for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are much more satisfied than those using electric as an energy source, especially for home heating, water heating and cooking.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. There is a significant increase in households wanting both all gas appliances and at least 1 gas appliance while only an insignificant decrease in users wanting all electric appliances.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	62%	12%
	Electric	32%	
Water Heating	Natural Gas	55%	12%
	Electric	41%	
Cooking	Natural Gas	28%	12%
	Electric	69%	
Clothes Drying	Natural Gas	11%	12%
	Electric	87%	
Fireplace	Natural Gas	67%	14%
	Electric	1%	
	Wood	25%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	80%	12%
	Electric	16%	
Water Heating	Natural Gas	75%	12%
	Electric	20%	
Cooking	Natural Gas	69%	12%
	Electric	31%	
Clothes Drying	Natural Gas	35%	12%
	Electric	53%	

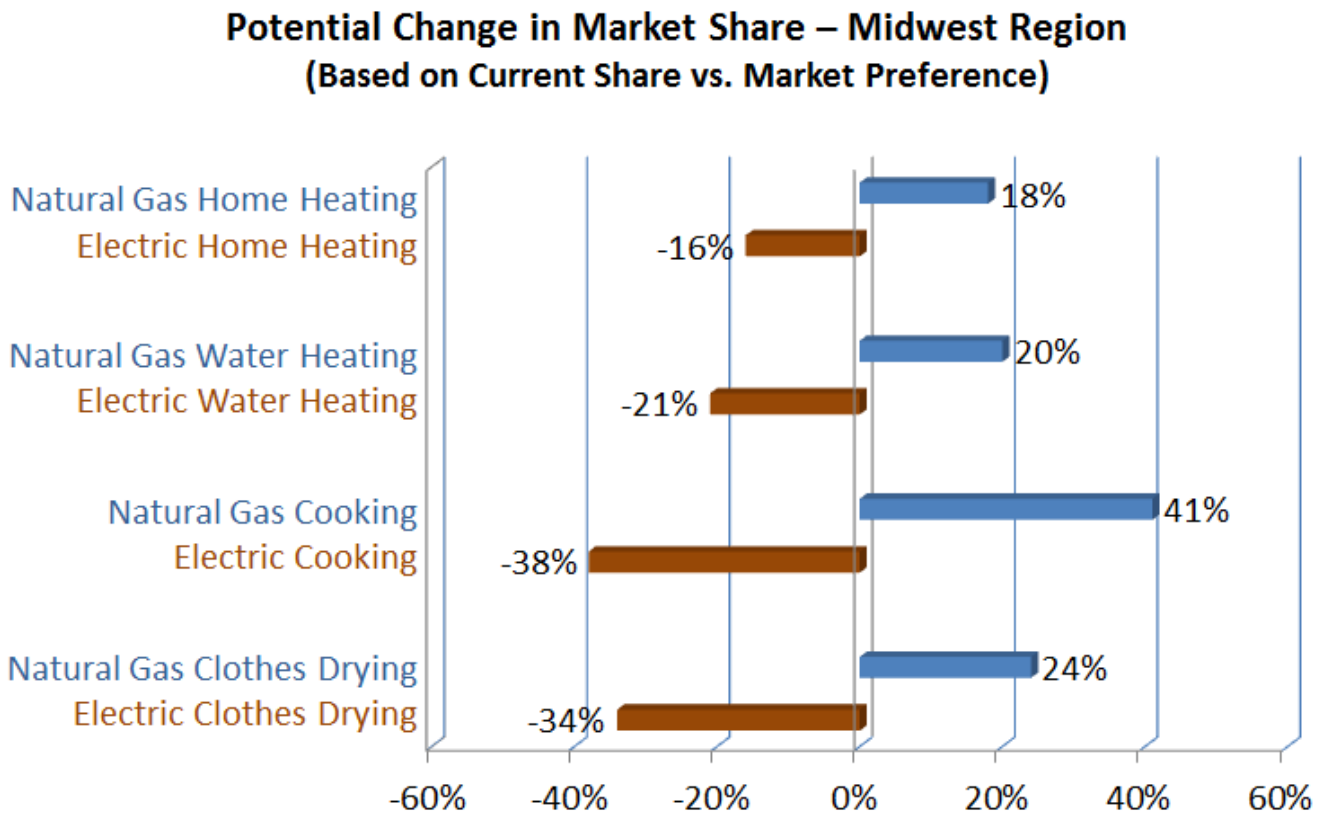
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	89%	15%
	Electric	32%	24%
Water Heating	Natural Gas	84%	16%
	Electric	26%	21%
Cooking	Natural Gas	93%	23%
	Electric	41%	15%
Clothes Drying	Natural Gas	97%	52%
	Electric	60%	13%

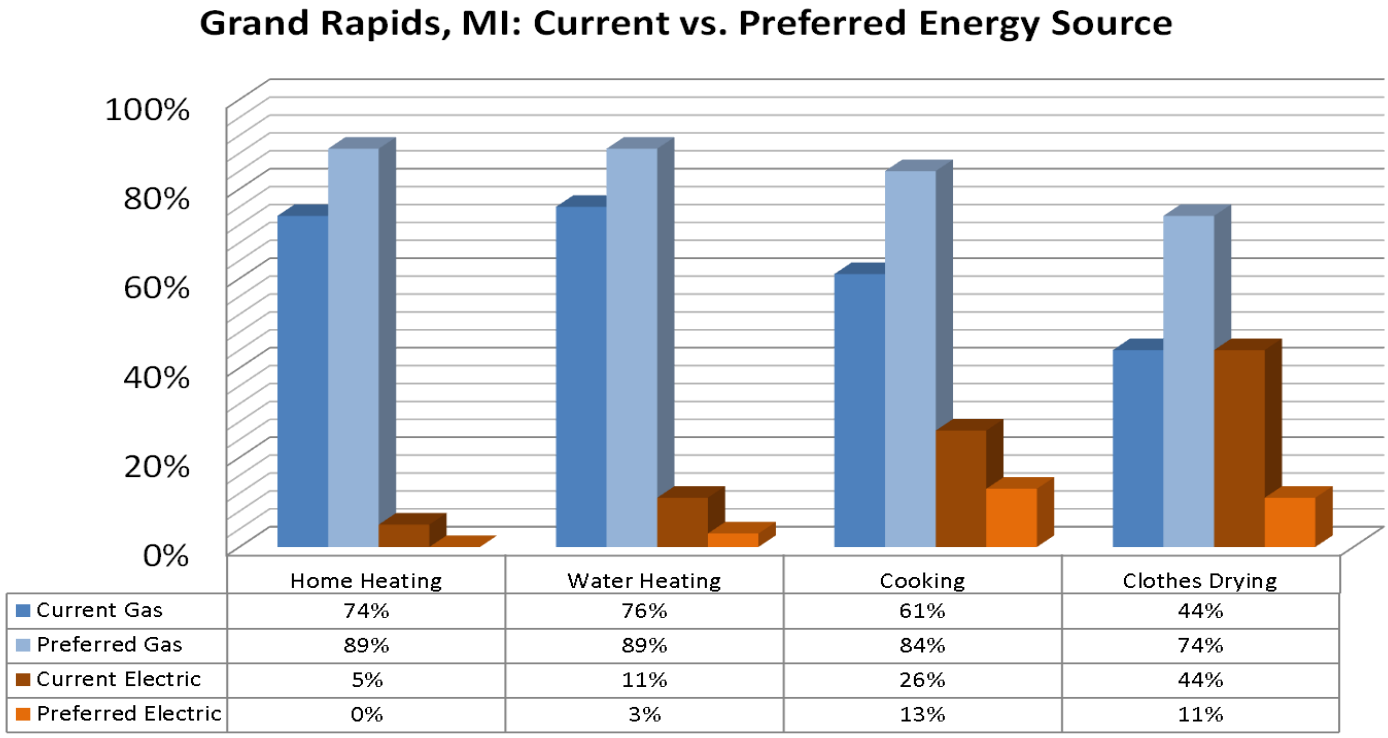
Overall Energy Source

	Status	Estimate	±ME
At least 1 Gas	Current	73%	11%
	Preferred	90%	
All Gas	Current	15%	
	Preferred	39%	
All Electric	Current	14%	
	Preferred	7%	

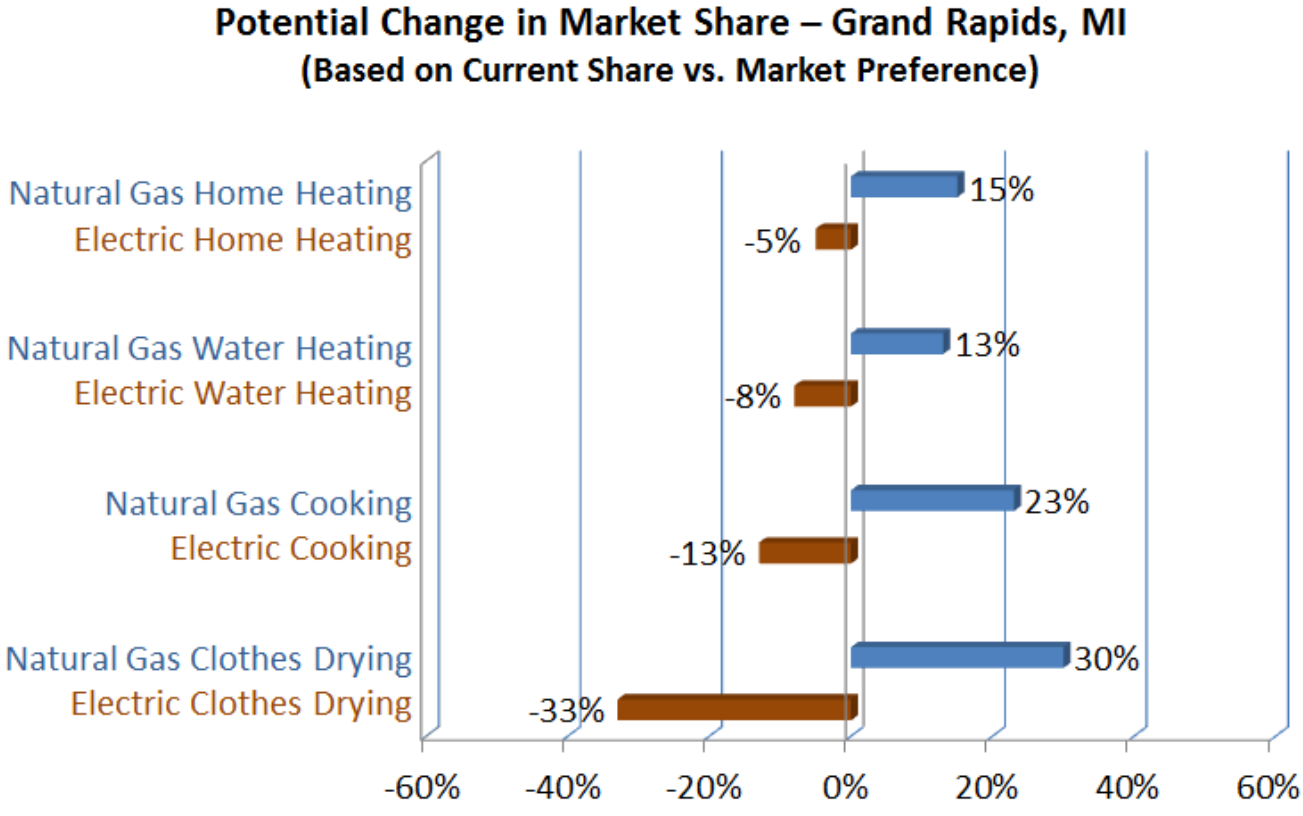
Midwest Region Potential for Change in Market Share Chart:



1. Market: Grand Rapids, MI



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	74%	76%	61%	44%
Preferred Gas	89%	89%	84%	74%
Current Electric	5%	11%	26%	44%
Preferred Electric	0%	3%	13%	11%



Market: Grand Rapids – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in clothes drying. Natural gas is currently the predominant energy source for home heating, water heating and cooking. It is estimated that 47% of homes have a fireplace with a Margin of Error (ME) of ±16% and in those homes natural gas and wood serve as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for all 4 appliances with no users choosing electric for home heating.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for all water heating, cooking and clothes drying. No analysis could be completed for electric users preference for home heating due to minimal usage of electric home heating.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting all gas appliances there is a significant increase, while all electric preference stays the same as all electric currently at 0%.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	74%	16%
	Electric	5%	
Water Heating	Natural Gas	76%	16%
	Electric	11%	
Cooking	Natural Gas	61%	16%
	Electric	26%	
Clothes Drying	Natural Gas	44%	16%
	Electric	44%	
Fireplace	Natural Gas	50%	23%
	Electric	6%	
	Wood	33%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	89%	16%
	Electric	0%	
Water Heating	Natural Gas	89%	16%
	Electric	3%	
Cooking	Natural Gas	84%	16%
	Electric	13%	
Clothes Drying	Natural Gas	74%	16%
	Electric	11%	

Preference for Current Energy Source

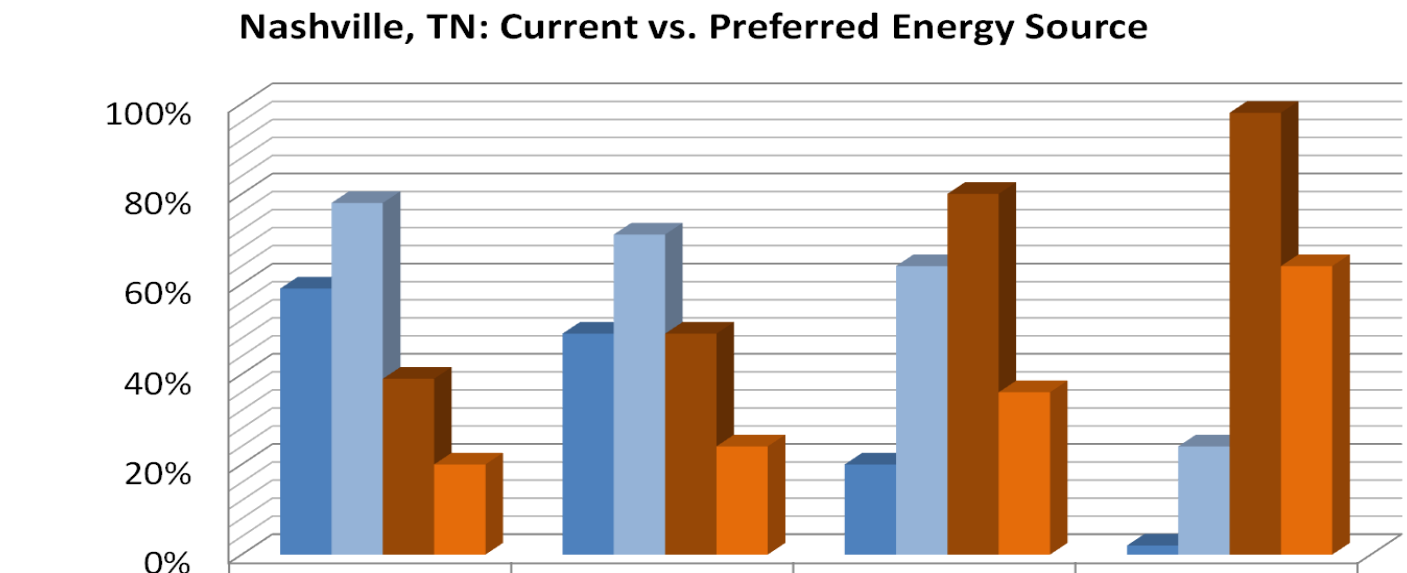
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	89%	18%
	Electric[1]	NA	NA
Water Heating	Natural Gas	90%	18%
	Electric	0%	49%
Cooking	Natural Gas	100%	20%
	Electric	50%	31%
Clothes Drying	Natural Gas	94%	24%
	Electric	25%	24%

