

2013 Residential End-Use Study — Florida Results

Duke Energy Market Research & Customer Insights

Background & Purpose
Housing Characteristics
Heating/Air Conditioning
Kitchen Appliances
Water Heating
Clothes Washing & Drying
Other Appliances Used in Home
Lighting
Home Safety & Security
Pools & Spas
Energy Savings
Solar Energy
Electric Vehicles
Energy Star Appliances
Computers, Internet & Phones
Demographics
Appendix DEF-DŞM-04003

Background

 Duke Energy periodically conducts an "Appliance Saturation Survey" to get a snapshot of the appliances and equipment inventory in the Duke Energy service territory. This survey is for residential customers. The last survey was completed in 2010.

Purpose

- The purpose of this survey is to get the current snapshot of the saturation level of various appliances for residential customers in all Duke Service territories (NC, SC, IN, OH-KY and FL). This survey will provide Duke Energy estimates of the number of appliances per home by types, vintages and energy efficiency levels (Energy Star). This research also focuses on consumers' interest and attitude towards energy efficiency products and approaches.
- Duke Energy will use these results for planning and product development efforts. Product managers will use this data
 to launch new products. The load forecasting and research group will use this data to analyze and forecast future load
 levels and to make recommendations for Integrated Resource Planning (IRP).

Overview Report & Detailed Data

- 2013 Residential End-use study provides an integrated, single-source of information on dwelling characteristics, end-use equipment, household demographics.
- This report provides an overall perspective on findings. Detailed data and cross tabulation is available for a more indepth analysis focusing on a specific business issue: Pagage to the specific business is the specific busines

The objective of this survey is to get snapshots of appliance saturation and consumer attitudes towards energy efficiency and develop a statistically significant data set for all Duke Energy territories for the IRP process.

Key Objectives:

- ✓ To find trends in appliance penetration and end-use behaviors
- ✓ To measure customer attitudes and priorities regarding energy and energy-related issues
- ✓ To identify behaviors and preferences regarding communications technologies, including land-line phone, cell phones, personal computers, and social media

Data Collection

- A 4-page questionnaire was mailed to 15,002 residential customers on July 8, 2013 with a letter requesting participation.
- As an incentive to complete the survey, a \$1 donation on behalf of the customer to a charity was offered. The customer had the choice of one of the following charities:
 - American Cancer Society
 - Children's Miracle Network
- A reminder postcard was mailed to non-responders on July 24th.
- A total of 3,331 completed surveys was received by the cutoff date of August 15th, for a 22% response rate.
- Questionnaire and postcard are included in the Appendix.
- Note Percentages may not add to 100% due to rounding.

Sample

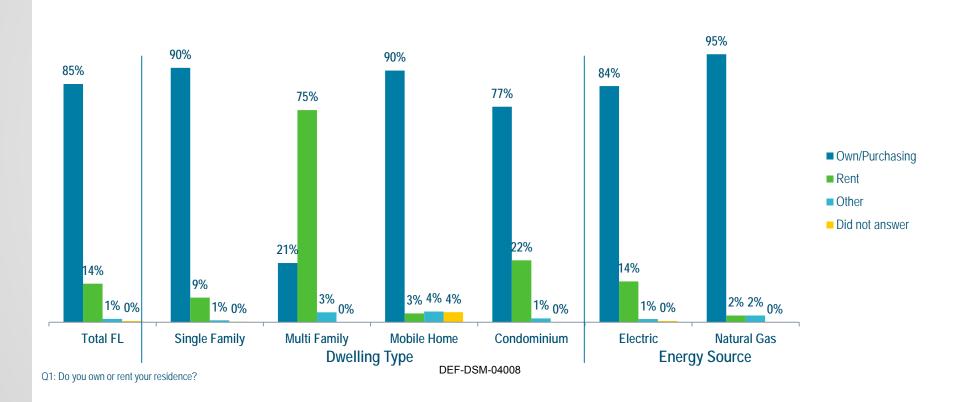
- Sample was balanced at four levels:
 - State: Florida, Indiana, Ohio/Kentucky, North Carolina, South Carolina
 - Dwelling Type: Single Family, Multi Family, Other
 - Age: Under 35, 35-54, 55+
 - Energy Usage: High, Medium, Low

Research Agency

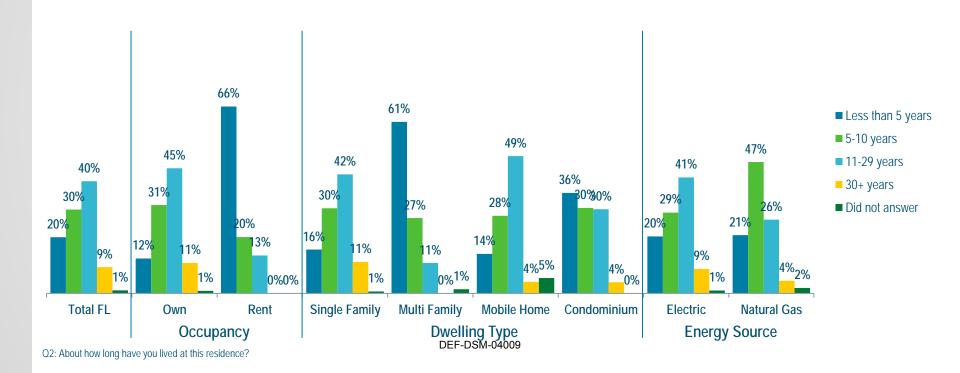
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Housing Characteristics

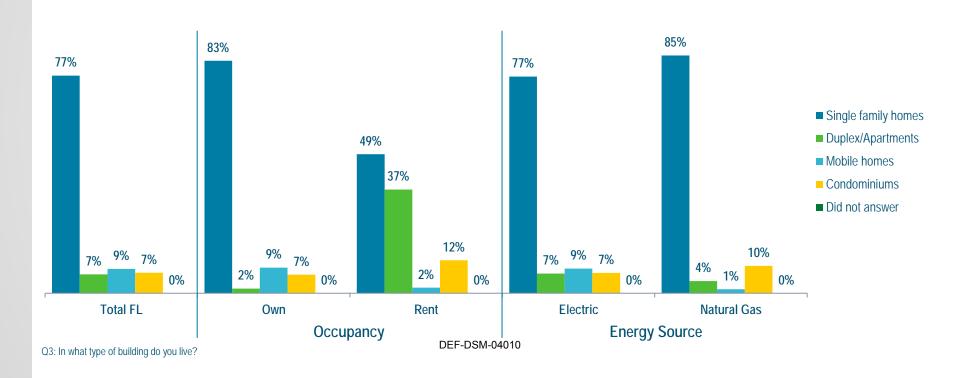
More than eight out of ten (85%) customers own or are purchasing their residence.



• One half (50%) of customers have lived at their home for 10 years or less.



The majority of customers (77%) live in single family homes.



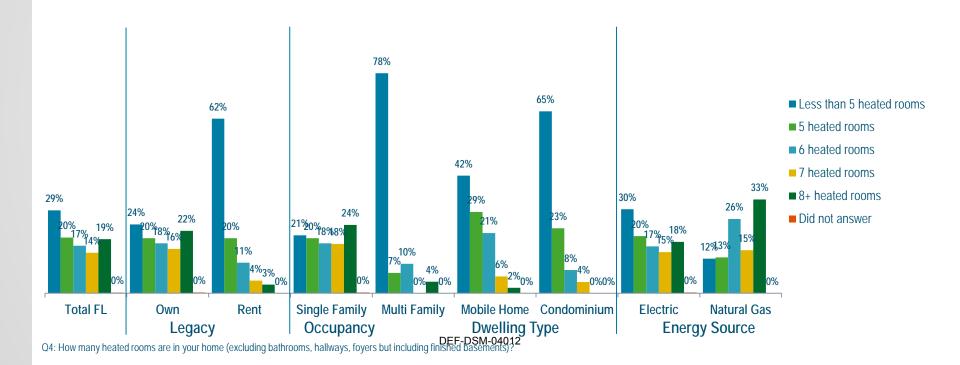
Home Building Type (continued)

• Slightly more than seven out of ten (72%) customers live in a single-family detached house.