Projected Natural Gas Market Share

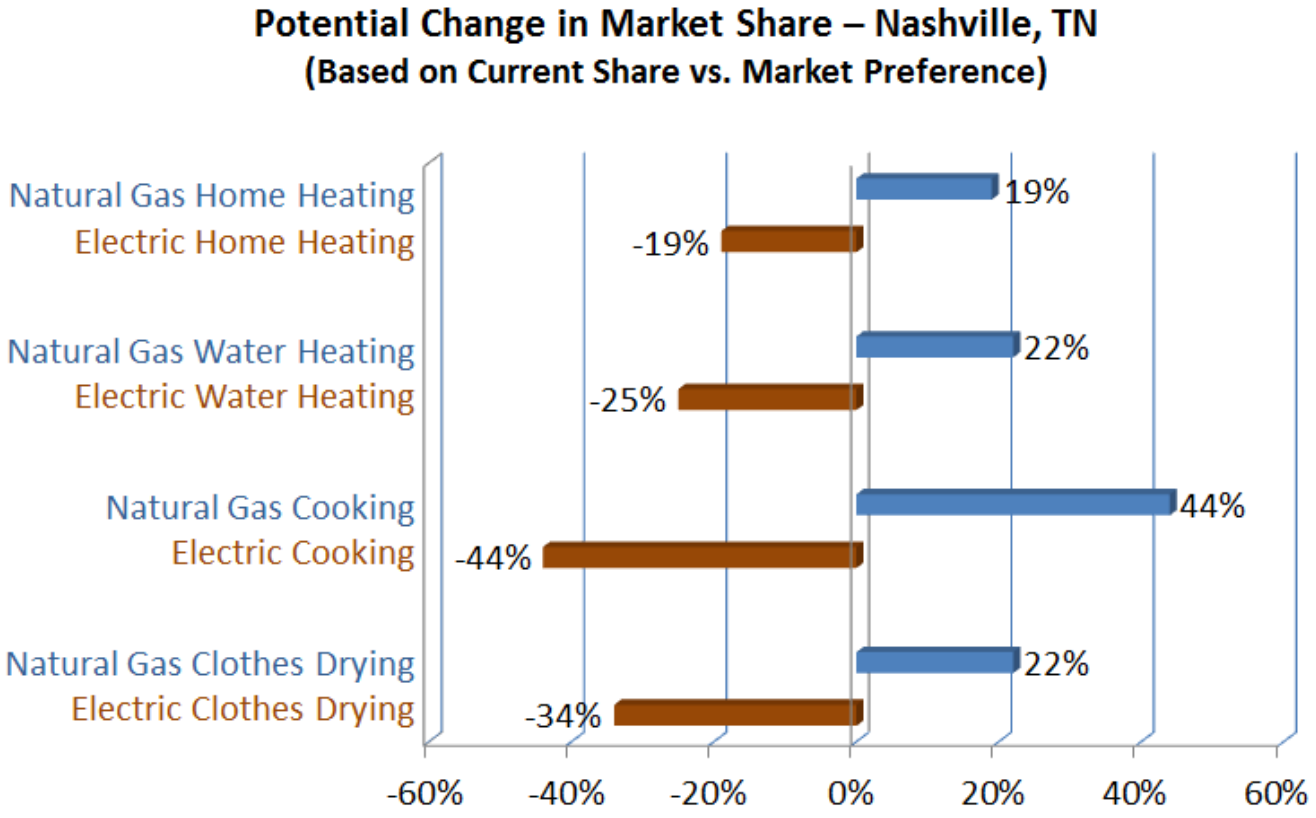
Appliance	Current	Projected	±ME
Home Heating	74%	92%	9%
Water Heating	76%	92%	9%
Cooking	61%	77%	13%
Clothes Drying	44%	70%	13%

1. Insufficient data to make valid estimate

2. Market: Nashville, TN



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	59%	49%	20%	2%
Preferred Gas	78%	71%	64%	24%
Current Electric	39%	49%	80%	98%
Preferred Electric	20%	24%	36%	64%



Market: Nashville – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home and water heating. Electric is currently the predominant energy source for cooking and clothes drying. It is estimated that 76% of homes have a fireplace with a Margin of Error (ME) of ±14% and in those homes natural gas serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, while electric is significantly preferred for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home heating, water heating and cooking. No analysis can be made for clothes drying preference among natural gas users.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting at least 1 gas appliance and all gas there is a moderate increase, while all electric preference shows an insignificant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	59%	14%
	Electric	39%	
Water Heating	Natural Gas	49%	15%
	Electric	49%	
Cooking	Natural Gas	20%	15%
	Electric	80%	
Clothes Drying	Natural Gas	2%	15%
	Electric	98%	
Fireplace	Natural Gas	71%	17%
	Electric	0%	
	Wood	23%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	78%	15%
	Electric	20%	
Water Heating	Natural Gas	71%	15%
	Electric	24%	
Cooking	Natural Gas	64%	15%
	Electric	36%	
Clothes Drying	Natural Gas	24%	15%
	Electric	64%	

Preference for Current Energy Source

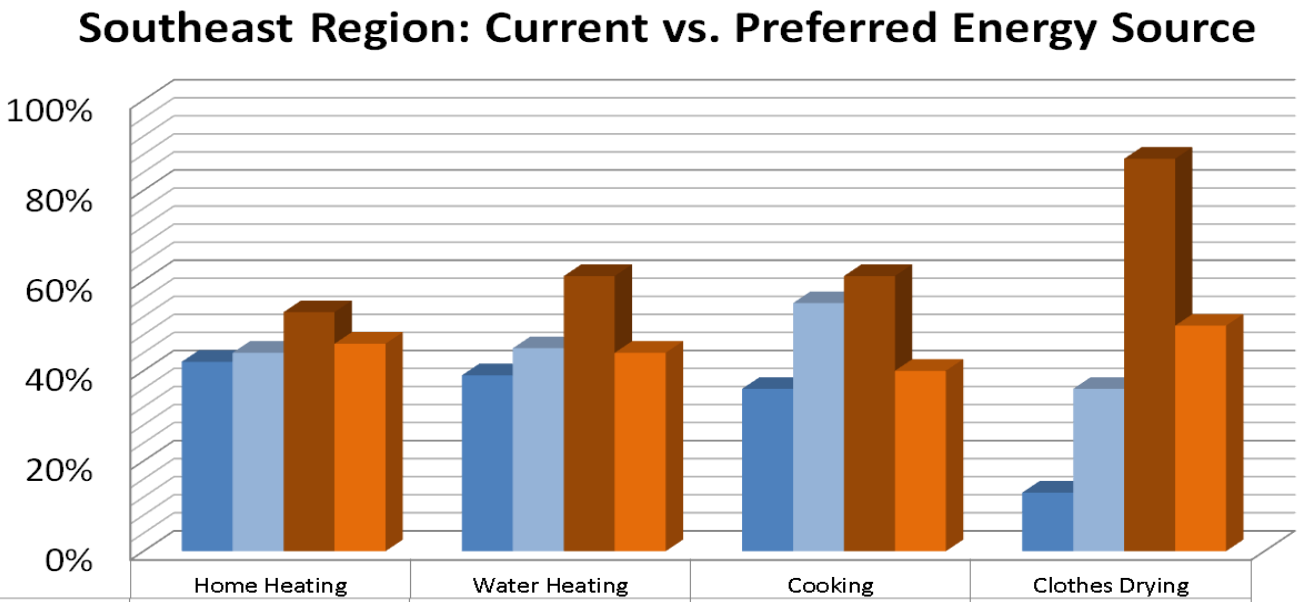
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	89%	19%
	Electric	35%	24%
Water Heating	Natural Gas	82%	21%
	Electric	29%	21%
Cooking	Natural Gas	89%	33%
	Electric	40%	17%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	65%	15%

Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	59%	77%	13%
Water Heating	49%	72%	14%
Cooking	20%	66%	14%
Clothes Drying	2%	25%	13%

1. Insufficient data to make valid estimate

E. Southeast Region Graphs/Data/Tables



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	42%	39%	36%	13%
Preferred Gas	44%	45%	55%	36%
Current Electric	53%	61%	61%	87%
Preferred Electric	46%	44%	40%	50%

The collective responses for the Southeast Region include 3 Metropolitan Statistical Areas (MSA): Atlanta, Dothan, and Tampa/St. Petersburg. These three sample MSAs surveyed indicate the current total market absorption for natural gas home heating is 42%. These new homeowners were also queried as to what energy source they preferred in their home. Natural gas adds just two points to a preferred level rating of 44% (basically unchanged as it is within the margin of error). Electric heated home market share is 53% with the customer preference lower at 46%, but also within the margin or error. The Southeast market is a tell of three cities as Atlanta is the only market with lower natural gas preference, while Tampa/St. Petersburgh and Dothan show tremendous natural gas market share potential. Unfortunately, Atlanta is the largest MSA in the Region and thus carried more significance and significantly changed the Region ratings. It is suggested that the Southeast Region MSA concentrate on their individual MSA results.

E. Southeast Regions Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home and water heating. Electric is currently the predominant energy source cooking and clothes drying. It is estimated that 64% of homes have a fireplace with a Margin of Error (ME) of ±13% and in those homes natural gas and wood serve as the primary energy source for the fireplace.

Preferred Energy Source

Overall, there is no difference in preferred energy source for home heating, water heating and cooking, while electric is preferred for clothes drying.

When preference is broken down by the homes current energy source those using natural gas have roughly the same preference for their current energy source as those using electric for all 4 appliances.

Projections

Projected market share for natural gas shows an increase for cooking and clothes drying. Among households wanting at least 1 gas appliance and all gas there is a significant increase from 4% to 20%, while all electric preference shows a significant decrease from 63% to just 34%.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	42%	13%
	Electric	53%	
Water Heating	Natural Gas	39%	13%
	Electric	61%	
Cooking	Natural Gas	36%	13%
	Electric	61%	
Clothes Drying	Natural Gas	13%	13%
	Electric	87%	
Fireplace	Natural Gas	42%	16%
	Electric	18%	
	Wood	32%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	44%	13%
	Electric	46%	
Water Heating	Natural Gas	45%	13%
	Electric	44%	
Cooking	Natural Gas	55%	13%
	Electric	40%	
Clothes Drying	Natural Gas	36%	13%
	Electric	50%	

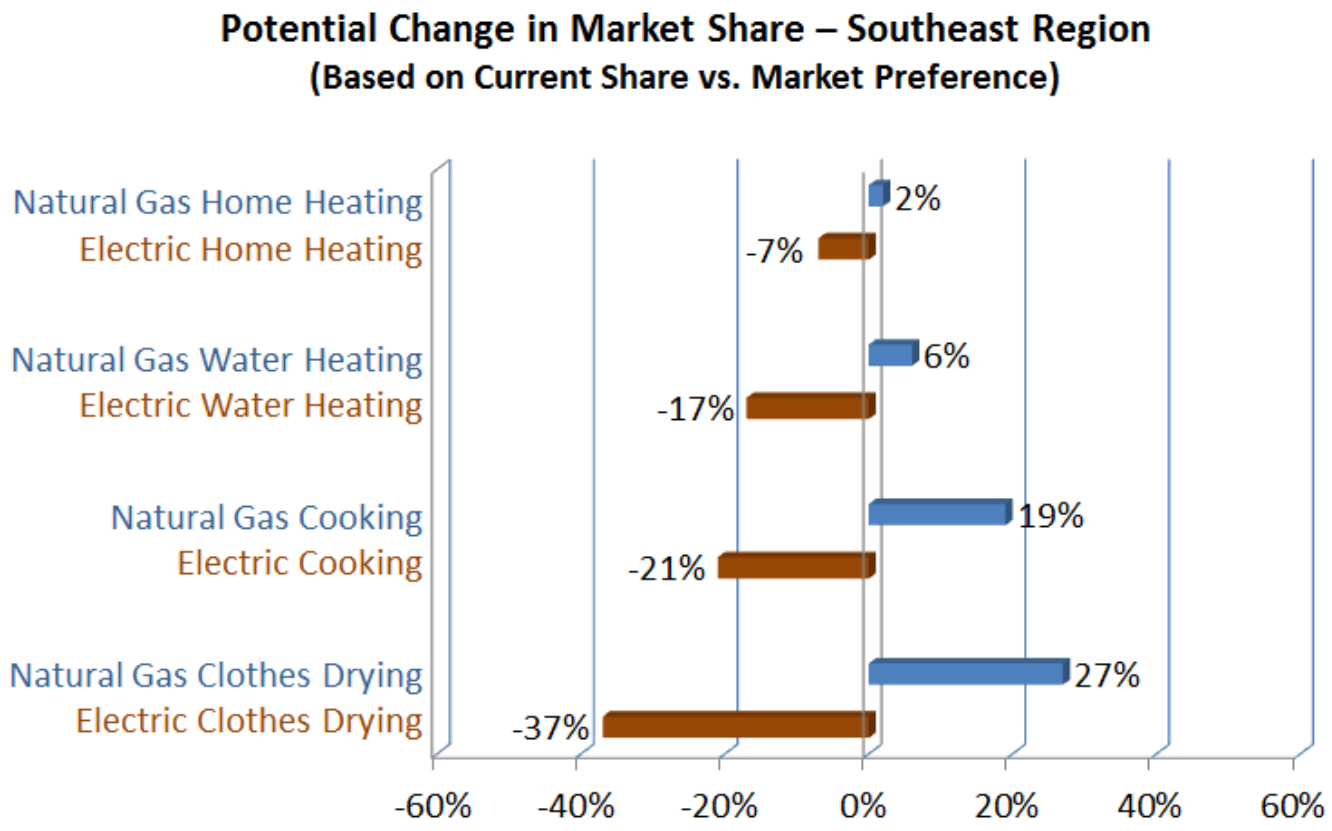
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	56%	22%
	Electric	58%	18%
Water Heating	Natural Gas	52%	23%
	Electric	52%	17%
Cooking	Natural Gas	53%	25%
	Electric	46%	17%
Clothes Drying	Natural Gas	69%	44%
	Electric	58%	15%

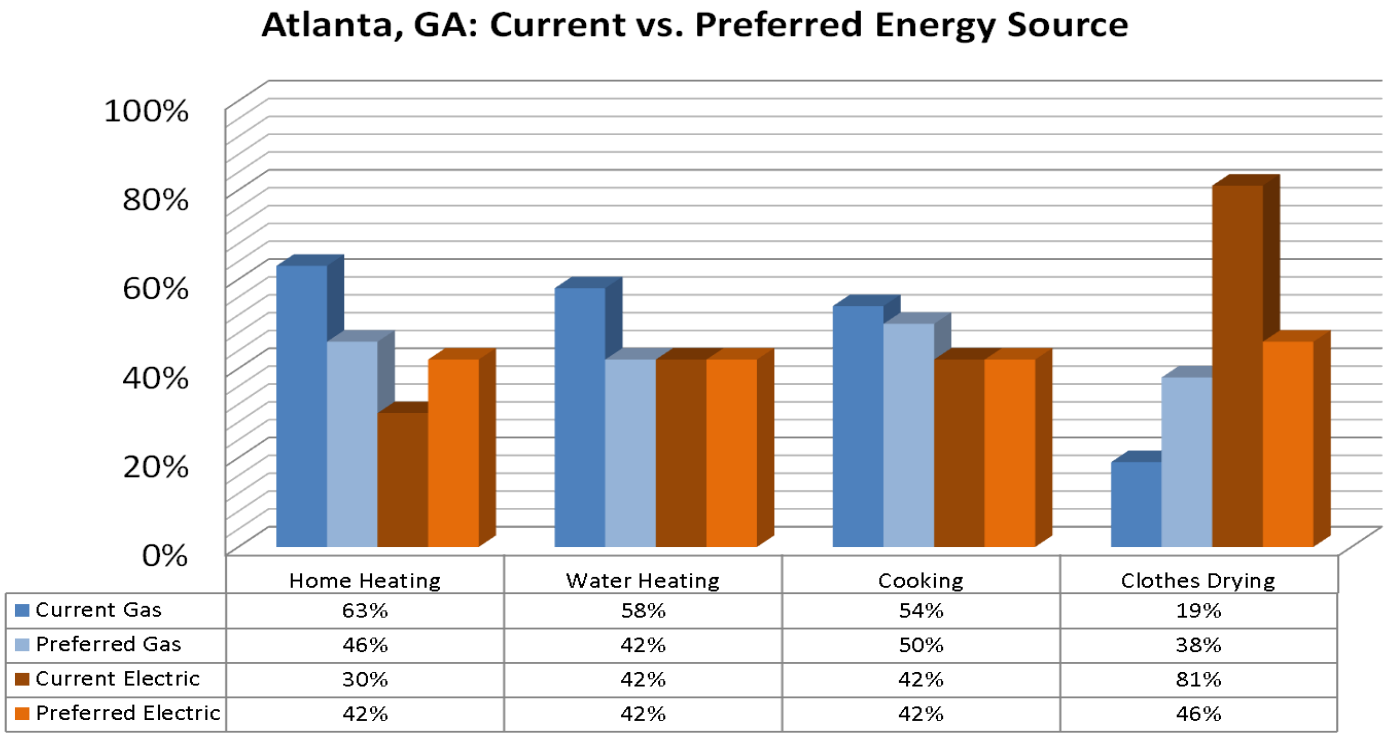
Overall Energy Source

	Status	Estimate	±ME
At least 1 Gas	Current	24%	8%
	Preferred	59%	
All Gas	Current	4%	
	Preferred	20%	
All Electric	Current	63%	
	Preferred	34%	

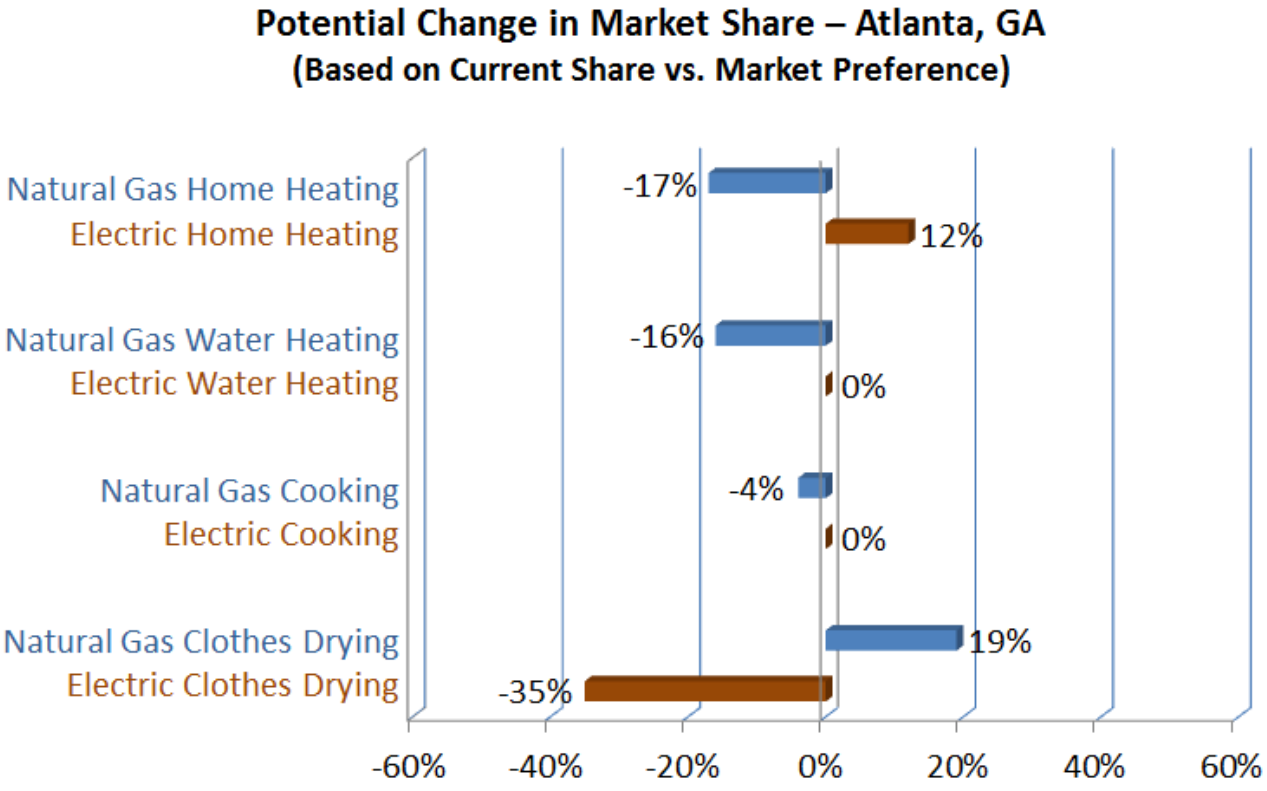
Southeast Region Potential for Change in Market Share Chart:



1. Market: Atlanta, GA



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	63%	58%	54%	19%
Preferred Gas	46%	42%	50%	38%
Current Electric	30%	42%	42%	81%
Preferred Electric	42%	42%	42%	46%



Market: Atlanta – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home heating, water heating and cooking. Electric is currently the predominant energy source for clothes drying. It is estimated that 81% of homes have a fireplace with a Margin of Error (ME) of ±19% and in those homes natural gas serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, there is no preferred energy source between natural gas and electric for any of the appliances.

When preference is broken down by the homes current energy source those using natural gas have roughly the same preference for their current energy source as those using electric for all 4 appliances.

Projections

Projected market share for natural gas shows no definitive change for any of the 4 appliances. Clothes dryer is the only appliance that indicates a potential increase. Among households wanting at least 1 gas appliance, all gas or all electric there is no significant change even though survey results indicates more want at least 1 gas and all gas than currently have it.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	63%	19%
	Electric	30%	
Water Heating	Natural Gas	58%	19%
	Electric	42%	
Cooking	Natural Gas	54%	19%
	Electric	42%	
Clothes Drying	Natural Gas	19%	19%
	Electric	81%	
Fireplace	Natural Gas	68%	21%
	Electric	0%	
	Wood	27%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	46%	19%
	Electric	42%	
Water Heating	Natural Gas	42%	19%
	Electric	42%	
Cooking	Natural Gas	50%	19%
	Electric	42%	
Clothes Drying	Natural Gas	38%	19%
	Electric	46%	

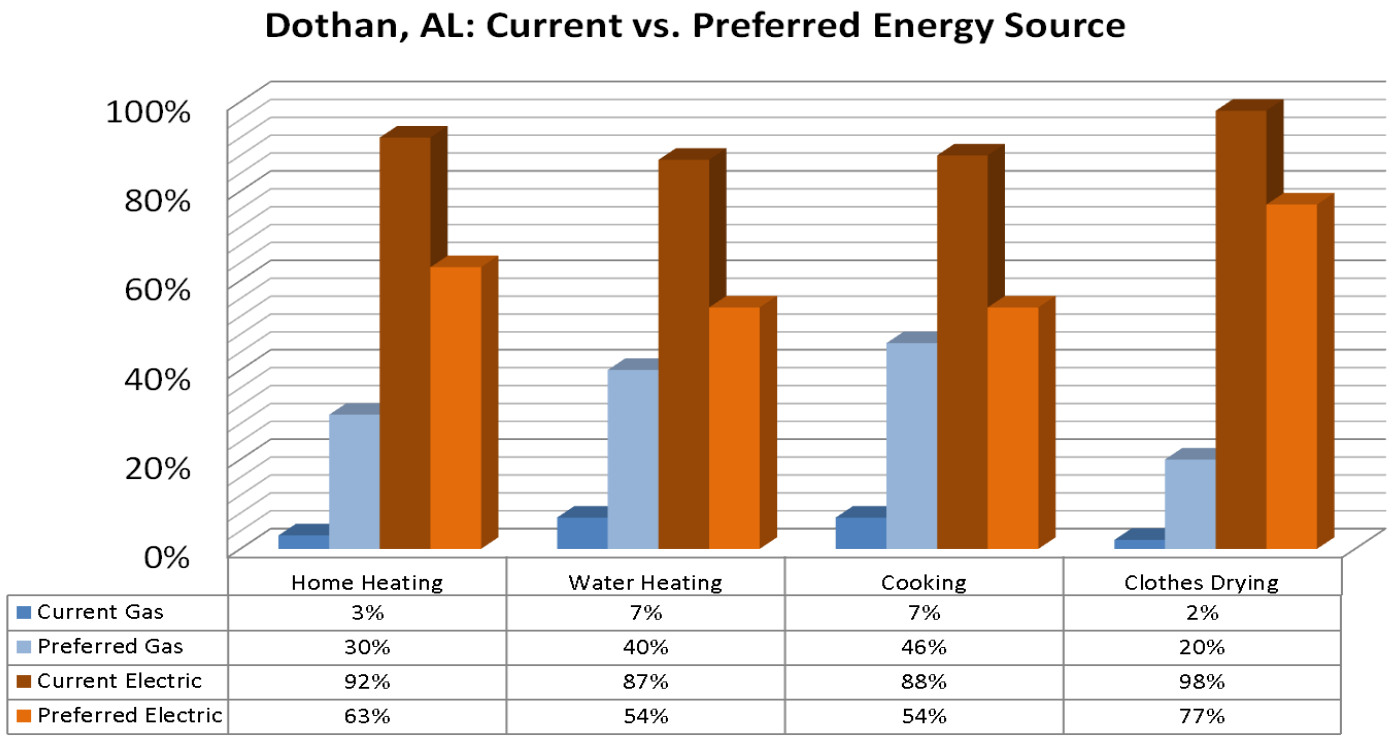
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	53%	24%
	Electric	63%	35%
Water Heating	Natural Gas	47%	25%
	Electric	55%	30%
Cooking	Natural Gas	50%	26%
	Electric	55%	30%
Clothes Drying	Natural Gas	60%	44%
	Electric	57%	21%

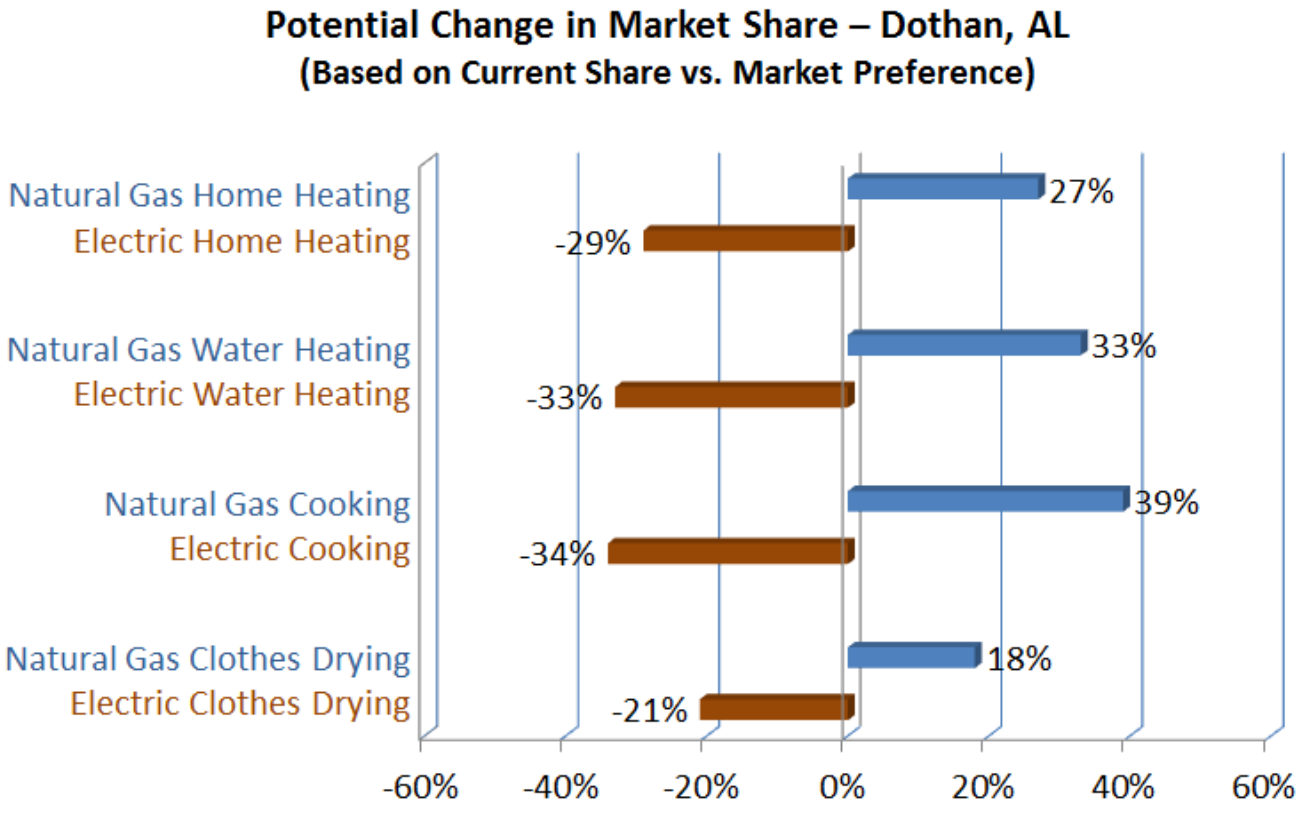
Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	63%	47%	20%
Water Heating	58%	42%	20%
Cooking	54%	48%	20%
Clothes Drying	19%	38%	19%

2. Market: Dothan, AL



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	3%	7%	7%	2%
Preferred Gas	30%	40%	46%	20%
Current Electric	92%	87%	88%	98%
Preferred Electric	63%	54%	54%	77%



Market: Dothan – Data/Tables

Current Energy Source

Current energy data shows electric is predominantly used in all 4 appliances. It is estimated that 63% of homes have a fireplace with a Margin of Error (ME) of ±12% and in those homes wood, electric and natural gas all serve as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is electric for home heating and clothes drying. There is no significant preference among water heating and cooking.

When preference is broken down by the homes current energy source those who use electric displayed between 59-78% preferences for electric. With such high current electric usage, meaningful analysis cannot be made on preference among natural gas users.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting at least 1 gas appliance there is a significant increase, while all electric preference shows a significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	3%	12%
	Electric	92%	
Water Heating	Natural Gas	7%	12%
	Electric	87%	
Cooking	Natural Gas	7%	12%
	Electric	88%	
Clothes Drying	Natural Gas	2%	12%
	Electric	98%	
Fireplace	Natural Gas	16%	16%
	Electric	26%	
	Wood	34%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	30%	13%
	Electric	63%	
Water Heating	Natural Gas	40%	13%
	Electric	54%	
Cooking	Natural Gas	46%	13%
	Electric	54%	
Clothes Drying	Natural Gas	20%	13%
	Electric	77%	

Preference for Current Energy Source

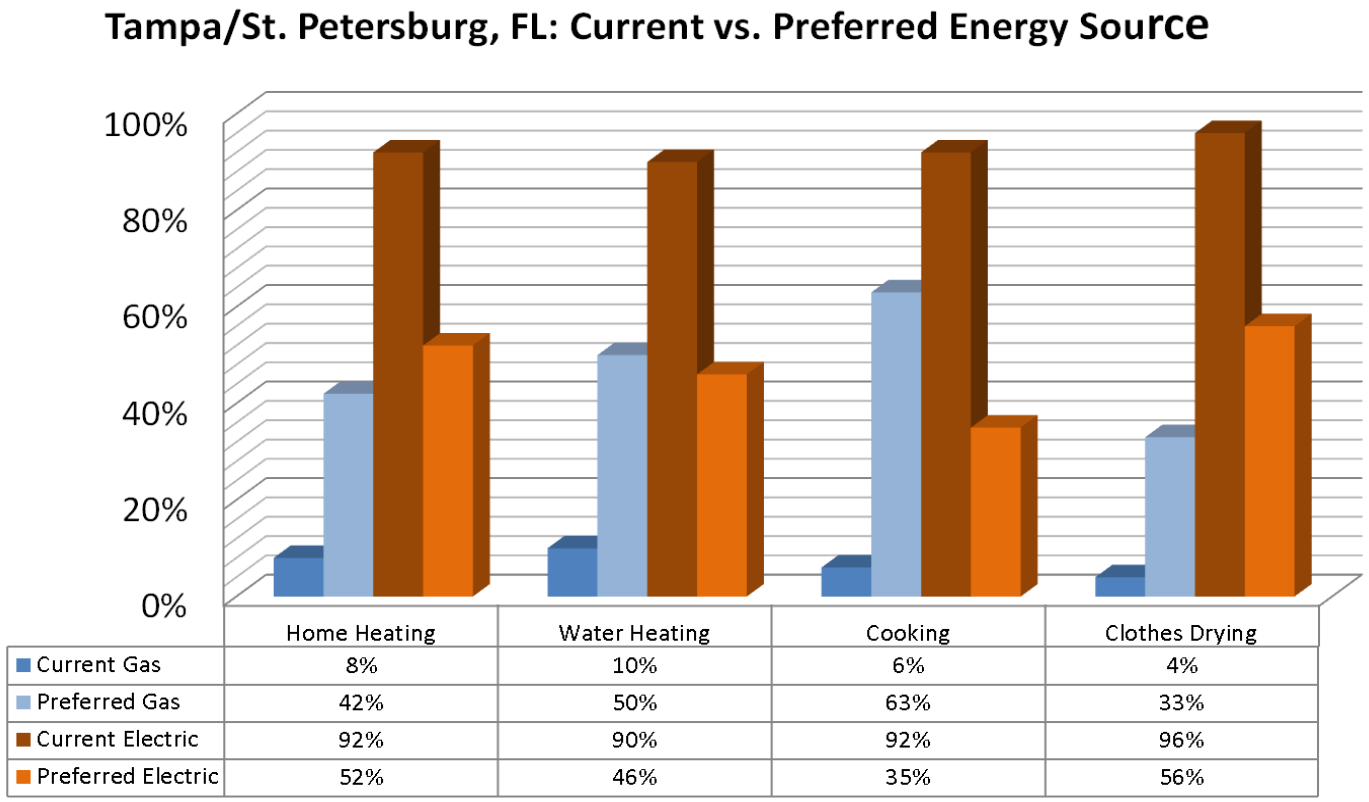
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas[1]	NA	NA
	Electric	67%	13%
Water Heating	Natural Gas[1]	NA	NA
	Electric	59%	14%
Cooking	Natural Gas	100%	49%
	Electric	59%	14%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	78%	13%