	Total FL	Occu	pancy	Energy	Source
		Own	Rent	Electric	Nat. Gas
Single-family detached house	72%	77%	43%	71%	80%
Single-family attached /two or more houses (townhomes)	6%	6%	7%	6%	4%
Duplex two-family building	2%	1%	4%	2%	4%
Apartment building (3-4 units)	2%	0%	12%	2%	0%
Apartment building (5 or more units)	3%	0%	21%	3%	0%
Mobile home	9%	9%	2%	9%	1%
Condominium (or Landominium)	7%	7%	12%	7%	10%
Did not answer	0%	0%	0%	0%	0%

Number of Heated Rooms in Home

- One out of five (19%) customers have 8 or more heated rooms in their home.
- Three out of ten (29%) customers have less than 5 heated rooms in their home.



Number of Heated Rooms in Home (continued)

- One out of five (19%) customers have 8 or more heated rooms in their home.
- Three out of ten (29%) customers have less than 5 heated rooms in their home.

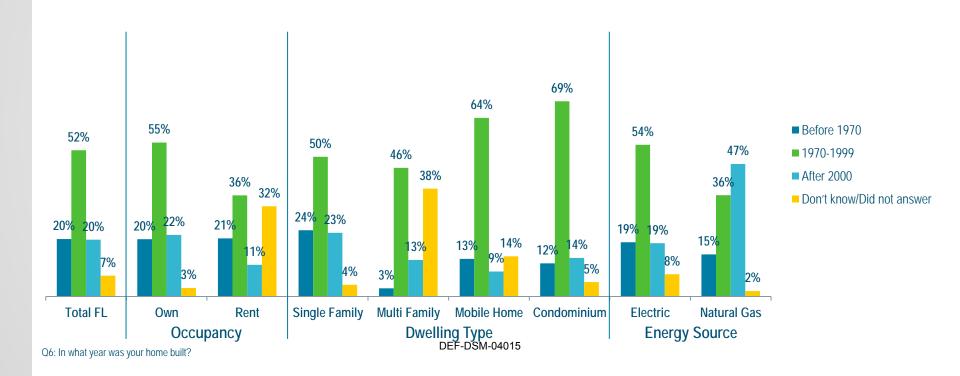
	Total FL	Occu	pancy		Dwellir	ng Type		Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
1 heated room	2%	1%	4%	1%	4%	9%	0%	2%	0%
2 heated rooms	2%	2%	6%	2%	6%	2%	7%	2%	4%
3 heated rooms	9%	5%	35%	5%	53%	7%	17%	9%	0%
4 heated rooms	16%	17%	17%	13%	15%	24%	40%	17%	8%
5 heated rooms	20%	20%	20%	20%	7%	29%	23%	20%	13%
6 heated rooms	17%	18%	11%	18%	10%	21%	8%	17%	26%
7 heated rooms	14%	16%	4%	18%	0%	6%	4%	15%	15%
8 heated rooms	10%	11%	3%	12%	4%	1%	0%	9%	16%
9 heated rooms	4%	5%	0%	5%	0%	0%	0%	4%	0%
10+ heated rooms	5%	6%	0%	7%	0%	1%	0%	4%	17%
Did not answer	0%	0%	0%	0%	0%	0%	0%	0%	0%

Q4: How many heated rooms are in your home (excluding bathrooms, hallways, foyers but including finished basements)?

• The median number of bathrooms is 2.

	Total FL	Occu	pancy		Dwellir	ng Type		Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
1 bathroom	16%	12%	39%	11%	57%	23%	17%	16%	4%
1-1/2 bathrooms	6%	5%	10%	5%	6%	4%	15%	6%	2%
2 bathrooms	56%	59%	40%	56%	34%	72%	60%	56%	60%
2-1/2 bathrooms	8%	7%	10%	9%	4%	1%	5%	8%	2%
3 bathrooms	10%	11%	0%	12%	0%	0%	2%	9%	19%
3-1/2 bathrooms	2%	2%	0%	2%	0%	0%	0%	2%	0%
4+ bathrooms	3%	4%	0%	4%	0%	0%	0%	3%	12%
Did not answer	0%	0%	0%	0%	0%	0%	0%	0%	0%

Slightly more than one half (52%) of customers' homes were built between 1970 and 1999.

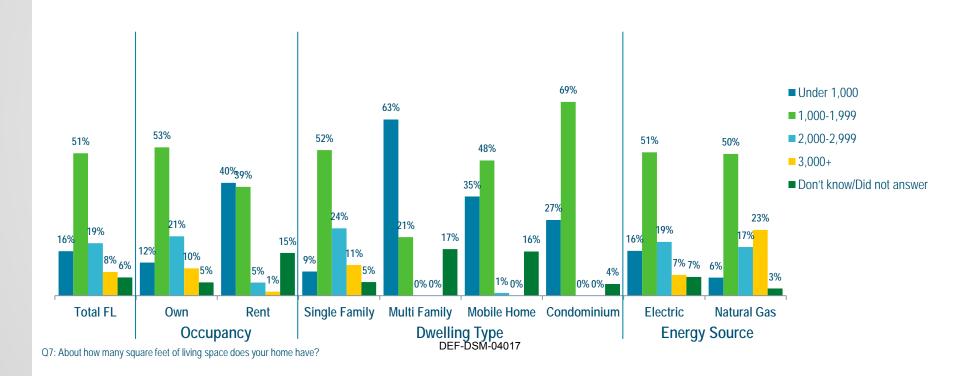


Year Home Was Built (continued)

Slightly more than one half (52%) of customers' homes were built between 1970 and 1999.

	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Before 1950	3%	3%	6%	4%	0%	1%	1%	3%	2%
1950 – 1959	8%	8%	8%	10%	1%	0%	1%	8%	0%
1960 – 1969	9%	9%	7%	9%	1%	12%	9%	8%	13%
1970 – 1979	17%	17%	16%	14%	15%	21%	42%	17%	14%
1980 – 1989	21%	24%	7%	22%	6%	24%	23%	23%	10%
1990 – 1999	14%	14%	13%	13%	25%	19%	4%	14%	12%
2000 – 2004	11%	12%	5%	13%	10%	6%	5%	10%	33%
2005 – 2010	8%	9%	4%	10%	3%	2%	5%	8%	14%
After 2010	1%	0%	2%	0%	0%	1%	4%	1%	0%
Don't know/Did not answer	7%	3%	32%	4%	38%	14%	5%	8%	2%

Two out of three (67%) customers live in homes with less than 2,000 square feet of living space.



Home Square Footage (continued)

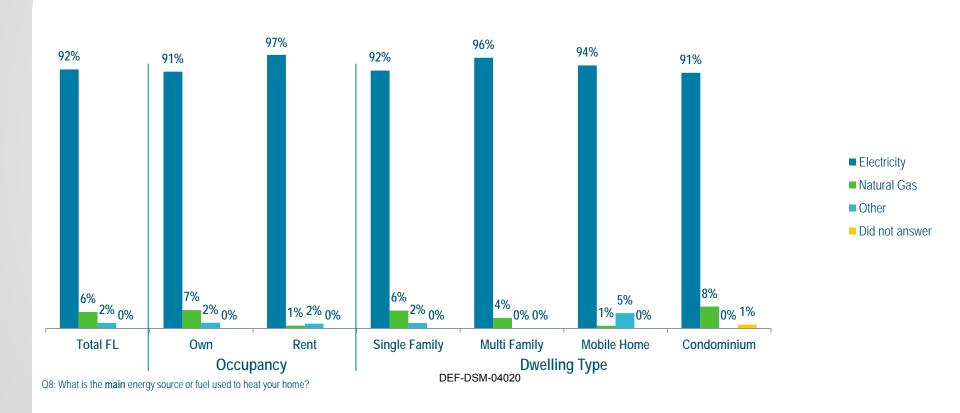
• Two out of three (67%) customers live in homes with less than 2,000 square feet of living space.