Projected Natural Gas Market Share

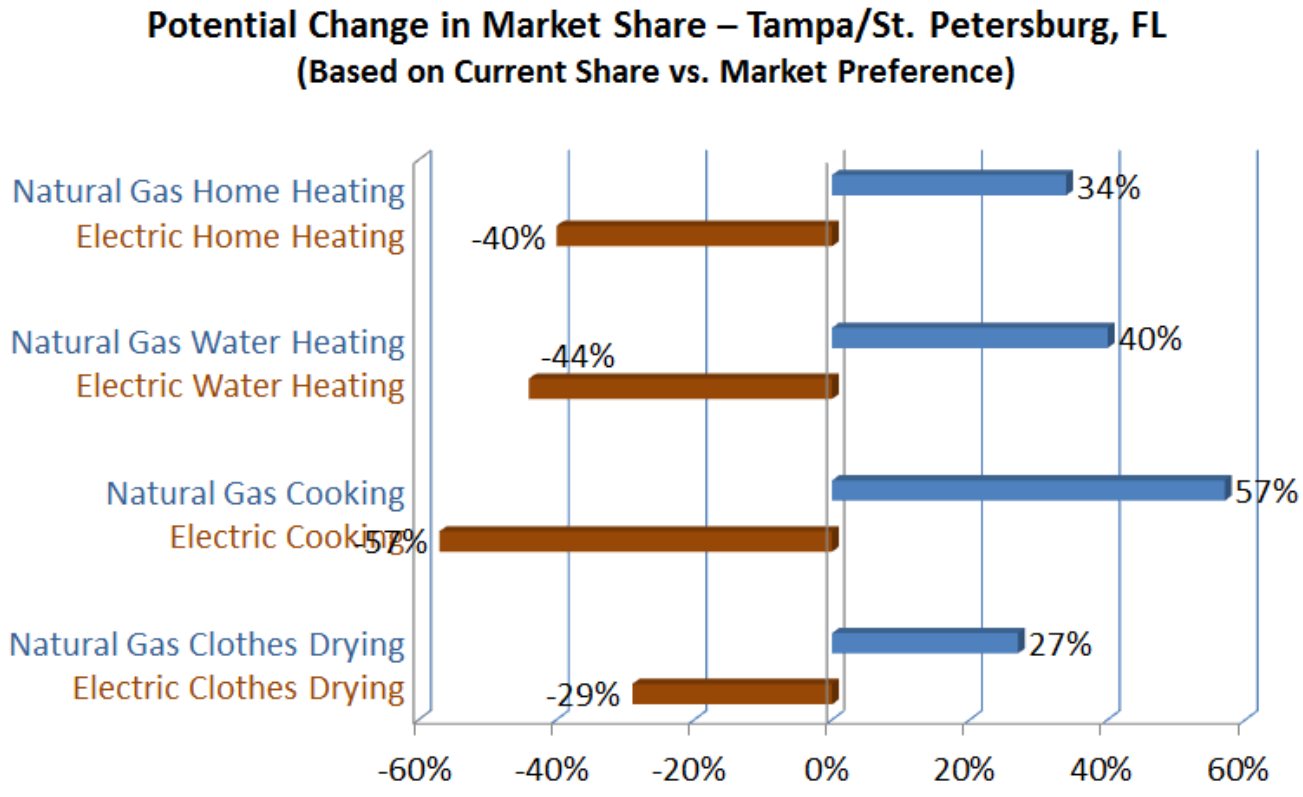
Appliance	Current	Projected	±ME
Home Heating	3%	28%	12%
Water Heating	7%	38%	13%
Cooking	7%	45%	13%
Clothes Drying	2%	20%	10%

1. Insufficient data to make valid estimate

3. Market: Tampa/St. Petersburg, FL



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	8%	10%	6%	4%
Preferred Gas	42%	50%	63%	33%
Current Electric	92%	90%	92%	96%
Preferred Electric	52%	46%	35%	56%



Market: Tampa/St. Petersburg – Data/Tables

Current Energy Source

Current energy data shows electric is predominantly used in all 4 appliances. It is estimated that 34% of homes have a fireplace with a Margin of Error (ME) of ±14% and in those homes electric and wood serve as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, there is no statistically preferred energy source between natural gas and electric for, although cooking leans natural gas and clothes drying leans electric.

When preference is broken down by the homes current energy source those using electric hover around 50% electric preference for the 4 appliances with cooking lowest at 36%. Due to most users currently using electric, meaningful analysis cannot be made among natural gas users about their preference.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting at least 1 gas appliance and all gas there is a significant increase, while all electric preference shows a significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	8%	14%
	Electric	92%	
Water Heating	Natural Gas	10%	14%
	Electric	90%	
Cooking	Natural Gas	6%	14%
	Electric	92%	
Clothes Drying	Natural Gas	4%	14%
	Electric	96%	
Fireplace	Natural Gas	0%	24%
	Electric	47%	
	Wood	41%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	42%	14%
	Electric	52%	
Water Heating	Natural Gas	50%	14%
	Electric	46%	
Cooking	Natural Gas	63%	14%
	Electric	35%	
Clothes Drying	Natural Gas	33%	14%
	Electric	56%	

Preference for Current Energy Source

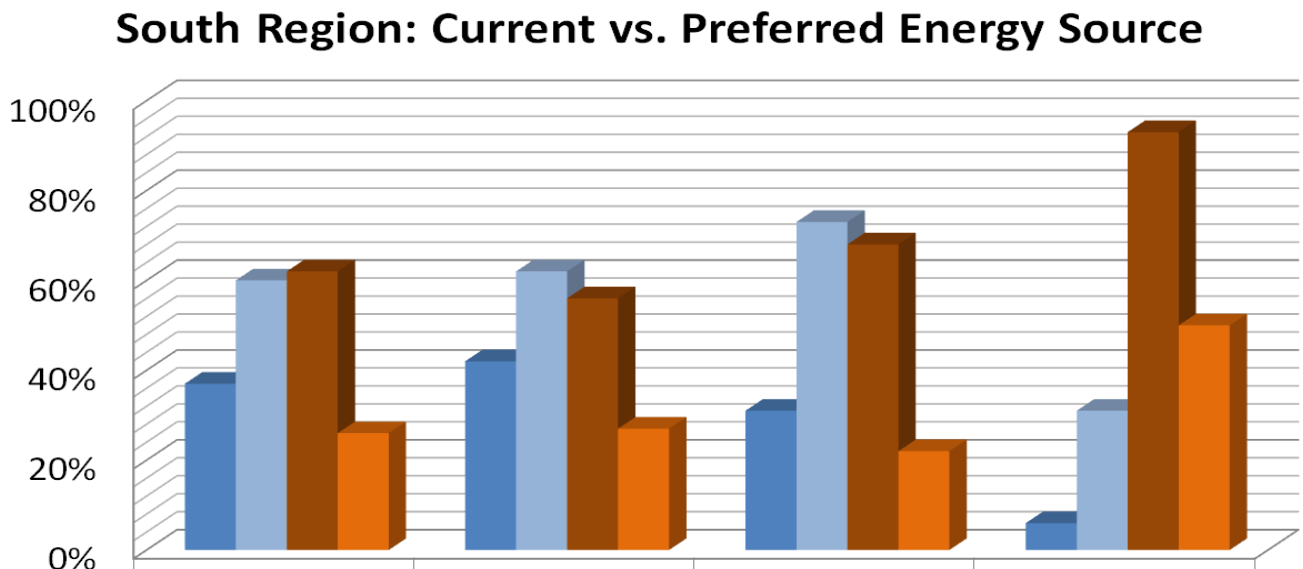
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas[1]	NA	NA
	Electric	55%	15%
Water Heating	Natural Gas[1]	NA	NA
	Electric	49%	15%
Cooking	Natural Gas[1]	NA	NA
	Electric	36%	15%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	59%	15%

Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	8%	42%	14%
Water Heating	10%	50%	14%
Cooking	6%	62%	14%
Clothes Drying	4%	33%	14%

1. Insufficient data to make valid estimate

F. South Region Graphs/Data/Tables



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	37%	42%	31%	6%
Preferred Gas	60%	62%	73%	31%
Current Electric	62%	56%	68%	93%
Preferred Electric	26%	27%	22%	50%

The collective responses for the South Region include 3 Metropolitan Statistical Areas (MSA): Jackson, San Antonio and Shreveport. These three sample MSAs surveyed indicate the current total market absorption for natural gas home heating is 37%. These new homeowners were also queried as to what energy source they preferred in their home. Natural gas preference jumps significantly, up 23 points to 60% (and becomes the market's preferred heating source). Electric heated home market share is 62% with the customer preference declining 36 points to just a customer preference rate of 26 %. The gas heating current market share versus customer preference exceeds the margin of error (12+/-) and thus, at the highest level assumption of this customer preference data would suggest that natural gas heated homes have significant opportunities for expansion in the South Region.

When parsing the database by the survey respondents' current heating energy source, other telling customer preferences can be found. For example, 80% of the current natural gas heating respondents maintain their willingness to recommend to family members natural gas heating. We call this the natural gas heating retention and recommendation rate.

On the other hand, the electric heating retention exercise shows a dramatically different result. Electric heating homeowner retention is just 34%. In other words, approximately than 2 out of 3 current electric heating homeowners lost their desire to recommend electric heat to their family and friends.

In regards to "all" natural gas home, this study indicated that the current market share of all natural gas homes is just 7%, with customer preference of more than 3X higher at 25%. Furthermore, this South Region study indicates "all" electric homes as almost the opposite. "All" electric homes market share is currently at 31%, with a customer preference at just 7%. This means that 2 out of every 3 "all" electric homeowners do not recommend electric heat to their family members and friends.

South Region Data/Tables

Current Energy Source

Current energy data shows no statistical difference in water heating. Electric is currently the predominant energy source for home heating, cooking and clothes drying. It is estimated that 64% of homes have a fireplace with a Margin of Error (ME) of ±12% and in those homes natural gas and wood serve as the primary energy source for the fireplace.

Preferred Energy Source

Overall, natural gas is the preferred energy source for home heating, water heating and cooking, while households leaned towards electric for clothes drying.

When preference is broken down by the homes current energy source those using natural gas have a significantly higher preference for their energy source than those using electric for home heating, water heating and cooking. Due to minimal natural gas users for clothes drying, no comparison can be made.

Projections

Projected market share for natural gas shows a significant increase for home heating, water heating and cooking. Among households wanting at least 1 gas appliance and all gas there is a significant increase, while all electric preference shows a significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	37%	12%
	Electric	62%	
Water Heating	Natural Gas	42%	12%
	Electric	56%	
Cooking	Natural Gas	31%	12%
	Electric	68%	
Clothes Drying	Natural Gas	6%	12%
	Electric	93%	
Fireplace	Natural Gas	35%	15%
	Electric	13%	
	Wood	48%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	60%	12%
	Electric	26%	
Water Heating	Natural Gas	62%	12%
	Electric	27%	
Cooking	Natural Gas	73%	12%
	Electric	22%	
Clothes Drying	Natural Gas	31%	13%
	Electric	50%	

Preference for Current Energy Source

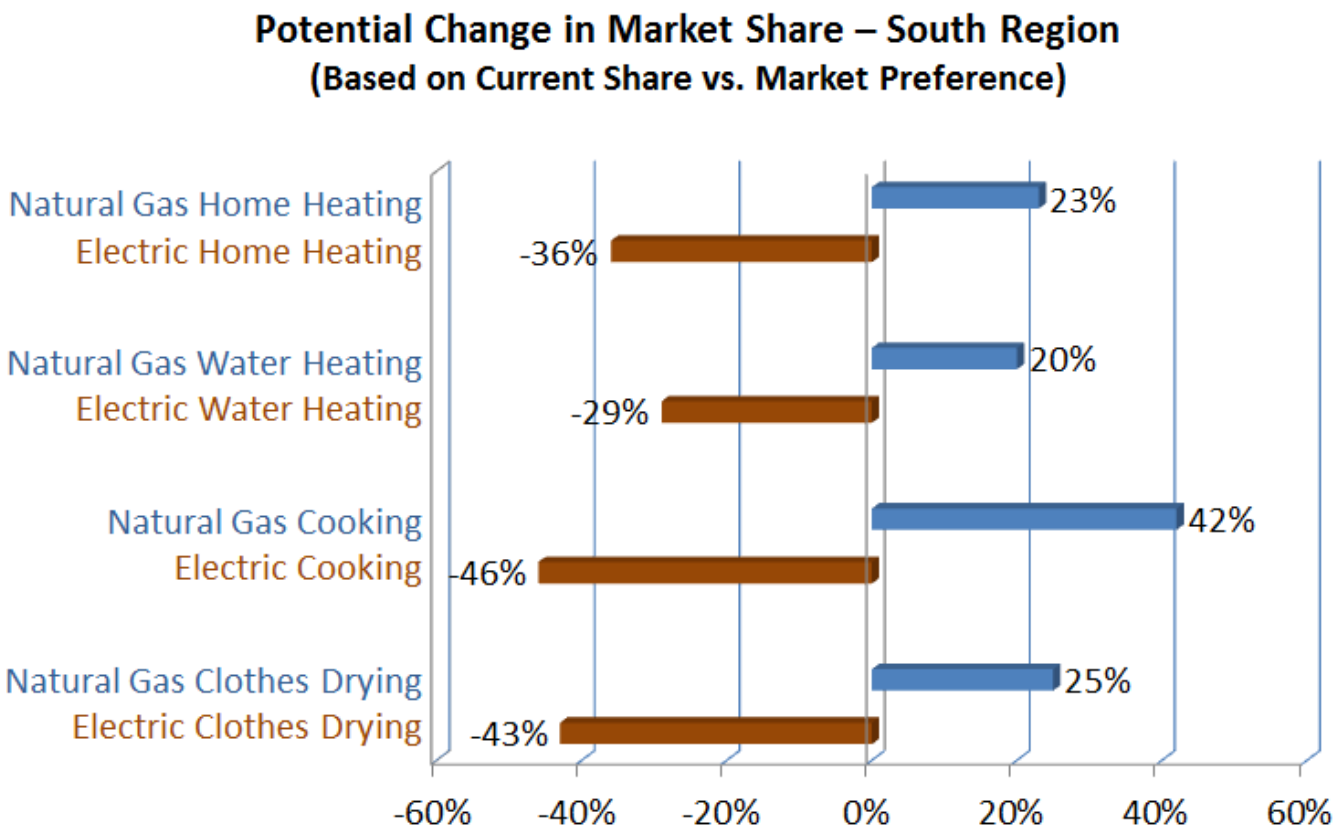
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	80%	20%
	Electric	34%	16%
Water Heating	Natural Gas	82%	19%
	Electric	37%	17%
Cooking	Natural Gas	92%	23%
	Electric	29%	15%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	54%	13%

Overall Energy Source

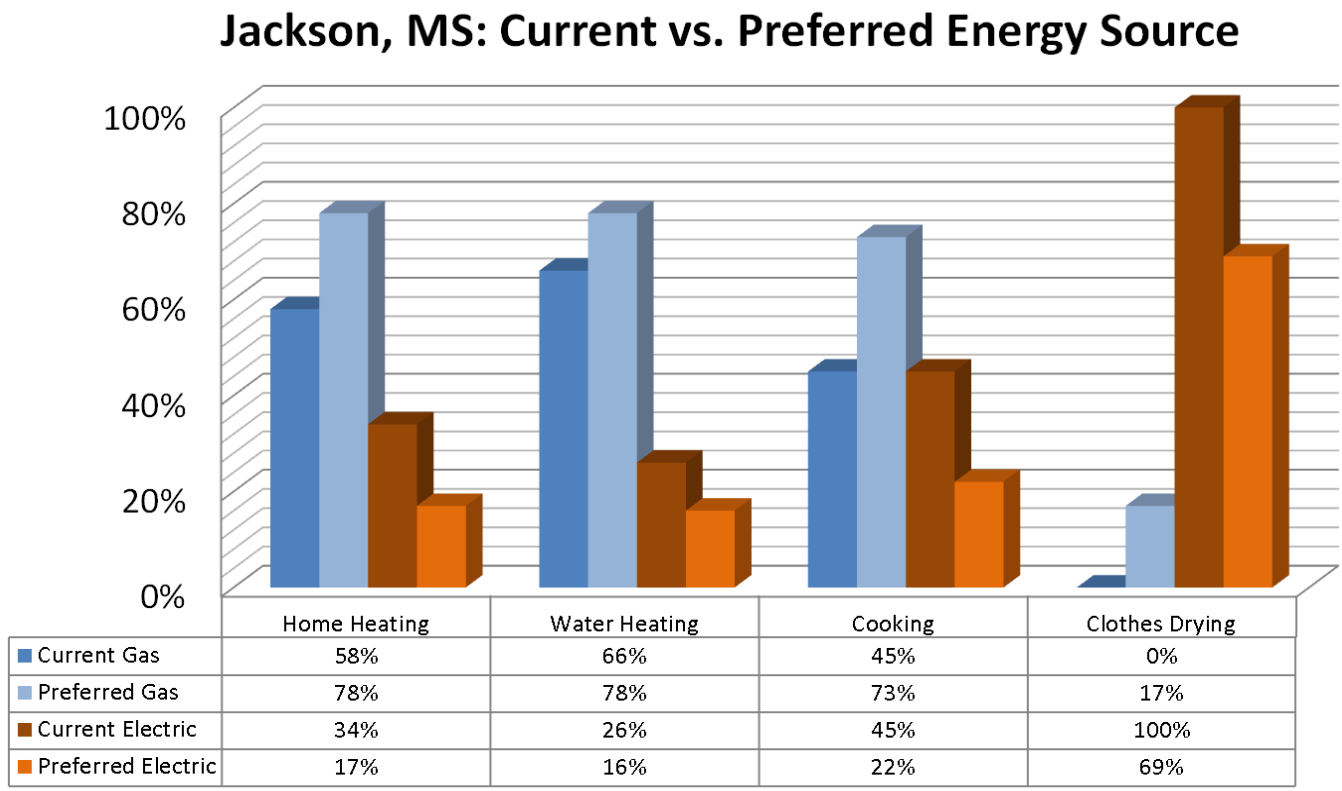
	Status	Estimate	±ME
At least 1 Gas	Current	62%	8%
	Preferred	84%	
All Gas	Current	7%	
	Preferred	25%	
All Electric	Current	31%	
	Preferred	7%	

1. Insufficient data to make valid estimate

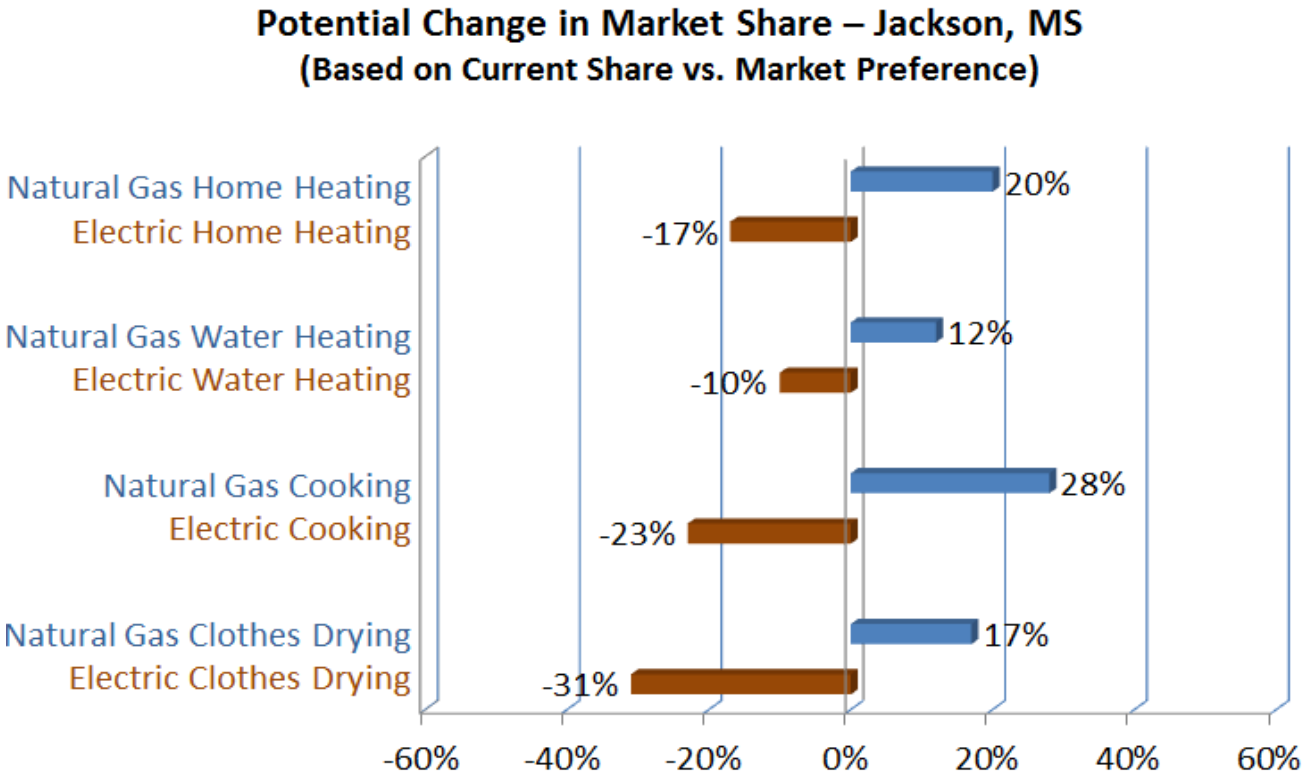
South Region Potential for Change in Market Share Chart:



1. Market: Jackson, MS



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	58%	66%	45%	0%
Preferred Gas	78%	78%	73%	17%
Current Electric	34%	26%	45%	100%
Preferred Electric	17%	16%	22%	69%



Market: Jackson – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home heating and cooking. Electric is currently the predominant energy source for clothes drying, while natural gas is significantly greater in water heating. It is estimated that 92% of homes have a fireplace with a Margin of Error (ME) of ±16% and in those homes natural gas serves as the primary energy source for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with electric the significant preference for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home heating, water heating and cooking. No valid comparison can be made for clothes drying.

Projections

Projected market share for natural gas shows a definitive increase for home heating and cooking. Among households wanting at least 1 gas appliance, all gas and all electric there is no significant change.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	58%	16%
	Electric	34%	
Water Heating	Natural Gas	66%	16%
	Electric	26%	
Cooking	Natural Gas	45%	16%
	Electric	45%	
Clothes Drying	Natural Gas	0%	16%
	Electric	100%	
Fireplace	Natural Gas	74%	16%
	Electric	3%	
	Wood	11%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	78%	16%
	Electric	17%	
Water Heating	Natural Gas	78%	16%
	Electric	16%	
Cooking	Natural Gas	73%	16%
	Electric	22%	
Clothes Drying	Natural Gas	17%	16%
	Electric	69%	

Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	100%	21%
	Electric	46%	27%
Water Heating	Natural Gas	96%	20%
	Electric	40%	31%
Cooking	Natural Gas	94%	24%
	Electric	44%	24%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	69%	16%

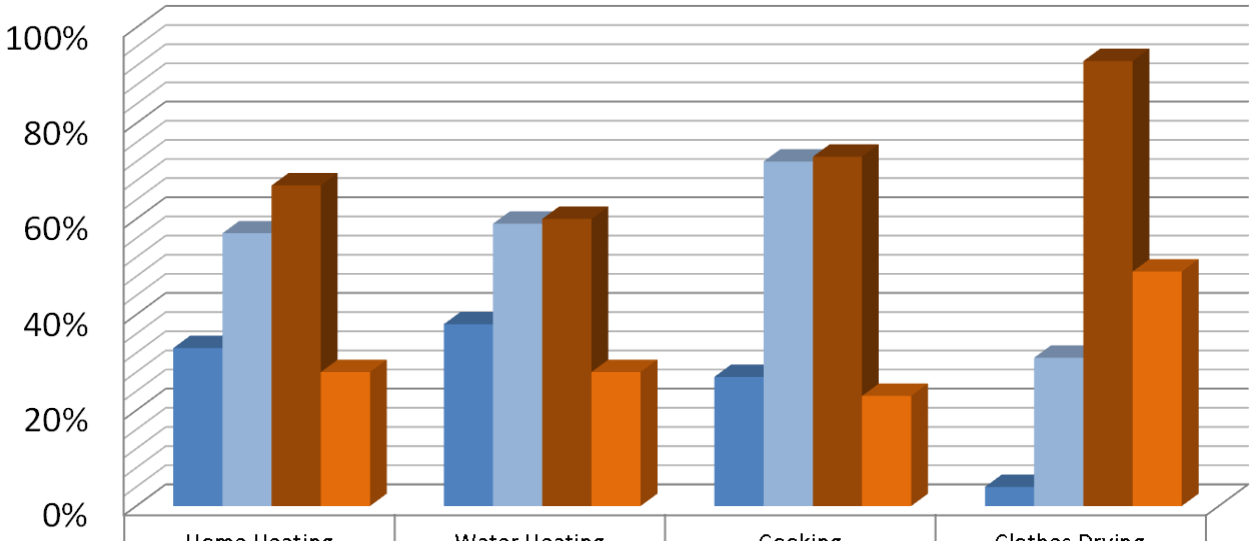
Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	58%	75%	15%
Water Heating	66%	77%	14%
Cooking	45%	67%	17%
Clothes Drying[1]	0%	NA	NA

1. Insufficient data to make valid estimate

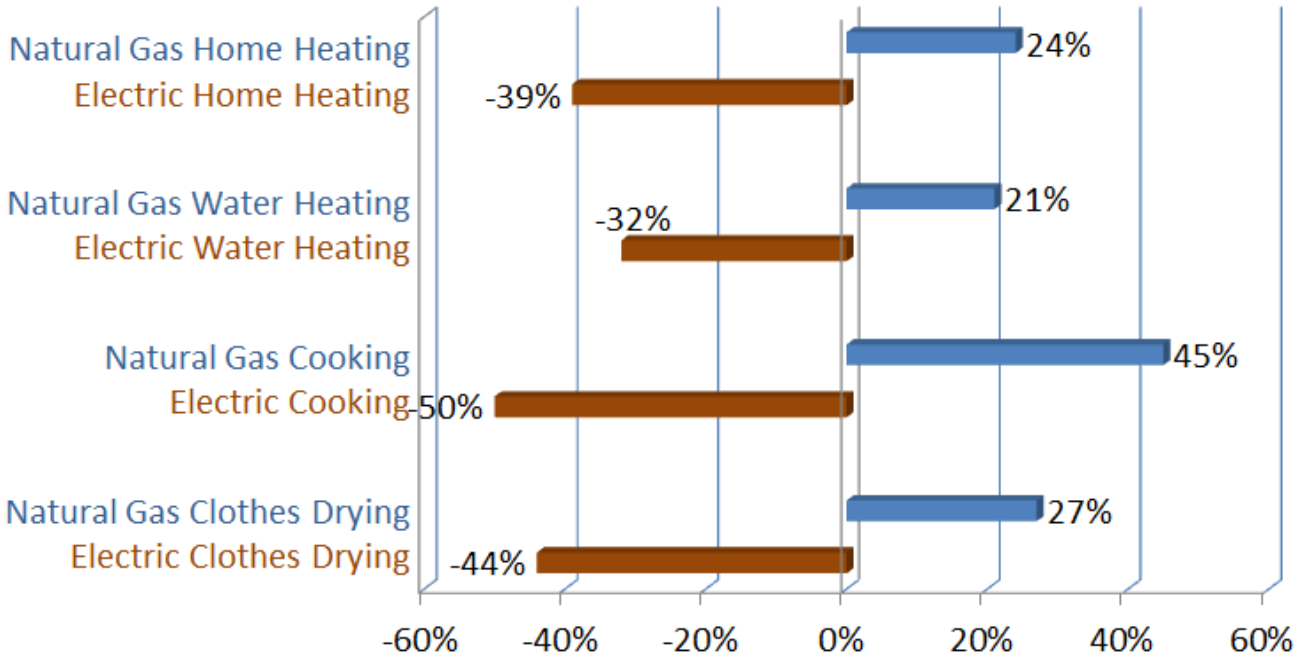
2. Market: San Antonio, TX

San Antonio, TX: Current vs. Preferred Energy Source



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	33%	38%	27%	4%
Preferred Gas	57%	59%	72%	31%
Current Electric	67%	60%	73%	93%
Preferred Electric	28%	28%	23%	49%

Potential Change in Market Share – San Antonio, TX
(Based on Current Share vs. Market Preference)



Market: San Antonio – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in water heating. Electric is currently the predominant energy source for home heating, cooking and clothes drying. It is estimated that 63% of homes have a fireplace with a Margin of Error (ME) of ±14% and in those homes wood and natural gas serve as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source statistically is natural gas for cooking, with a moderate lean towards natural gas for home and water heating. For clothes drying there is a moderate lean towards electric.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home heating, water heating and cooking. No valid comparison can be made for clothes drying.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances with the largest increase in cooking. Among households wanting at least 1 gas and all gas there is a significant increase, while all electric shows a significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	33%	14%
	Electric	67%	
Water Heating	Natural Gas	38%	14%
	Electric	60%	
Cooking	Natural Gas	27%	14%
	Electric	73%	
Clothes Drying	Natural Gas	4%	14%
	Electric	93%	
Fireplace	Natural Gas	30%	18%
	Electric	13%	
	Wood	53%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	57%	14%
	Electric	28%	
Water Heating	Natural Gas	59%	14%
	Electric	28%	
Cooking	Natural Gas	72%	14%
	Electric	23%	
Clothes Drying	Natural Gas	31%	15%
	Electric	49%	