	Total FL	Occu	pancy		Dwellir	ng Type		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas	
Less than 500	1%	1%	3%	1%	1%	3%	1%	1%	0%	
500 - 999	15%	11%	37%	8%	61%	32%	26%	15%	6%	
1,000 - 1,499	29%	29%	24%	27%	12%	39%	53%	29%	20%	
1,500 - 1,999	22%	23%	15%	25%	9%	9%	16%	22%	30%	
2,000 - 2,499	13%	14%	3%	16%	0%	1%	0%	13%	12%	
2,500 - 2,999	6%	7%	2%	8%	0%	0%	0%	6%	5%	
3,000 - 3,499	6%	7%	1%	8%	0%	0%	0%	5%	19%	
3,500 - 3,999	1%	1%	0%	1%	0%	0%	0%	1%	5%	
4,000 or more	1%	2%	0%	2%	0%	0%	0%	1%	0%	
Don't know/Did not answer	6%	5%	15%	5%	17%	16%	4%	7%	3%	

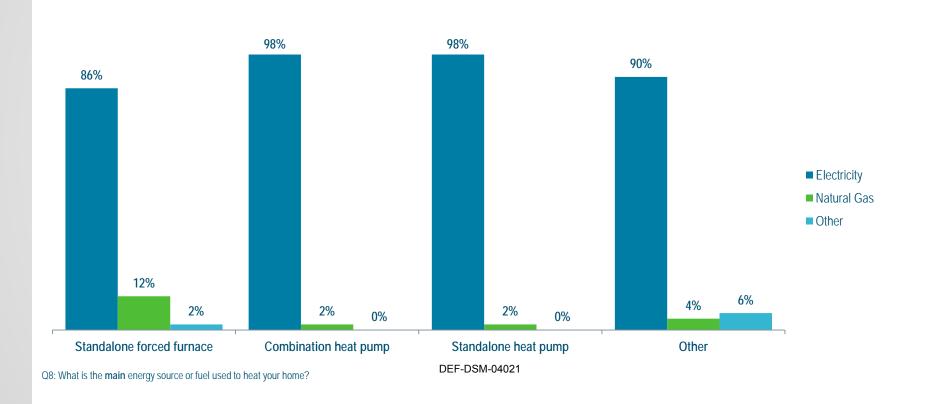
Heating/Air Conditioning

Main Energy Source for Heating

• Slightly more than nine out of ten (92%) customers use electricity as the main source of energy to heat their home.



Electricity is the main energy source for heating.



Main Heating System – Equipment Type

- One out of three (33%) customers use a standalone forced air furnace as their main heating system.
- Slightly more than one out of four (27%) use a heat pump combined with a forced air furnace as their main heating system.

	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Standalone forced air furnace	33%	31%	47%	33%	52%	17%	40%	31%	68%
Heat pump combined with a forced air furnace	27%	29%	12%	29%	7%	24%	30%	29%	9%
Standalone heat pump	16%	17%	8%	19%	5%	9%	3%	17%	5%
Circulating hot water or steam	0%	0%	0%	0%	0%	1%	0%	0%	0%
Electric baseboard heat/ceiling or floor coil	6%	6%	9%	6%	11%	10%	5%	7%	0%
Propane, oil, kerosene stove/heater (not furnace)	2%	1%	3%	1%	4%	4%	0%	1%	4%
Wood/pellet burning stoves/fireplace(s)	0%	0%	0%	0%	0%	0%	0%	0%	0%
Other	11%	11%	12%	9%	9%	31%	12%	11%	9%
Don't know/Did not answer	5%	4%	10%	4%	13%	4%	10%	5%	4%

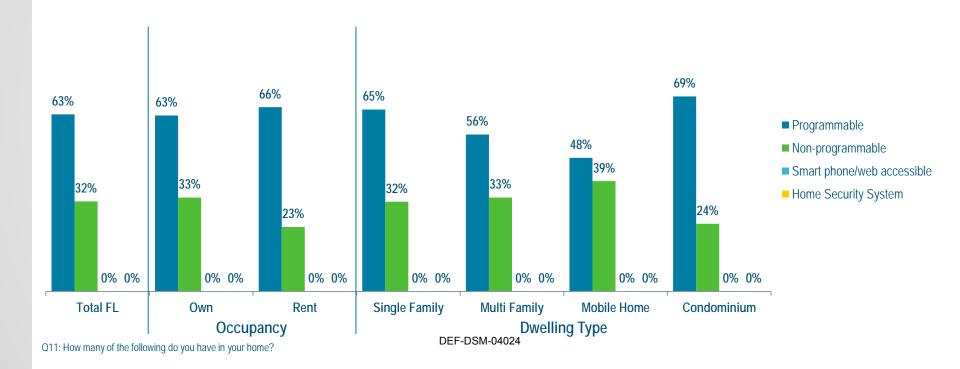
Age of Main Heating System

• The median age range of main heating systems is 6-10 years.

	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Less than 3 years	20%	20%	20%	20%	3%	30%	33%	21%	15%
3 - 5 years	22%	23%	16%	22%	14%	28%	19%	22%	20%
6 - 10 years	27%	28%	23%	30%	20%	17%	25%	27%	33%
11 - 15 years	18%	17%	27%	17%	38%	17%	13%	18%	20%
More than 15 years	9%	9%	4%	9%	10%	6%	8%	8%	12%
Did not answer	3%	2%	10%	2%	14%	2%	3%	3%	0%

Thermostat Types in Home

- Almost two out of three (63%) customers have programmable thermostats.
- One out of three (32%) customers have non-programmable thermostats.



Thermostat Types in Home

- Almost two out of three (63%) customers have programmable thermostats.
- One out of three (32%) customers have non-programmable thermostats.

	Total FL	Occup	oancy		Dwellir	ng Type		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas	
Non-Programmable										
One	28%	29%	22%	27%	32%	34%	24%	27%	31%	
Two+	4%	5%	1%	5%	1%	5%	0%	4%	9%	
None	34%	32%	50%	33%	47%	32%	33%	34%	29%	
Did not answer	34%	35%	27%	35%	20%	29%	43%	35%	32%	
Programmable										
One	57%	55%	66%	57%	56%	48%	68%	59%	42%	
Two+	6%	7%	0%	8%	0%	0%	2%	6%	17%	
None	16%	16%	17%	15%	21%	23%	15%	15%	26%	
Did not answer	21%	21%	17%	20%	23%	29%	16%	21%	16%	
Smart Phone and/or Web Accessible										
One	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%	
None	45%	43%	57%	44%	57%	45%	46%	44%	55%	
Did not answer	55%	57%	43%	56%	43%	55%	54%	56%	45%	
Part of Home Security System										
One	0%	0%	0%	0%	0%	0%	0%	0%	0%	
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%	
None	45%	43%	57%	44%	57%	47%	46%	44%	55%	
Did not answer	55%	57%	43%	56%	43%	53%	54%	56%	45%	

Supplemental Heating Systems

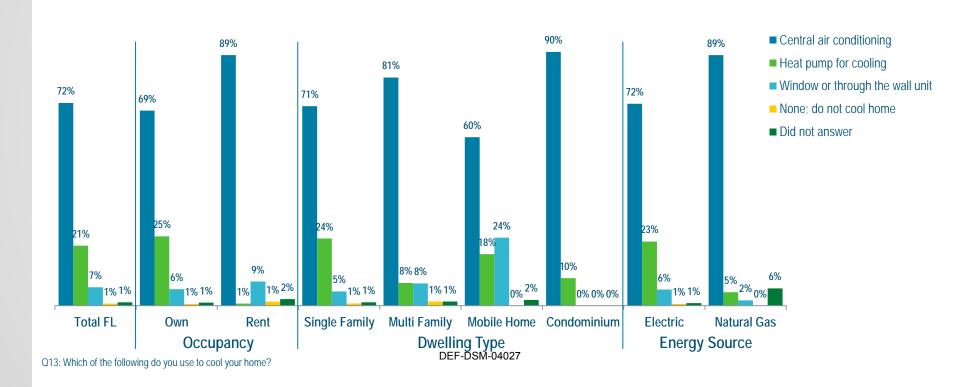
Seven out of ten (70%) customers do not use a supplemental heating system.