Preference for Current Energy Source

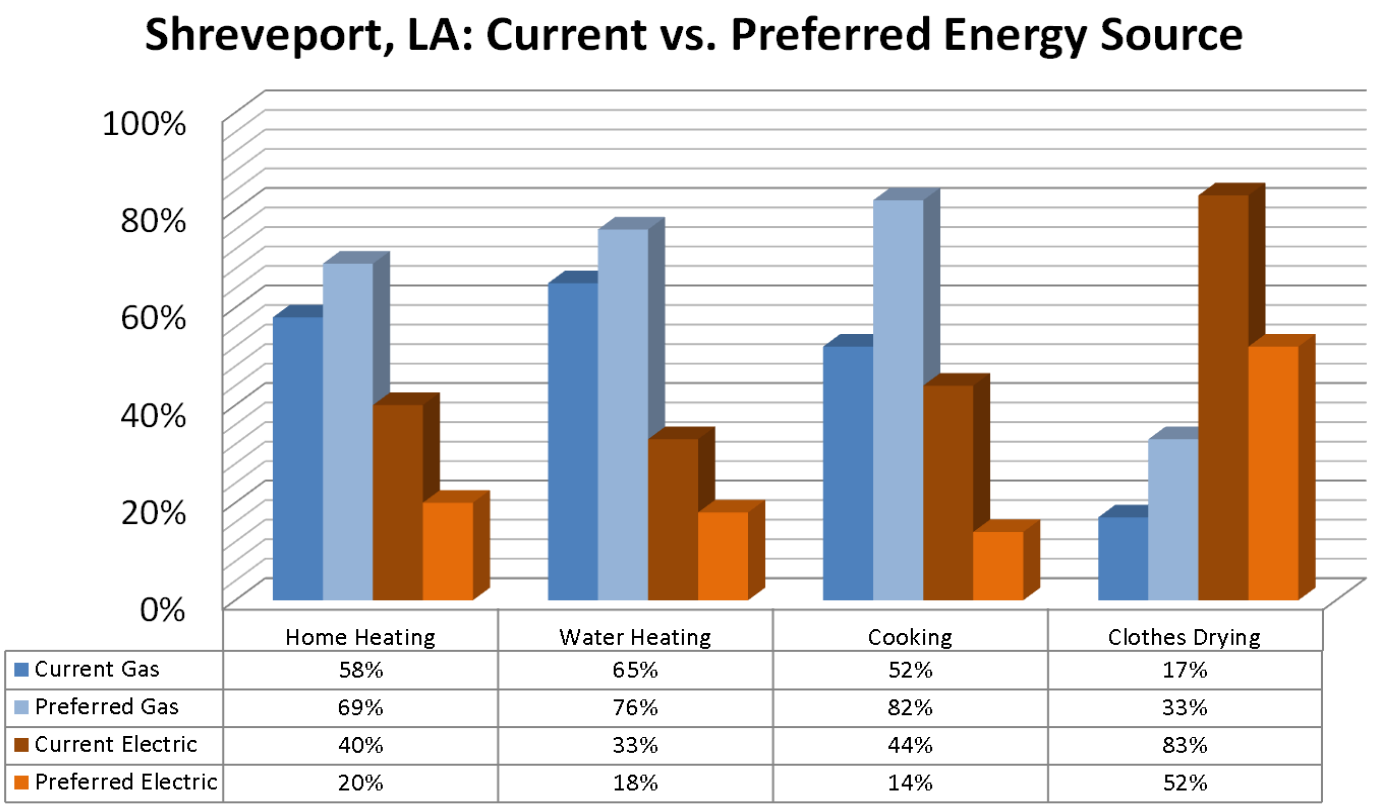
Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	75%	24%
	Electric	32%	18%
Water Heating	Natural Gas	78%	23%
	Electric	36%	19%
Cooking	Natural Gas	92%	28%
	Electric	29%	17%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	51%	15%

Projected Natural Gas Market Share

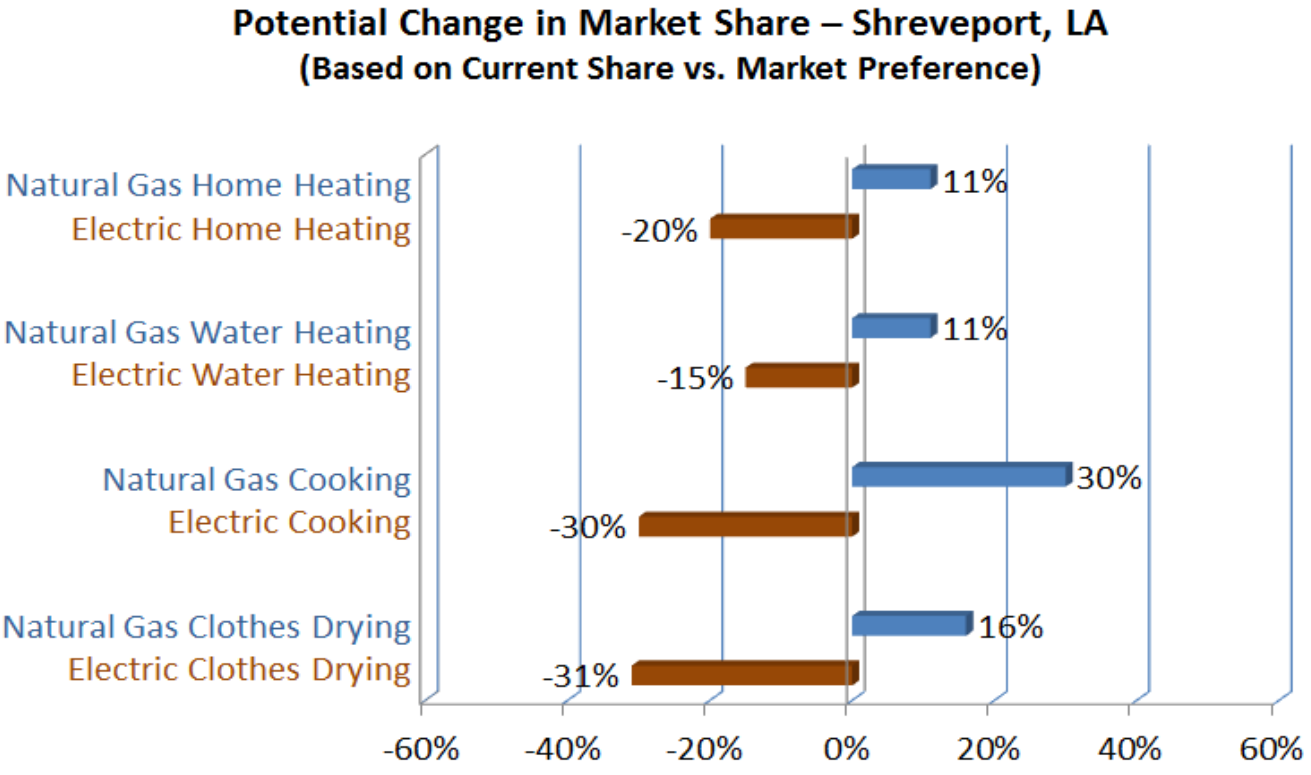
Appliance	Current	Projected	±ME
Home Heating	33%	57%	15%
Water Heating	38%	58%	14%
Cooking	27%	73%	13%
Clothes Drying	4%	30%	14%

1. Insufficient data to make valid estimate

3. Market: Shreveport, LA



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	58%	65%	52%	17%
Preferred Gas	69%	76%	82%	33%
Current Electric	40%	33%	44%	83%
Preferred Electric	20%	18%	14%	52%



Market: Shreveport – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home heating and cooking. Electric is currently the predominant energy source for clothes drying, while natural gas is greater in water heating. It is estimated that 60% of homes have a fireplace with a Margin of Error (ME) of ±14% and in those homes natural gas and wood serve as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with a moderate lean towards electric for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home heating, water heating and cooking. There is not a statistical difference in clothes drying.

Projections

Projected market share for natural gas shows a definitive increase for cooking and clothes drying. Among households wanting at least 1 gas appliance and all gas there is not a significant change, while all electric preference shows a decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	58%	13%
	Electric	40%	
Water Heating	Natural Gas	65%	13%
	Electric	33%	
Cooking	Natural Gas	52%	13%
	Electric	44%	
Clothes Drying	Natural Gas	17%	13%
	Electric	83%	
Fireplace	Natural Gas	55%	18%
	Electric	16%	
	Wood	29%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	69%	14%
	Electric	20%	
Water Heating	Natural Gas	76%	14%
	Electric	18%	
Cooking	Natural Gas	82%	14%
	Electric	14%	
Clothes Drying	Natural Gas	33%	14%
	Electric	52%	

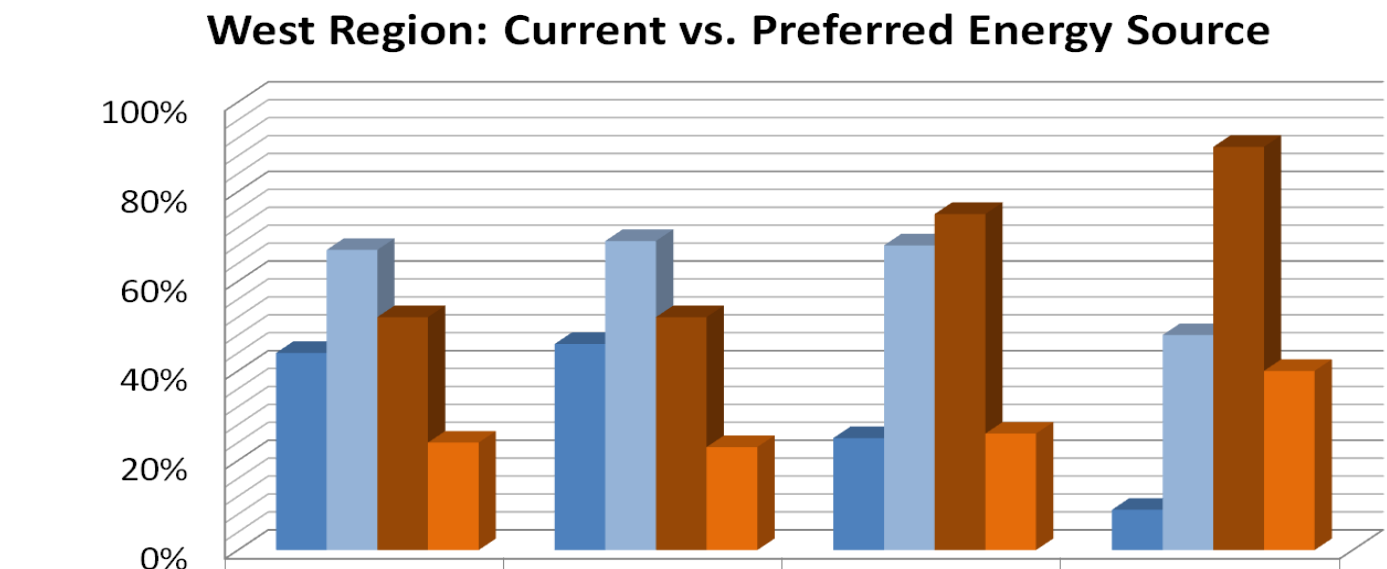
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	93%	18%
	Electric	45%	22%
Water Heating	Natural Gas	94%	17%
	Electric	50%	24%
Cooking	Natural Gas	92%	20%
	Electric	23%	21%
Clothes Drying	Natural Gas	78%	33%
	Electric	64%	16%

Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	58%	69%	13%
Water Heating	65%	75%	12%
Cooking	52%	81%	11%
Clothes Drying	17%	33%	13%

G. West Region Graphs/Data/Tables



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	44%	46%	25%	9%
Preferred Gas	67%	69%	68%	48%
Current Electric	52%	52%	75%	90%
Preferred Electric	24%	23%	26%	40%

The collective responses for the West Region include 2 Metropolitan Statistical Areas (MSA): Phoenix and Portland. Again, this is a tale of two cities/MSAs. Portland and Phoenix are so different in current natural gas market shares that it is recommended that the individual MSA's be reviewed instead of the Region results. For example, Portland's current natural gas heating market share is 73% versus Phoenix current natural gas heating market share as just 29%.

It is noteworthy that despite different natural gas starting points, the favorable view of natural gas for both preference and willing to recommend bodes well for continued natural gas market share expansion. Both markets also show electric vulnerability given customers having less preference for electric (in all appliances) than is currently being delivered to them. For example, "all" natural gas homes in the West Region make up just 6% of the studies new homes, while 41% (7X) prefer "all" gas homes. On the other hand, in the West Region "all" electric homes were indicated at 31% with a preference for "all" electric homes at just 13%.

West Region Data/Tables

Current Energy Source

Current energy data shows no statistical difference in home and water heating. Electric is currently the predominant energy source for cooking and clothes drying. It is estimated that 47% of homes have a fireplace with a Margin of Error (ME) of ±11% and in those homes natural gas and wood serve as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with no statistical difference for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home all 4 appliances.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting all gas there is a significant increase, while at least 1 gas shows a moderate increase and all electric shows a moderate decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	44%	11%
	Electric	52%	
Water Heating	Natural Gas	46%	11%
	Electric	52%	
Cooking	Natural Gas	25%	11%
	Electric	75%	
Clothes Drying	Natural Gas	9%	11%
	Electric	90%	
Fireplace	Natural Gas	37%	20%
	Electric	29%	
	Wood	26%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	67%	11%
	Electric	24%	
Water Heating	Natural Gas	69%	11%
	Electric	23%	
Cooking	Natural Gas	68%	11%
	Electric	26%	
Clothes Drying	Natural Gas	48%	11%
	Electric	40%	

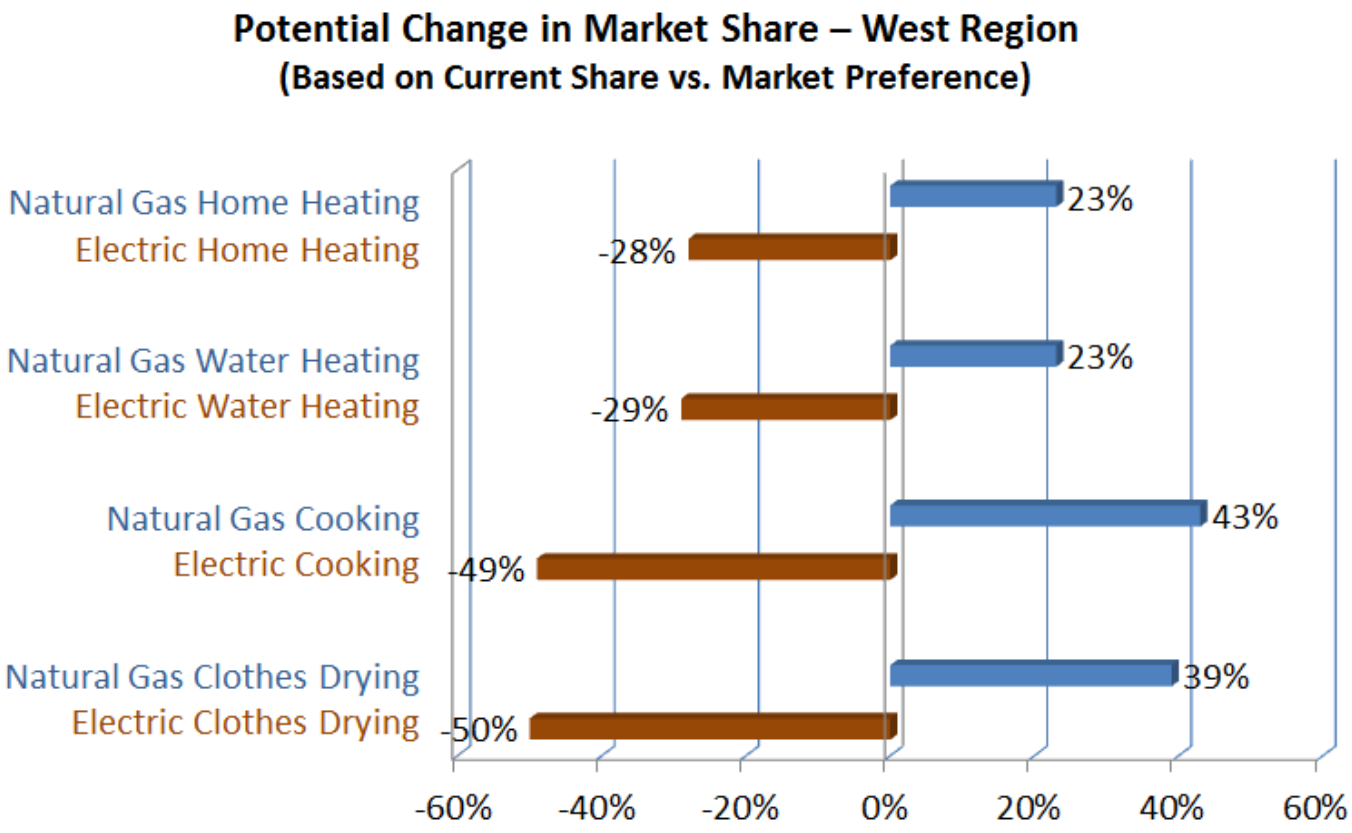
Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	80%	16%
	Electric	33%	16%
Water Heating	Natural Gas	87%	16%
	Electric	36%	16%
Cooking	Natural Gas	88%	24%
	Electric	32%	13%
Clothes Drying	Natural Gas	100%	46%
	Electric	43%	12%

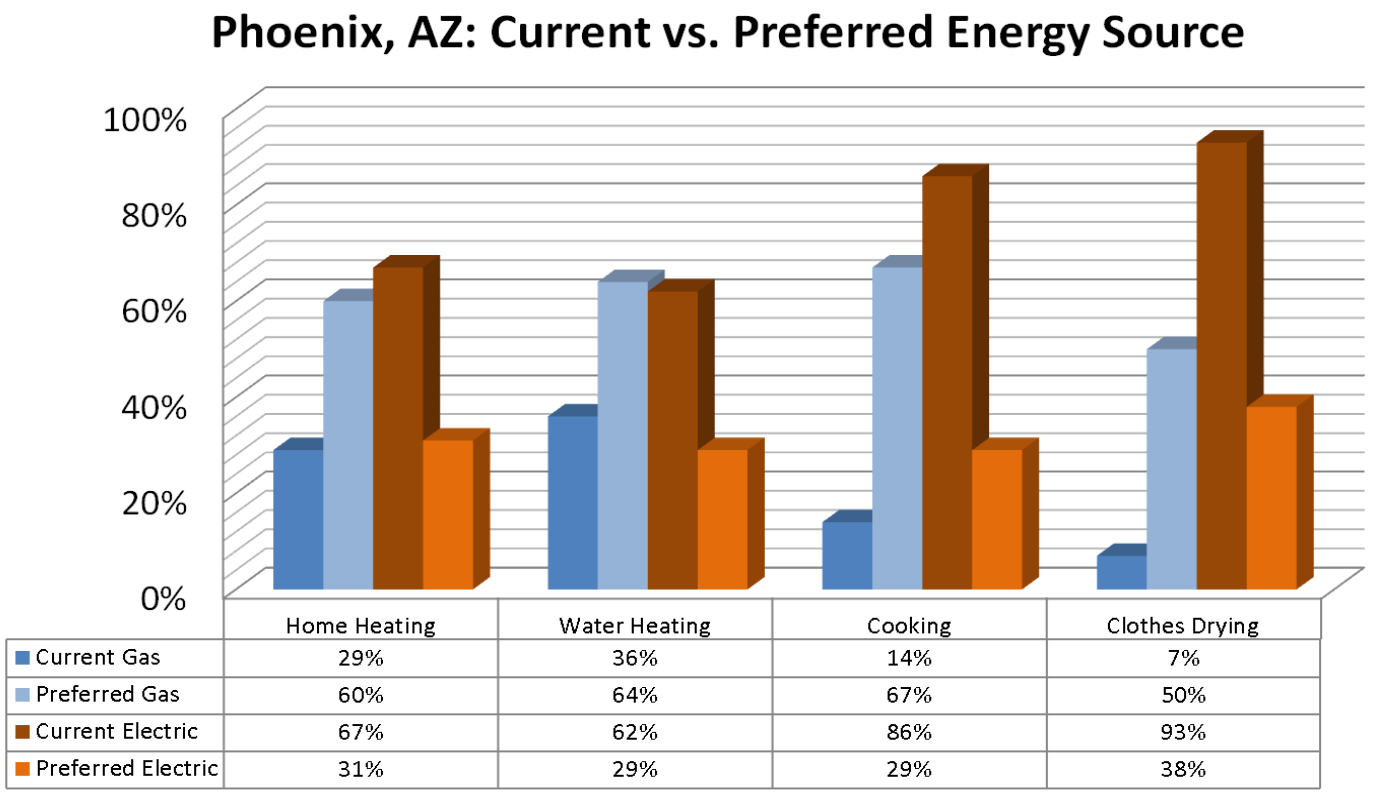
Overall Energy Source

	Status	Estimate	±ME
At least 1 Gas	Current	64%	10%
	Preferred	80%	
All Gas	Current	6%	
	Preferred	41%	
All Electric	Current	31%	
	Preferred	13%	

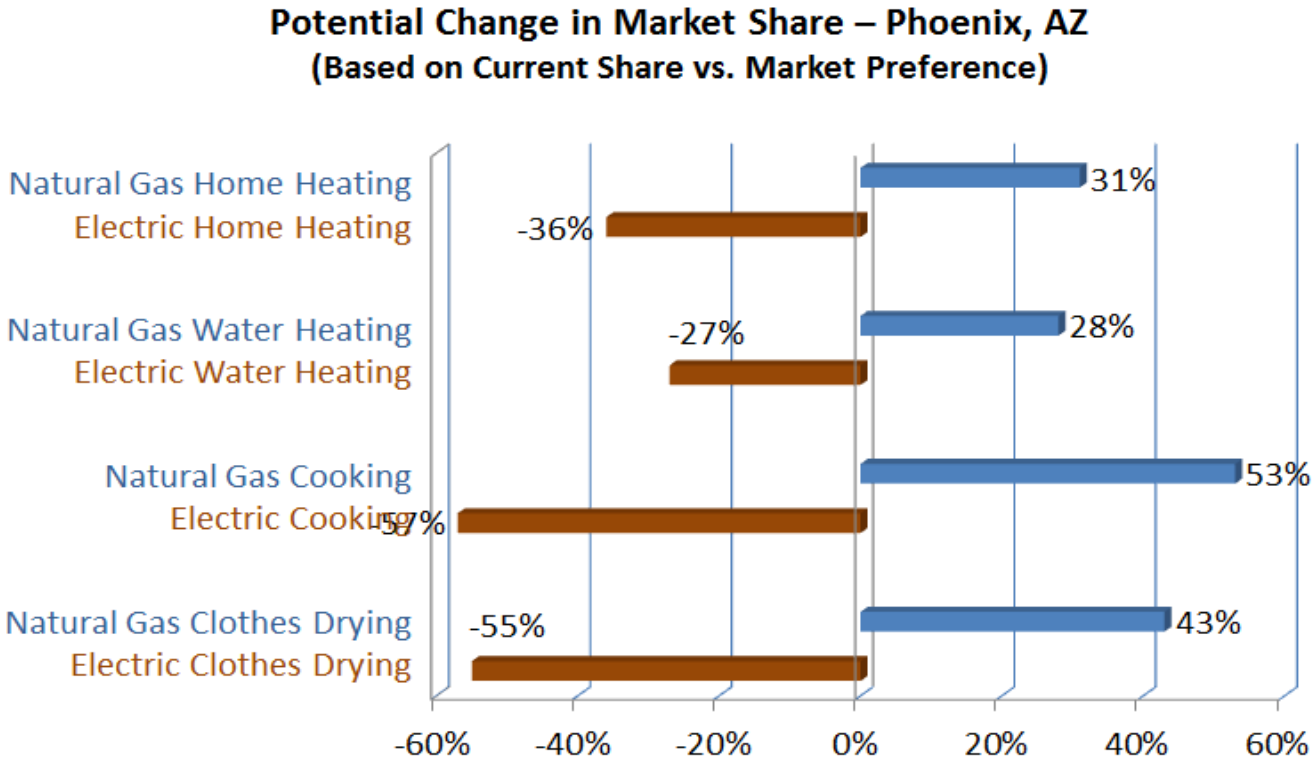
West Region Potential for Change in Market Share Chart:



1. **Market: Phoenix, AZ**



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	29%	36%	14%	7%
Preferred Gas	60%	64%	67%	50%
Current Electric	67%	62%	86%	93%
Preferred Electric	31%	29%	29%	38%



Market: Phoenix – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in water heating. Electric is currently the predominant energy source for home heating, cooking and clothes drying. It is estimated that 29% of homes have a fireplace with a Margin of Error (ME) of ±15% and in those homes natural gas electric and wood all serves as energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with no statistical difference for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for home heating, water heating and cooking. No valid comparison can be made for clothes drying.

Projections

Projected market share for natural gas shows a definitive increase for all 4 appliances. Among households wanting all gas and at least 1 gas there is a significant increase. Households wanting all electric show a significant decrease.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	29%	15%
	Electric	67%	
Water Heating	Natural Gas	36%	15%
	Electric	62%	
Cooking	Natural Gas	14%	15%
	Electric	86%	
Clothes Drying	Natural Gas	7%	15%
	Electric	93%	
Fireplace	Natural Gas	33%	28%
	Electric	42%	
	Wood	17%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	60%	15%
	Electric	31%	
Water Heating	Natural Gas	64%	15%
	Electric	29%	
Cooking	Natural Gas	67%	15%
	Electric	29%	
Clothes Drying	Natural Gas	50%	15%
	Electric	38%	

Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	67%	28%
	Electric	32%	19%
Water Heating	Natural Gas	87%	25%
	Electric	38%	19%
Cooking	Natural Gas	83%	40%
	Electric	31%	16%
Clothes Drying	Natural Gas[1]	NA	NA
	Electric	39%	16%

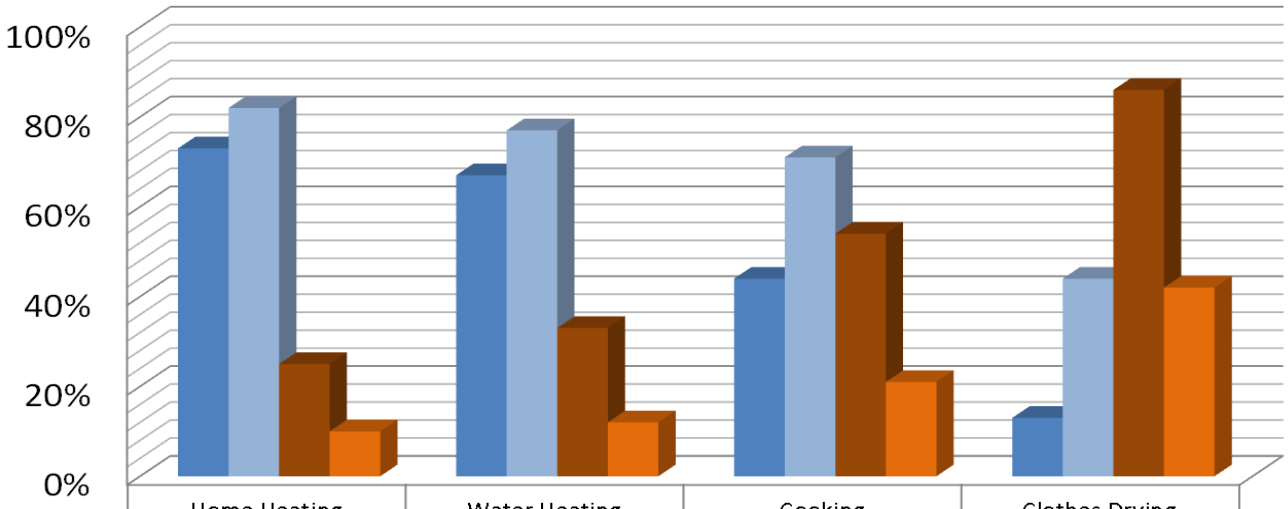
Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	29%	57%	15%
Water Heating	36%	63%	15%
Cooking	14%	67%	15%
Clothes Drying	7%	51%	16%

1. Insufficient data to make valid estimate

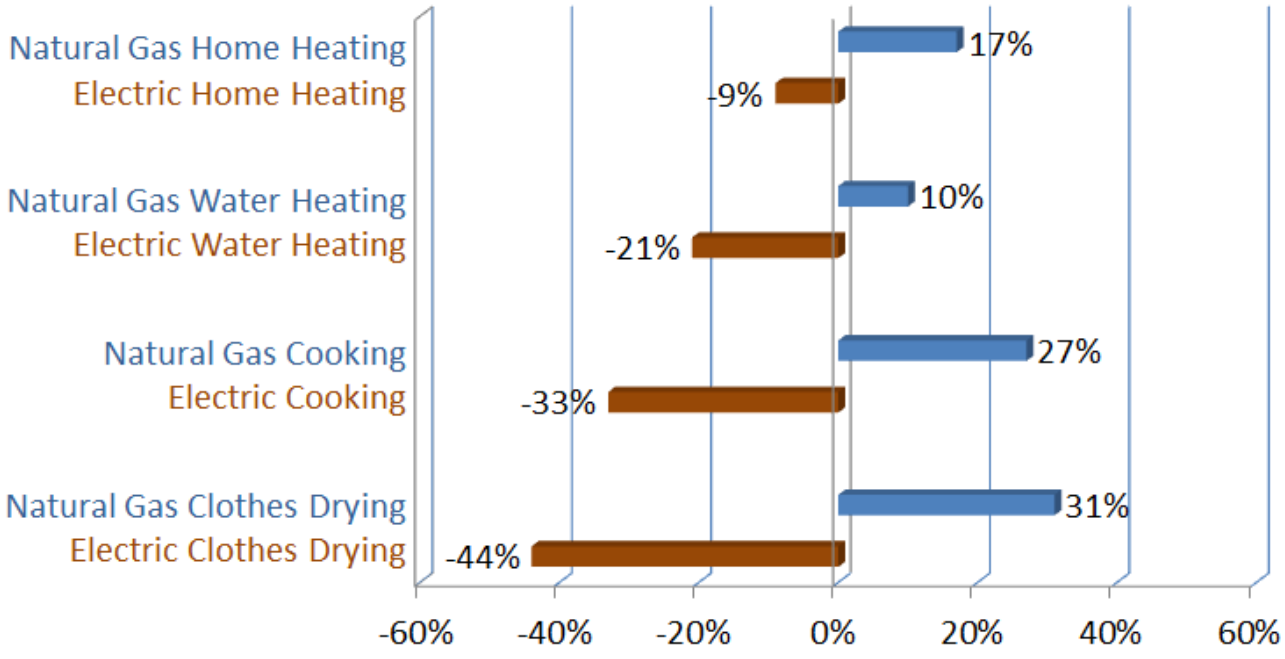
2. Market: Portland/Vancouver-Hillsboro, OR-WA

Portland/Vancouver-Hillsborough: Current vs. Preferred Energy Source



	Home Heating	Water Heating	Cooking	Clothes Drying
Current Gas	73%	67%	44%	13%
Preferred Gas	82%	77%	71%	44%
Current Electric	25%	33%	54%	86%
Preferred Electric	10%	12%	21%	42%

Potential Change in Market Share – Portland/Vancouver-Hillsboro, OR-WA (Based on Current Share vs. Market Preference)



Market: Portland/Vancouver – Data/Tables

Current Energy Source

Current energy data shows no statistical difference in cooking. Electric is currently the predominant energy source for clothes drying, while natural gas is significantly greater in home heating and water heating. It is estimated that 83% of homes have a fireplace with a Margin of Error (ME) of ±12% and in those homes natural gas and wood serves as the primary energy sources for the fireplace.

Preferred Energy Source

Overall, the preferred energy source is natural gas for home heating, water heating and cooking, with no statistical difference for clothes drying.

When preference is broken down by the homes current energy source those using natural gas are more satisfied than those using electric for all 4 appliances.

Projections

Projected market share for natural gas shows a significant increase for cooking and clothes drying. Among households wanting all gas appliances there is a significant increase, while at least 1 gas and all electric preference show no significant change.

Current Energy Source

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	73%	12%
	Electric	25%	
Water Heating	Natural Gas	67%	12%
	Electric	33%	
Cooking	Natural Gas	44%	12%
	Electric	54%	
Clothes Drying	Natural Gas	13%	12%
	Electric	86%	
Fireplace	Natural Gas	45%	13%
	Electric	6%	
	Wood	43%	

Overall Energy Source Preference

Appliance	Energy Source	Estimate	±ME
Home Heating	Natural Gas	82%	13%
	Electric	10%	
Water Heating	Natural Gas	77%	13%
	Electric	12%	
Cooking	Natural Gas	71%	12%
	Electric	21%	
Clothes Drying	Natural Gas	44%	13%
	Electric	42%	

Preference for Current Energy Source

Appliance	Current Source	Estimate	±ME
Home Heating	Natural Gas	93%	15%
	Electric	38%	24%
Water Heating	Natural Gas	88%	15%
	Electric	26%	22%
Cooking	Natural Gas	93%	19%
	Electric	36%	17%
Clothes Drying	Natural Gas_1	100%	35%
	Electric	49%	14%

Projected Natural Gas Market Share

Appliance	Current	Projected	±ME
Home Heating	73%	82%	10%
Water Heating	67%	78%	11%
Cooking	44%	70%	12%
Clothes Drying	13%	44%	13%

H. National and Regional Projections of Natural Gas Market Share

These estimates (%) are based on current energy source and preferred energy source within each household's current status. Each of those estimates has variability influencing the overall market share projections for natural gas. There is no way to discern the impact of cost on a household switching from one energy source to the next based on this study.