	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Portable electric heaters	16%	15%	20%	16%	15%	21%	9%	15%	11%
Gas fireplace(s)	3%	3%	0%	4%	0%	1%	0%	3%	4%
Wood/pellet burning stoves/fireplace(s)	7%	8%	0%	9%	0%	0%	0%	7%	0%
Electric fireplace(s)	2%	2%	2%	2%	4%	5%	0%	2%	0%
Portable oil or kerosene heaters	0%	0%	1%	0%	0%	2%	0%	0%	2%
No supplemental heating system	70%	70%	75%	69%	79%	58%	88%	70%	83%
Other	2%	2%	4%	2%	2%	7%	3%	2%	2%
Did not answer	3%	3%	2%	3%	4%	7%	1%	3%	0%

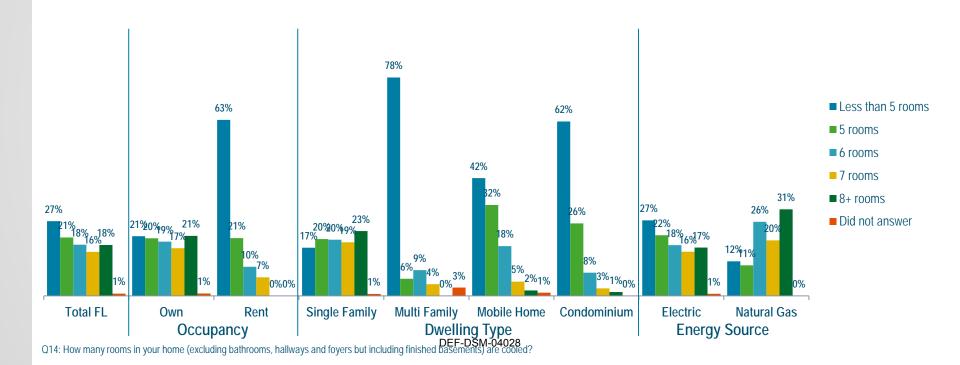
Multiple responses accepted.

Main Cooling System – Equipment Type

Slightly more than seven out of ten (72%) customers use central air conditioning to cool their home.



The median number of cooled rooms is 6.



Rooms Cooled in Home (continued)

The median number of cooled rooms is 6.

	Total FL	Occu	pancy		Dwellir	ng Type		Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
1 room	1%	1%	1%	0%	3%	4%	0%	1%	0%
2 rooms	2%	2%	7%	1%	5%	4%	8%	2%	4%
3 rooms	7%	4%	28%	4%	44%	10%	10%	8%	0%
4 rooms	16%	15%	26%	12%	25%	23%	44%	17%	8%
5 rooms	21%	20%	21%	20%	6%	32%	26%	22%	11%
6 rooms	18%	19%	10%	20%	9%	18%	8%	18%	26%
7 rooms	16%	17%	7%	19%	4%	5%	3%	16%	20%
8 rooms	10%	12%	0%	13%	0%	1%	1%	10%	16%
9 rooms	4%	4%	0%	5%	0%	0%	0%	4%	0%
10+ rooms	4%	5%	0%	5%	0%	1%	0%	3%	14%
Did not answer	1%	1%	0%	1%	3%	1%	0%	1%	0%

Q14: How many rooms in your home (excluding bathrooms, hallways and foyers but including finished basements) are cooled?

• Then median age range of cooling systems is 6-10 years.

	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Less than 3 years	21%	22%	16%	21%	4%	25%	35%	21%	26%
3 - 5 years	24%	25%	16%	24%	17%	31%	20%	23%	22%
6 - 10 years	28%	29%	27%	30%	17%	22%	25%	28%	31%
11 - 15 years	18%	17%	26%	18%	35%	11%	14%	18%	16%
More than 15 years	7%	6%	7%	6%	14%	9%	6%	7%	4%
Did not answer	2%	1%	8%	1%	13%	2%	0%	2%	0%

More than eight out of ten (85%) customers do not use window-units or through the wall air conditioners.

	Total FL	Occupancy			Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
1	8%	8%	10%	8%	5%	19%	0%	8%	0%
2	2%	2%	2%	2%	4%	9%	0%	2%	0%
3	1%	1%	1%	1%	0%	0%	0%	0%	2%
4+	1%	1%	4%	1%	4%	2%	0%	1%	0%
None	85%	87%	80%	87%	88%	68%	94%	86%	98%
Did not answer	2%	2%	3%	2%	0%	3%	6%	2%	0%

Summertime Thermostat Settings

• More than six out of ten say their summertime thermostat settings are between 73 and 78 degrees Fahrenheit (Daytime = 61%, Nighttime = 65%).

	Total FL	Occu	pancy		Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Summer daytime									
Lower than 69F	1%	1%	2%	0%	3%	5%	0%	1%	0%
69-72F	5%	5%	8%	4%	13%	7%	3%	5%	3%
73-78F	61%	61%	61%	63%	59%	50%	56%	61%	62%
Higher than 78F	27%	27%	24%	26%	20%	30%	36%	27%	36%
Off	3%	3%	3%	2%	1%	6%	4%	3%	0%
Don't know/Did not answer	4%	4%	3%	4%	4%	2%	1%	4%	0%
Summer nighttime									
Lower than 69F	1%	1%	3%	1%	2%	6%	0%	1%	0%
69-72F	8%	8%	12%	8%	17%	8%	10%	9%	7%
73-78F	65%	67%	62%	69%	55%	51%	57%	65%	74%
Higher than 78F	17%	17%	16%	17%	16%	17%	27%	18%	15%
Off	3%	3%	3%	2%	6%	9%	5%	2%	4%
Don't know/Did not answer	5%	5%	5%	4%	5%	9%	1%	5%	0%

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Wintertime Thermostat Settings

• Roughly one third say their wintertime thermostat settings are between 73 and 78 degrees Fahrenheit (Daytime = 36%, Nighttime = 33%).

	Total FL	Occu	pancy		Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Winter daytime									
Lower than 69F	10%	11%	3%	11%	5%	6%	3%	9%	21%
69-72F	27%	29%	18%	29%	21%	18%	23%	27%	32%
73-78F	36%	37%	30%	36%	30%	32%	42%	36%	30%
Higher than 78F	8%	8%	11%	8%	3%	12%	13%	8%	13%
Off	14%	12%	27%	11%	34%	18%	15%	14%	4%
Don't know/Did not answer	5%	4%	10%	5%	7%	14%	4%	5%	0%
Winter nighttime									
Lower than 69F	13%	15%	3%	14%	4%	20%	9%	12%	32%
69-72F	27%	29%	18%	30%	11%	18%	26%	28%	22%
73-78F	33%	33%	31%	33%	29%	29%	34%	32%	33%
Higher than 78F	8%	7%	14%	7%	6%	8%	17%	8%	9%
Off	12%	11%	24%	11%	41%	7%	11%	13%	0%
Don't know/Did not answer	7%	6%	10%	6%	9%	17%	3%	6%	4%

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Kitchen Appliances

Nine out of ten (89%) customers use electric ovens in their home.

	Total FL	Осси	oancy		Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Natural Gas Oven									
One	6%	6%	4%	6%	3%	10%	10%	4%	48%
Two+	0%	0%	0%	0%	0%	0%	1%	0%	0%
None	48%	45%	67%	50%	57%	25%	44%	49%	38%
Did not answer	45%	48%	29%	44%	40%	65%	44%	47%	14%
Electric Oven									
One	82%	80%	92%	82%	89%	69%	87%	84%	45%
Two+	7%	8%	2%	8%	4%	5%	1%	7%	2%
None	6%	6%	3%	5%	5%	15%	9%	5%	30%
Did not answer	5%	5%	3%	5%	1%	11%	3%	3%	23%
Propane Oven									
One	2%	2%	0%	2%	0%	12%	0%	2%	0%
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	49%	46%	68%	50%	59%	31%	51%	49%	63%
Did not answer	48%	51%	32%	48%	41%	57%	49%	49%	37%
Other									
One	1%	1%	1%	2%	0%	1%	1%	1%	0%
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	47%	45%	59%	48%	55%	30%	46%	46%	61%
Did not answer	52%	54%	40%	50%	45%	69%	53%	52%	39%

Appliances – Ranges/Cooktops

• More than eight out of ten (87%) customers use electric ranges in their home.

	Total FL	Occu	pancy		Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Natural Gas Range									
One	7%	8%	4%	7%	2%	11%	10%	4%	50%
Two+	0%	0%	0%	0%	0%	2%	0%	0%	0%
None	47%	44%	68%	49%	57%	30%	43%	49%	36%
Did not answer	45%	48%	29%	44%	41%	57%	47%	47%	14%
Electric Range									
One	85%	84%	92%	86%	91%	69%	83%	87%	43%
Two+	2%	2%	3%	2%	4%	0%	4%	2%	0%
None	7%	8%	3%	6%	5%	16%	9%	5%	36%
Did not answer	6%	7%	3%	6%	0%	15%	4%	5%	20%
Propane Range									
One	3%	3%	1%	2%	0%	12%	0%	3%	0%
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	49%	46%	68%	50%	59%	35%	51%	49%	63%
Did not answer	48%	51%	31%	47%	41%	53%	49%	48%	37%
Other									
One	1%	1%	1%	1%	0%	0%	3%	1%	0%
Two+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	48%	46%	59%	49%	55%	35%	45%	47%	61%
Did not answer	52%	54%	40%	51%	45%	65%	53%	52%	39%

DEF-DSM-04036

Appliances – Refrigerators/Stand-Alone Freezers

Slightly more than nine out of ten (92%) customers have frost free refrigerators.

	Total FL	Осси	oancy		Dwelling Type			Energy Sou	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Frost free refrigerator									
Have in home	92%	93%	80%	91%	89%	94%	95%	92%	91%
Have in an unheated area	19%	21%	10%	22%	15%	15%	0%	18%	28%
Operable but not in use	3%	3%	7%	3%	4%	4%	5%	3%	8%
Manual defrost refrigerator									
Have in home	10%	8%	20%	10%	14%	4%	3%	9%	11%
Have in an unheated area	5%	4%	10%	6%	2%	3%	0%	5%	9%
Operable but not in use	1%	0%	4%	1%	4%	0%	0%	1%	0%
Frost free stand-alone freezer									
Have in home	15%	16%	11%	18%	0%	11%	5%	15%	9%
Have in an unheated area	8%	8%	7%	10%	0%	4%	0%	8%	4%
Operable but not in use	1%	1%	1%	1%	0%	0%	0%	1%	0%
Manual stand-alone defrost freezer									
Have in home	9%	9%	5%	9%	7%	19%	1%	8%	12%
Have in an unheated area	8%	8%	6%	8%	8%	6%	1%	7%	11%
Operable but not in use	1%	1%	1%	2%	0%	0%	0%	1%	0%

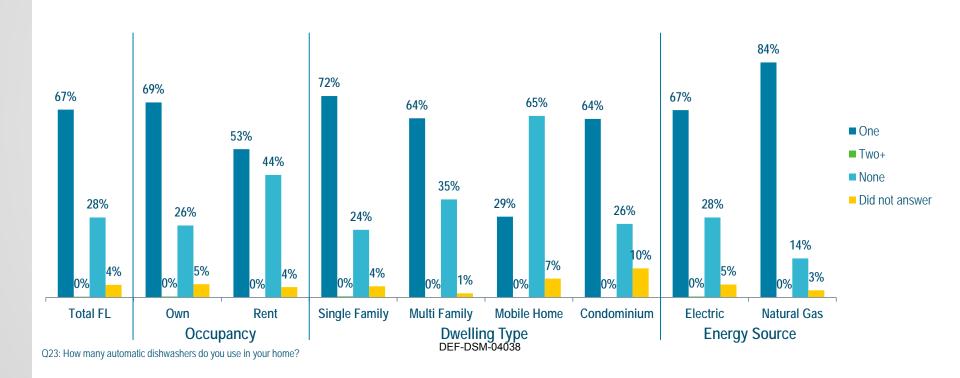
Q20: How many refrigerators and/or stand-alone freezers of each type do you have in your home?

Q21: How many of these refrigerators and/or freezers are in an unheated area (e.g., unheated garage) DEF-DSM-04037

Q22: How many of these refrigerators and/or freezers are operable but not in use?

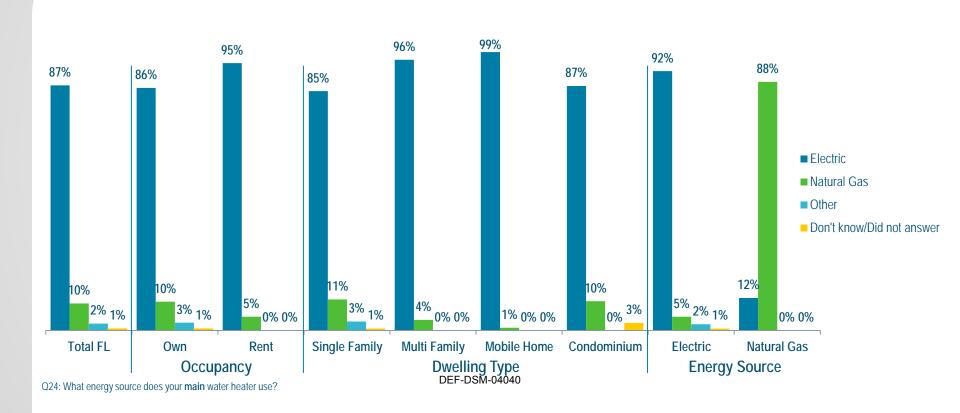
Appliances – Automatic Dishwashers

Two out of three (67%) customers have an automatic dishwasher in their home.



Water Heating

Almost nine out of ten (87%) customers use electricity as the main energy source for their water heater.



Water Heaters in the Home

Almost nine out of ten (87%) customers have one or more tank water heaters.

	Total FL	Occu	pancy		Dwelli		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Tank									
1	85%	85%	80%	85%	81%	88%	83%	85%	82%
2+	2%	2%	0%	2%	0%	1%	2%	2%	0%
None	6%	5%	9%	6%	9%	5%	3%	5%	10%
Did not answer	8%	8%	11%	8%	11%	6%	12%	8%	8%
Tankless									
1	3%	3%	1%	3%	0%	3%	0%	2%	11%
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	48%	45%	64%	48%	61%	32%	48%	47%	53%
Did not answer	49%	52%	35%	48%	39%	65%	52%	50%	36%
Heat pump water heater									
1	5%	3%	16%	4%	13%	4%	3%	5%	0%
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	49%	48%	57%	51%	53%	33%	48%	49%	59%
Did not answer	46%	49%	27%	45%	34%	63%	49%	46%	41%
Tank with solar collectors									
1	1%	1%	1%	2%	0%	0%	0%	1%	0%
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	49%	47%	64%	50%	61%	35%	48%	49%	59%
Did not answer	49%	51%	35%	48%	39%	65%	52%	50%	41%

The median age range of main water heaters is 5-9 years.