National and Regional Projection Tables				
	Appliance	Current Estimate	Projected Estimate	±ME
National	Home Heating	50	65	8
	Water Heating	53	68	10
	Cooking	42	67	9
	Clothes Drying[1]	22	NA	NA
Northeast	Home Heating	61	82	17
	Water Heating	75	91	15
	Cooking	70	84	15
	Clothes Drying[1]	49	NA	NA
Midwest	Home Heating	62	79	11
	Water Heating	55	76	11
	Cooking	28	68	12
	Clothes Drying	11	35	11
Southeast	Home Heating	42	45	14
	Water Heating	39	46	14
	Cooking	36	53	15
	Clothes Drying	13	37	14
South	Home Heating	37	59	12
	Water Heating	42	61	13
	Cooking	31	73	11
	Clothes Drying[1]	6	NA	NA
West	Home Heating	44	65	11
	Water Heating	46	68	11
	Cooking	25	67	11
	Clothes Drying	9	49	11

1. Insufficient data to make valid estimate

IV. Appendix

A. Survey Summary Comments (see market reports for details)

Those who responded were provided two sections for comments:

1. Please share a few reasons why you have these preferences, and
2. Please share any dislikes with your current energy sources.

A sample of responses is provided to give insight into the rationale that affects decisions about a households' energy source. Many comments stressed energy source preferences based on "what I am used to."

Below are the top 5 Pro Gas and Pro Electric (in order) comment categories along with a sample comment.

Pro Gas Most Common Sentiments

Cooking: Cooking with gas is a lot nicer, easier and more controllable.
Outage Protection: We don't have to depend on electricity to keep the house warm and shower.
Faster: Gas heats faster for heating and cooking than electric options.
Cost: Gas heat better and more efficient. Electricity is too high, goes out all the time.
Ecology: Natural gas is better for the environment and a better heating option (doesn't need coal).

Pro Electric Most Common Sentiments

Convenience: One energy provider one bill is convenient.
Availability: Gas is not available in my area.
Safety: Electric is safer.
Efficiency: Electric is more efficient.
Ecology: Gas is unsustainable and earth damaging.

B. Raw Data

2016	Region	Northeast Original Markets															
	City	Dover DE								Salisbury MD-DE							
		Current	Preferred	Preferred Among Nat Gas	Preferred Among Electric	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	36	43	33	2	7	1	0	44	12	37	12	13	10	1	0	33
	Electric	9	8	1	6	0	1	0	6	26	12	0	11	1	0	0	11
	Propane	9								11							
	Wood	2								1							
	Oil	0								1							
	Other								6								4
	No Preference		4	1	1	1	0	0			3	0	2	0	0	1	
	Total Responses	57	55	35	9	8	2	0	56	52	52	12	26	11	1	1	48
Water Heating	Natural Gas	25	38	22	11	5		0	38	7	32	7	15	9		0	29
	Electric	26	13	1	12	0		0	15	34	17	0	16	1		0	16
	Propane	6								10							
	Oil	0								0							
	Other																4
	No Preference		4	1	3	0		0			3	0	3	0		0	
	Total Responses	57	55	24	26	5		0	55	51	52	7	34	10		0	49
Cooking/ Stove	Natural Gas	22	37	21	11	5				6	31	6	16	8			
	Electric	28	15	0	14	1				34	17	0	16	1			
	Propane	7								11							
	No Preference		3	1	2	0					4	0	2	2			
	Total Responses	57	55	22	27	6				51	52	6	34	11			
Clothes Dryer	Natural Gas	5	18	4	11	3				0	20	0	18	1			
	Electric	49	31	0	31	0				50	27	0	27	0			
	Propane	3								1							
	No Preference		7	1	6	0					5	0	5	0			
	Total Responses	57	56	5	48	3				51	52	0	50	1			
Fireplace	Natural Gas	17								7							
	Electric	2								4							
	Propane	4								12							
	Wood	8								8							
	Total Fireplaces	31								31							
Combined Sources	All Natural Gas	3	17							0	17						
	All Electric	7	6							15	11						
	Both NGas & Elec	35	26							12	20						
	At least 1 NGas	38	47							12	39						
	All No Preference		0								0						
	Sample Size	57								52							
	Population Size	1,784								4,604							

2016

	Region	Northeast New Markets																							
	City	Allentown/Bethlehem PA								Buffalo NY								Newark NJ							
		Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	17	33	16	10	1	6	0	35	23	27	21	0	5	0	0	26	14	19	13	4	0	2	0	19
	Electric	14	4	0	2	0	2	0	3	1	1	1	0	0	0	0	0	6	2	0	2	0	0	0	2
	Propane	1								5								0							
	Wood	9								0								2							
	Oil	0								0								0							
	Other								0								2								1
	No Preference		3	1	1	0	1	0			2	1	1	0	0	0			1	1	0	0	0	0	
	Total Responses	41	40	17	13	1	9	0	38	30	30	23	1	5	0	0	28	22	22	14	6	0	2	0	22
Water Heating	Natural Gas	17	32	16	14	0		2	32	21	27	19	1	4		1	26	18	20	18	2	0		0	19
	Electric	20	5	0	3	0		2	5	2	1	1	0	0		0	0	3	2	0	1	0		1	2
	Propane	0								4								0							
	Oil	4								1								1							
	Other								0								2								1
	No Preference		3	1	2	0		0			2	1	1	0		0			0	0	0	0		0	
	Total Responses	41	40	17	19	0		4	37	28	30	21	2	4		1	28	22	22	18	3	0		1	22
Cooking/ Stove	Natural Gas	10	28	10	17	1				17	21	14	5	2				17	19	16	3	0			
	Electric	30	9	0	9	0				11	6	2	4	0				5	3	1	2	0			
	Propane	1								2								0							
	No Preference		3	0	3	0					3	1	2	0					0	0	0	0			
	Total Responses	41	40	10	29	1				30	30	17	11	2				22	22	17	5	0			
Clothes Dryer	Natural Gas	4	16	3	13	0				18	21	17	3	1				12	17	12	5	0			
	Electric	37	17	1	16	0				11	6	0	6	0				9	3	0	3	0			
	Propane	0								1								0							
	No Preference		7	0	7	0					3	1	2	0					2	0	1	0			
	Total Responses	41	40	4	36	0				30	30	18	11	1				22	22	12	9	0			
Fireplace	Natural Gas	5								10								0							
	Electric	6								2								1							
	Propane	1								0								0							
	Wood	8								7								5							
	Total Fireplaces	20								19								6							
Combined Sources	All Natural Gas	4	16							14	18							9	16						
	All Electric	12	2							1	1							2	0						
	Both NGas & Elec	14	15							8	6							9	6						
	At least 1 NGas	18	36							23	28							19	22						
	All No Preference		0								0								0						
	Sample Size	41								30								22							
	Population Size	10,008								6,999								112,745							

2016

Region		Midwest															
City		Grand Rapids MI								Nashville TN							
		Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	28	34	25	2	5	2	0	33	27	35	24	10	1	0	0	34
	Electric	2	0	0	0	0	0	0	0	18	9	3	6	0	0	0	8
	Propane	5								1							
	Wood	2								0							
	Oil	1								0							
	Other								2								2
	No Preference		4	3	0	0	0	1			1	0	1	0	0	0	
	Total Responses	38	38	28	2	5	2	1	35	46	45	27	17	1	0	0	44
Water Heating	Natural Gas	29	34	26	4	4		0	32	22	32	18	13	1		0	29
	Electric	4	1	1	0	0		0	1	22	11	4	6	0		0	11
	Propane	4								1							
	Oil	0								0							
	Other								2								1
	No Preference		3	2	0	0		0			2	0	2	0		0	
	Total Responses	38	38	29	4	4		0	35	45	45	22	21	1		0	41
Cooking/ Stove	Natural Gas	23	32	23	4	5				9	29	8	21	0			
	Electric	10	5	0	5	0				36	16	1	14	0			
	Propane	5								0							
	No Preference		1	0	1	0					0	0	0	0			
	Total Responses	38	38	23	10	5				45	45	9	35	0			
Clothes Dryer	Natural Gas	16	28	15	8	3				1	11	1	10	0			
	Electric	16	4	0	4	0				44	29	0	28	0			
	Propane	3								0							
	No Preference		6	1	4	0					5	0	5	0			
	Total Responses	36	38	16	16	3				45	45	1	43	0			
Fireplace	Natural Gas	9								25							
	Electric	1								0							
	Propane	2								2							
	Wood	6								8							
	Total Fireplaces	18								35							
Combined Sources	All Natural Gas	12	24							1	9						
	All Electric	0	0							12	6						
	Both NGas & Elec	15	6							30	25						
	At least 1 NGas	30	37							31	39						
	All No Preference		0								0						
Sample Size		38								46							
Population Size		9,874								37,930							

2016

	Region	Southeast																									
	City	Atlanta GA								Dothan AL								Tampa-St. Petersburg FL							
		Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	17	12	9	3	0	0	0	13	2	17	1	14	2	0	0	15	4	20	3	17	0	0	0	19
	Electric	8	11	5	5	0	0	0	8	55	36	0	35	0	0	0	36	46	25	1	24	0	0	0	24
	Propane	0								2								0							
	Wood	0								0								0							
	Oil	0								0								0							
	Other								1								3								3
	No Preference		3	3	0	0	0	0			4	1	3	0	0	0			3	0	3	0	0	0	
	Total Responses	26	26	17	8	0	0	0	22	59	57	2	52	2	0	0	54	50	48	4	44	0	0	0	46
Water Heating	Natural Gas	15	11	7	4	0		0	13	4	23	2	18	3		0	23	5	24	4	20	0		0	23
	Electric	11	11	5	6	0		0	9	52	31	1	29	0		0	32	45	22	1	21	0		0	20
	Propane	0								3								0							
	Oil	0								0								0							
	Other								1								2								5
	No Preference		4	3	1	0		0			3	1	2	0		0			2	0	2	0		0	
	Total Responses	26	26	15	11	0		0	23	59	57	4	49	3		0	57	50	48	5	43	0		0	48
Cooking/ Stove	Natural Gas	14	13	7	5	0				4	26	4	20	2				3	30	2	27	1			
	Electric	11	11	5	6	0				53	30	0	29	1				46	17	1	16	0			
	Propane	0								3								1							
	No Preference		2	2	0	0					0	0	0	0					1	0	1	0			
	Total Responses	26	26	14	11	0				60	56	4	49	3				50	48	3	44	1			
Clothes Dryer	Natural Gas	5	10	3	7	0				1	11	1	10	0				2	16	2	13	0			
	Electric	21	12	0	12	0				59	43	0	43	0				46	27	0	26	0			
	Propane	0								0								0							
	No Preference		4	2	2	0					2	0	2	0					5	0	5	0			
	Total Responses	26	26	5	21	0				60	56	1	55	0				48	48	2	44	0			
Fireplace	Natural Gas	15								6								0							
	Electric	0								10								8							
	Propane	1								9								2							
	Wood	6								13								7							
	Total Fireplaces	22								38								17							
Combined Sources	All Natural Gas	4	8							1	7							0	13						
	All Electric	5	8							39	24							42	15						
	Both NGas & Elec	15	7							8	20							5	16						
	At least 1 NGas	19	16							9	32							5	33						
	All No Preference		0								0								0						
Sample Size		27								60								50							
Population Size		81,652								1,723								48,845							

2016	Region	South																									
	City	Jackson MS								San Antonio TX								Shreveport LA							
		Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	22	28	21	5	2	0	0	28	16	27	12	15	0	0	0	27	30	34	26	7	1	0	0	37
	Electric	13	6	0	6	0	0	0	9	32	13	3	10	0	0	0	14	21	10	1	9	0	0	0	10
	Propane	2								0								1							
	Wood	0								0								0							
	Oil	0								0								0							
	Other								0								3								0
	No Preference		2	0	2	0	0	0			7	1	6	0	0	0			5	1	4	0	0	0	
	Total Responses	37	36	21	13	2	0	0	37	48	47	16	31	0	0	0	44	52	49	28	20	1	0	0	47
Water Heating	Natural Gas	25	29	23	4	2		0	31	18	27	14	13	0		0	28	34	37	30	6	1		0	36
	Electric	10	6	1	4	1		0	7	29	13	3	10	0		0	12	17	9	1	8	0		0	11
	Propane	3								0								1							
	Oil	0								0								0							
	Other								0								2								0
	No Preference		2	0	2	0		0			6	1	5	0		0			3	1	2	0		0	
	Total Responses	38	37	24	10	3		0	38	48	46	18	28	0		0	42	52	49	32	16	1		0	47
Cooking/ Stove	Natural Gas	17	27	16	7	4				13	34	11	23	0				27	40	23	15	2			
	Electric	17	8	1	7	0				35	11	1	10	0				23	7	2	5	0			
	Propane	4								0								2							
	No Preference		2	0	2	0					2	0	2	0					2	0	2	0			
	Total Responses	38	37	17	16	4				48	47	12	35	0				52	49	25	22	2			
Clothes Dryer	Natural Gas	0	6	0	6	0				2	14	1	12	0				9	16	7	9	0			
	Electric	37	25	0	25	0				43	22	1	21	0				43	25	0	25	0			
	Propane	0								0								0							
	No Preference		5	0	5	0					9	0	8	0					7	2	5	0			
	Total Responses	37	36	0	36	0				46	45	2	41	0				52	48	9	39	0			
Fireplace	Natural Gas	26								9								17							
	Electric	1								4								5							
	Propane	4								1								0							
	Wood	4								16								9							
	Total Fireplaces	35								30								31							
Combined Sources	All Natural Gas	0	6							2	13							8	15						
	All Electric	6	2							24	7							13	1						
	Both NGas & Elec	25	24							19	16							29	24						
	At least 1 NGas	26	34							22	37							37	45						
	All No Preference		0								0								0						
Sample Size		38								48								52							
Population Size		1,907								30,288								3,904							

2016	Region	West															
	City	Phoenix AZ								Portland/Vancouver Hillsboro OR-WA							
		Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend	Current	Preferred	Preferred Among NGas	Preferred Among Elec	Preferred Among Propane	Preferred Among Wood	Preferred Among Oil	Recommend
Home Heating	Natural Gas	12	25	8	15	0	1	1	22	47	50	42	8	0	0	0	53
	Electric	28	13	4	9	0	0	0	12	16	6	0	6	0	0	0	4
	Propane	0								0							
	Wood	1								0							
	Oil	1								1							
	Other								5								3
	No Preference		4	0	4	0	0	0			5	3	2	0	0	0	
	Total Responses	42	42	12	28	0	1	1	39	64	61	45	16	0	0	0	60
Water Heating	Natural Gas	15	27	13	13	0		1	25	42	46	35	11	0		0	45
	Electric	26	12	2	10	0		0	10	21	7	1	5	0		0	9
	Propane	0								0							
	Oil	1								0							
	Other								5								3
	No Preference		3	0	3	0		0			7	4	3	0		0	
	Total Responses	42	42	15	26	0		1	40	63	60	40	19	0		0	57
Cooking/ Stove	Natural Gas	6	28	5	23	0				28	45	26	17	1			
	Electric	36	12	1	11	0				34	13	1	12	0			
	Propane	0								1							
	No Preference		2	0	2	0					5	1	4	0			
	Total Responses	42	42	6	36	0				63	63	28	33	1			
Clothes Dryer	Natural Gas	3	21	3	18	0				8	26	8	18	0			
	Electric	38	16	0	15	0				54	25	0	25	0			
	Propane	0								0							
	No Preference		5	0	5	0					8	0	8	0			
	Total Responses	41	42	3	38	0				63	59	8	51	0			
Fireplace	Natural Gas	4								24							
	Electric	5								3							
	Propane	1								3							
	Wood	2								23							
	Total Fireplaces	12								53							
Combined Sources	All Natural Gas	2	19							4	24						
	All Electric	23	11							10	3						
	Both NGas & Elec	15	7							45	25						
	At least 1 NGas	17	30							51	55						
	All No Preference		0								0						
Sample Size		42								64							
Population Size		73,405								39,162							

C. Glossary of Terms

Population of Interest: Who the study is trying to make estimates about.

Sampling Frame: A list of the population from which the samples are drawn.

Simple Random Sample: Sampling method where every combination of households has an equal chance of being included in the sample.

Stratified Random Sample: Sampling method where the population of interest is divided into smaller groups with random samples taken from each group.

Estimate: The prediction of the unknown variable using the sample data.

Margin of Error (ME): The amount of variability above and below the estimate that we believe the unknown variables true value may lie.

Confidence Level: The likelihood that the unknown variables true value will be contained within the ME above and below the estimate.

Significant: When the results observed deviate significantly from a value of interest being used as a comparison.

Simulations: Using a computer program to repeatedly compute estimates of the unknown variable to gather statistical information of the unknown parameter.