	Total FL	Осси	oancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Less than 1 year	4%	4%	3%	5%	0%	3%	1%	4%	5%
1-2 years	8%	8%	8%	8%	5%	6%	13%	8%	6%
3-4 years	15%	16%	14%	15%	11%	15%	28%	15%	15%
5-9 years	37%	38%	35%	40%	26%	38%	20%	38%	34%
10-14 years	22%	22%	25%	21%	35%	25%	15%	22%	23%
15 or more years	10%	11%	4%	10%	10%	12%	10%	10%	9%
Did not answer	3%	1%	11%	1%	13%	2%	12%	2%	7%

Clothes Washing & Drying

Clothes Washing Machines in Home

- Two out of three (67%) customers have top loading clothes washers in their home.
- Slightly more than one out of four (27%) have front loading clothes washers in their home.

	Total FL	Осси	pancy		Dwellir	ng Type		Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Front Loading Clothes Washer									
1	27%	30%	11%	30%	8%	19%	22%	27%	42%
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	42%	38%	64%	40%	65%	34%	47%	41%	42%
Did not answer	31%	32%	25%	30%	27%	47%	30%	32%	15%
Top Loading Clothes Washer									
1	67%	68%	61%	69%	41%	77%	59%	67%	52%
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	20%	17%	34%	17%	49%	11%	31%	20%	29%
Did not answer	13%	14%	5%	14%	10%	12%	11%	13%	19%

• Eight out of ten (79%) customers have electric clothes dryers in their home.

	Total FL	Occu	pancy	Dwelling Type				Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas	
Electric Clothes Dryer										
1	79%	82%	57%	83%	46%	79%	69%	81%	53%	
2+	0%	0%	0%	0%	0%	1%	0%	0%	0%	
None	10%	7%	31%	7%	46%	8%	18%	10%	21%	
Did not answer	10%	10%	12%	10%	9%	12%	13%	9%	26%	
Natural Gas Clothes Dryer										
1	3%	4%	0%	4%	2%	0%	0%	1%	37%	
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%	
None	54%	52%	68%	54%	67%	41%	62%	55%	51%	
Did not answer	42%	44%	32%	42%	31%	59%	38%	44%	12%	
Propane Clothes Dryer										
1	1%	1%	0%	1%	0%	5%	0%	1%	0%	
2+	0%	0%	0%	0%	0%	0%	0%	0%	0%	
None	55%	52%	68%	55%	67%	39%	62%	54%	64%	
Did not answer	44%	46%	32%	44%	33%	56%	38%	44%	36%	

Other Appliances Used In Home

	Total FL	Оссиј	pancy		Dwellii		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Microwave									
1	97%	97%	96%	97%	96%	99%	96%	97%	96%
2+	2%	2%	2%	2%	0%	0%	4%	2%	0%
None	1%	1%	0%	1%	0%	0%	0%	1%	4%
Did not answer	1%	1%	2%	1%	4%	1%	0%	1%	0%
Stand-Alone Humidifier									
1	3%	3%	6%	4%	0%	0%	5%	4%	0%
2+	0%	1%	0%	1%	1%	0%	0%	0%	5%
None	78%	77%	82%	78%	85%	70%	82%	77%	89%
Did not answer	18%	19%	12%	18%	14%	30%	13%	19%	6%
Attic/Whole House Fan									
1	8%	10%	0%	10%	4%	5%	0%	8%	3%
2+	4%	4%	4%	5%	1%	4%	1%	4%	4%
None	71%	69%	81%	69%	79%	65%	87%	70%	81%
Did not answer	17%	17%	15%	16%	15%	26%	12%	17%	12%
Ceiling Fans									
1	9%	8%	13%	8%	14%	9%	15%	9%	11%
2+	81%	84%	62%	85%	47%	76%	75%	81%	85%
None	6%	4%	22%	3%	33%	10%	9%	7%	2%
Did not answer	4%	4%	3%	4%	6%	4%	1%	4%	2%

Appliances Used in Home (continued)

	Total FL	Occu	pancy		Dwellir	ng Type		Energy	nergy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas	
Well Water/Sump Pumps										
1	13%	15%	2%	15%	0%	17%	1%	14%	5%	
2+	1%	1%	0%	1%	0%	1%	0%	1%	0%	
None	71%	69%	84%	70%	83%	58%	84%	70%	85%	
Did not answer	15%	15%	14%	14%	17%	24%	15%	15%	11%	
Dehumidifiers										
1	4%	4%	4%	4%	3%	5%	11%	4%	5%	
2+	0%	0%	0%	0%	0%	0%	0%	0%	2%	
None	79%	78%	84%	80%	83%	68%	74%	79%	87%	
Did not answer	16%	17%	12%	16%	14%	27%	15%	17%	6%	
Electronic Air Cleaners										
1	6%	6%	6%	7%	0%	4%	8%	6%	8%	
2+	3%	3%	2%	3%	4%	1%	1%	2%	12%	
None	75%	74%	81%	75%	84%	69%	76%	75%	76%	
Did not answer	16%	17%	11%	15%	12%	26%	15%	17%	4%	
Jacuzzi/Whirlpool tubs										
1	9%	9%	5%	11%	0%	1%	5%	9%	6%	
2+	0%	0%	0%	0%	0%	0%	0%	0%	5%	
None	76%	74%	84%	75%	88%	72%	81%	76%	83%	
Did not answer	15%	16%	11%	14%	12%	27%	15%	16%	6%	

Appliances Used in Home (continued)

	Total FL	Occu	pancy		Dwellir	ng Type		Energy	Source
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Standard Television									
1	30%	29%	33%	27%	61%	38%	24%	29%	30%
2+	32%	33%	28%	36%	12%	25%	22%	33%	32%
None	25%	26%	26%	25%	18%	21%	42%	26%	25%
Did not answer	12%	12%	13%	12%	9%	15%	12%	12%	14%
Plasma Television									
1	11%	11%	10%	11%	9%	5%	11%	11%	9%
2+	6%	5%	10%	6%	0%	4%	16%	5%	14%
None	60%	59%	69%	59%	78%	62%	56%	60%	62%
Did not answer	23%	25%	12%	24%	14%	29%	17%	23%	15%
LCD Television									
1	19%	18%	27%	17%	34%	23%	23%	19%	19%
2+	20%	21%	20%	23%	7%	8%	19%	20%	26%
None	40%	40%	38%	40%	40%	46%	33%	40%	42%
Did not answer	20%	21%	14%	19%	20%	23%	26%	21%	12%
LED Television									
1	15%	13%	20%	16%	12%	14%	8%	15%	15%
2+	13%	15%	2%	15%	3%	13%	10%	14%	9%
None	52%	52%	58%	52%	63%	45%	55%	52%	60%
Did not answer	20%	19%	20%	18%	21%	28%	27%	20%	16%

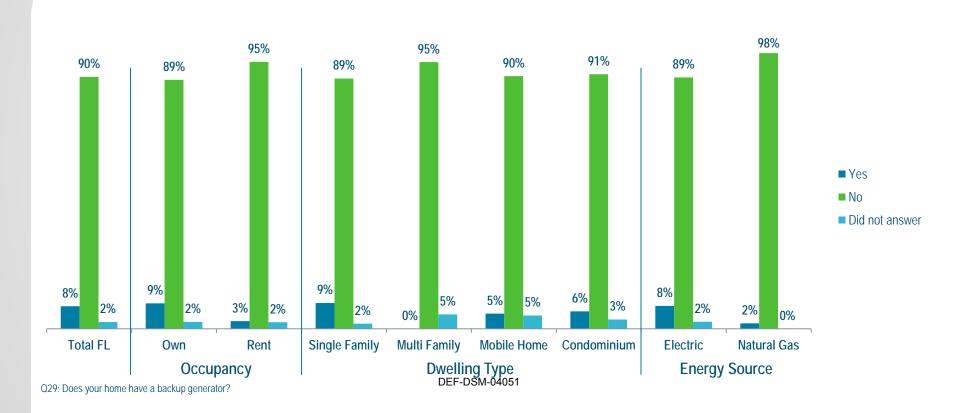
Appliances Used in Home (continued)

	Total FL	Occu	pancy		Dwelli	ng Type		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas	
Cable TV Box										
1	38%	37%	40%	35%	66%	43%	37%	40%	23%	
2+	36%	36%	35%	40%	8%	15%	39%	35%	42%	
None	19%	19%	19%	17%	25%	31%	21%	18%	32%	
Did not answer	7%	7%	5%	8%	0%	11%	3%	7%	3%	
Home Theater/Sound System										
1	30%	32%	19%	37%	4%	10%	13%	30%	44%	
2+	3%	3%	2%	4%	0%	0%	0%	3%	2%	
None	53%	50%	68%	47%	83%	64%	75%	52%	48%	
Did not answer	14%	14%	11%	13%	14%	26%	12%	14%	6%	
Digital Video Recorder (DVR)										
1	35%	35%	41%	35%	36%	34%	36%	35%	37%	
2+	16%	18%	6%	19%	0%	2%	16%	15%	25%	
None	38%	36%	46%	36%	52%	45%	40%	39%	32%	
Did not answer	11%	11%	7%	10%	12%	19%	8%	11%	6%	
Video Gaming System										
1	26%	26%	27%	29%	15%	13%	13%	26%	33%	
2+	10%	10%	10%	11%	8%	9%	0%	10%	12%	
None	52%	51%	54%	48%	64%	55%	73%	51%	51%	
Did not answer	13%	14%	9%	11%	14%	23%	15%	13%	4%	
Digital Photo Frame(s)										
1	11%	13%	0%	13%	3%	5%	10%	11%	20%	
2+	1%	1%	0%	1%	0%	0%	3%	1%	5%	
None	71%	69%	85%	70%	85%	68%	72%	71%	70%	
Did not answer	16%	17%	15%	16% SM-04050	12%	27%	15%	17%	6%	

Q28: How many of the following appliances do you use in your home?

Backup Generator at Home

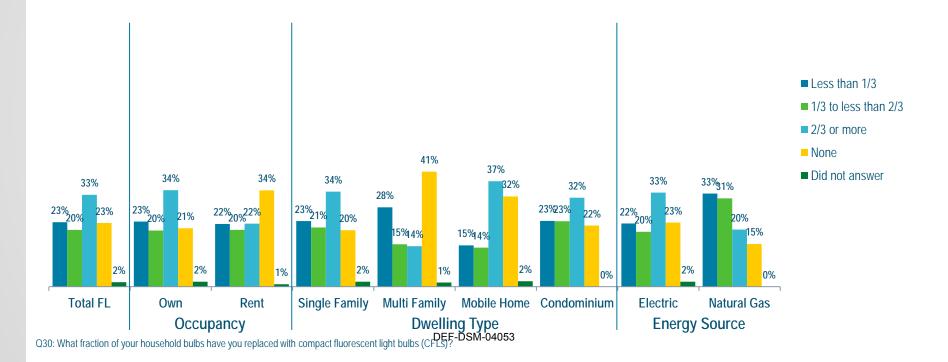
Less than one out of ten (8%) customers have a backup generator at their home.



Lighting

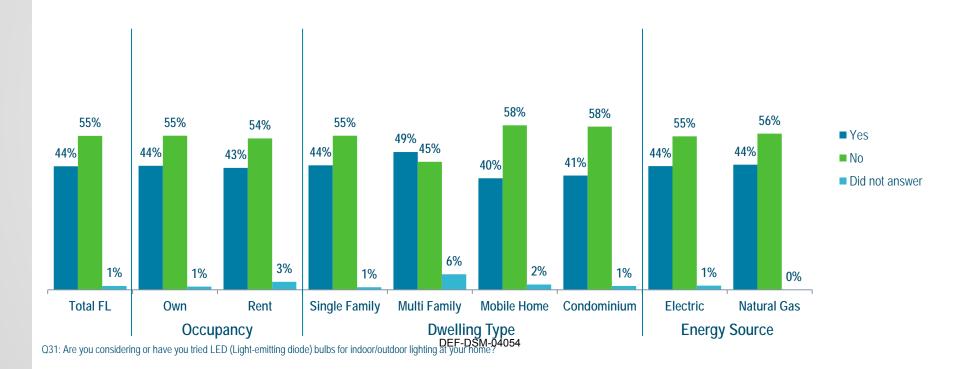
Fraction of Household Light Bulbs Replaced with CFLs

- One-third (33%) of customers have replaced 2/3 or more of their household bulbs with compact fluorescent light bulbs (CFLs).
- Slightly less than one out of four (23%) have not replaced any household bulbs with CFLs.



Considering or Tried LED Bulbs at Home

More than four out of ten (44%) customers have considered or have tried LED bulbs at home.



LED Bulbs Installed at Home

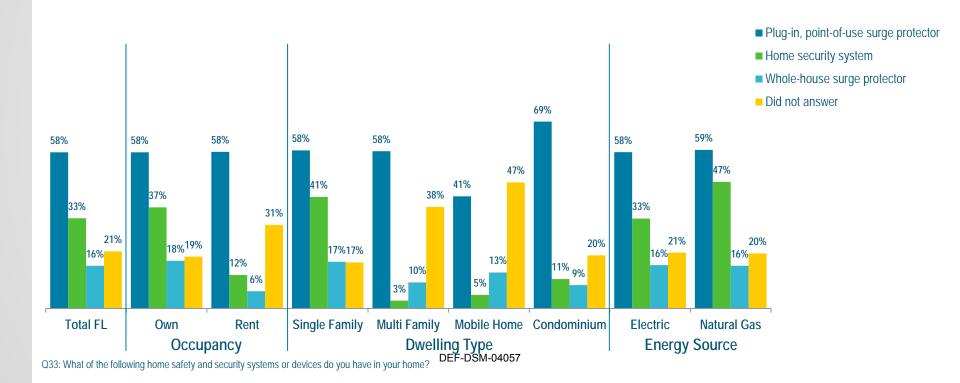
One out of five (19%) customers have installed 1 to 3 LED bulbs in their home.

	Total FL	Occupancy			Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
1 - 3	19%	19%	19%	20%	17%	14%	19%	19%	33%
4 - 6	10%	10%	12%	9%	15%	13%	10%	11%	3%
7 - 9	5%	5%	0%	5%	1%	8%	3%	4%	7%
10+	4%	4%	4%	4%	1%	1%	7%	4%	0%
None	49%	48%	56%	49%	58%	47%	49%	50%	44%
Did not answer	13%	14%	9%	13%	7%	16%	12%	12%	12%

Home Safety & Security

Home Safety and Security Systems or Devices in Home

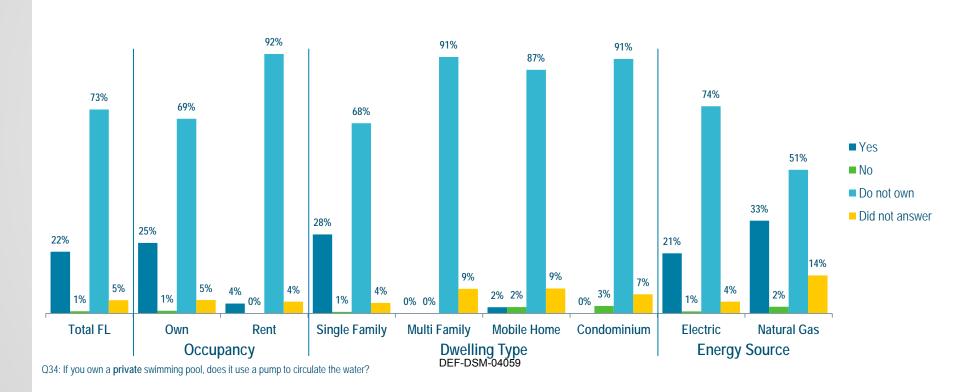
- Slightly less than six out of ten (58%) have plug-in, point-of-use surge protectors in their home.
- One out of three (33%) have a home security system.



Pool & Spas

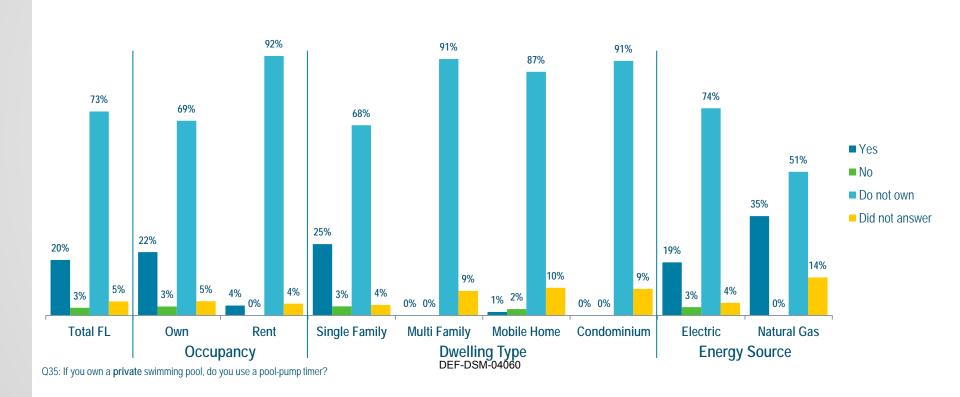
Use Pump to Circulate the Water in Private Swimming Pool

• Slightly more than one out of five (22%) customers use a pump to circulate the water in their private swimming pool.



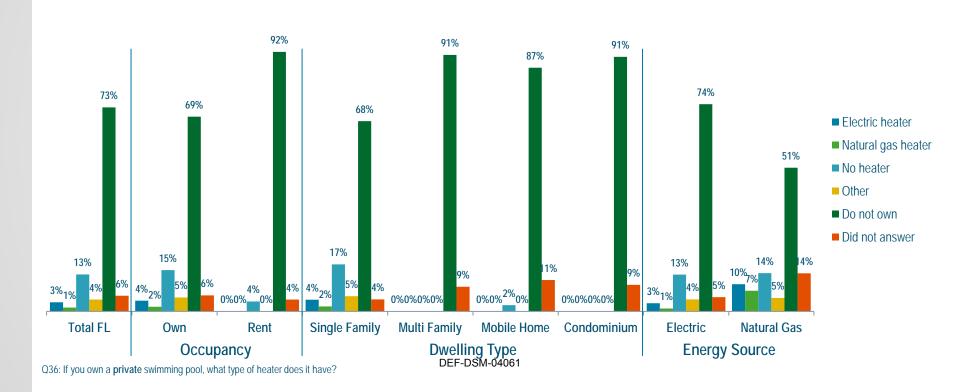
Use Pool Pump Timer in Private Swimming Pool

• One out of five (20%) customers use a pool pump timer.

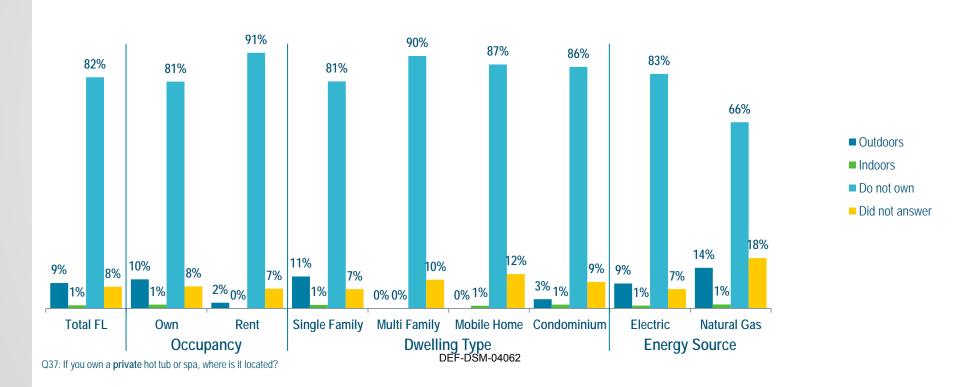


Heating Source for Private Swimming Pool

Very few (8%) customers have a pool heater.

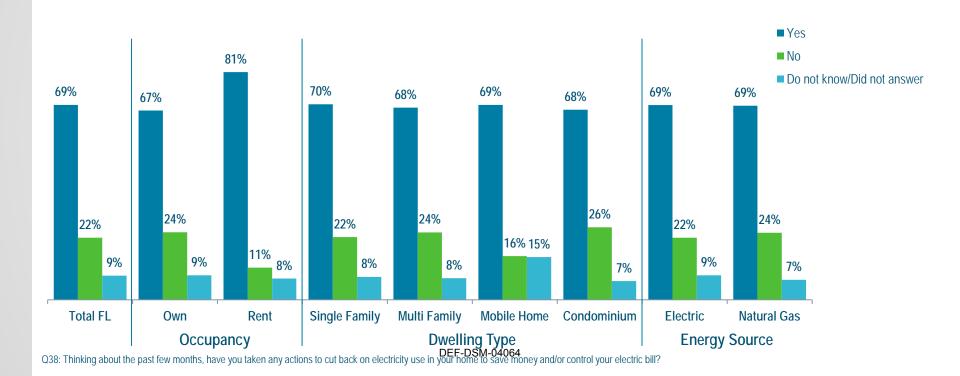


One out of ten (9%) customers have an outdoor private hot tub or spa.



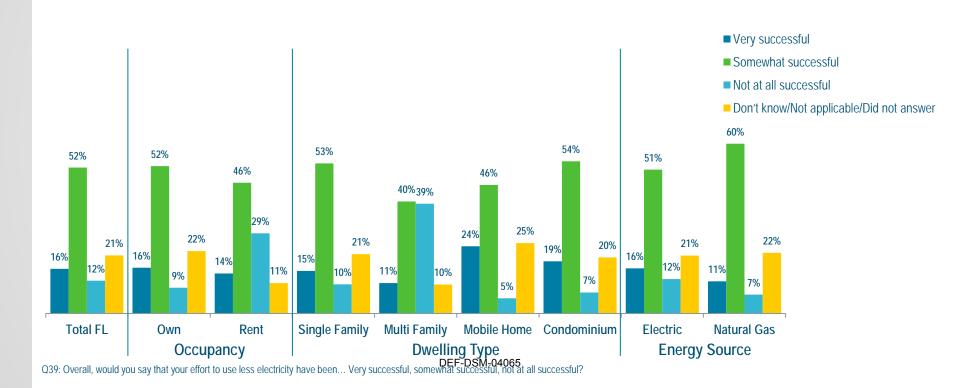
Energy Savings

 Seven out of ten (69%) customers have taken actions to cut back on electricity use in their home to save money and/or control their electric bill.



Effort to Use Less Electricity

Two out of three (68%) customers have been successful in their effort to conserve energy.



Energy-Saving Measures Equipped in Home

• Low flow showerheads/faucets (37%), insulated ductwork (28%) and storm or multi-pane windows (27%) are the energy-saving measures most used by customers.

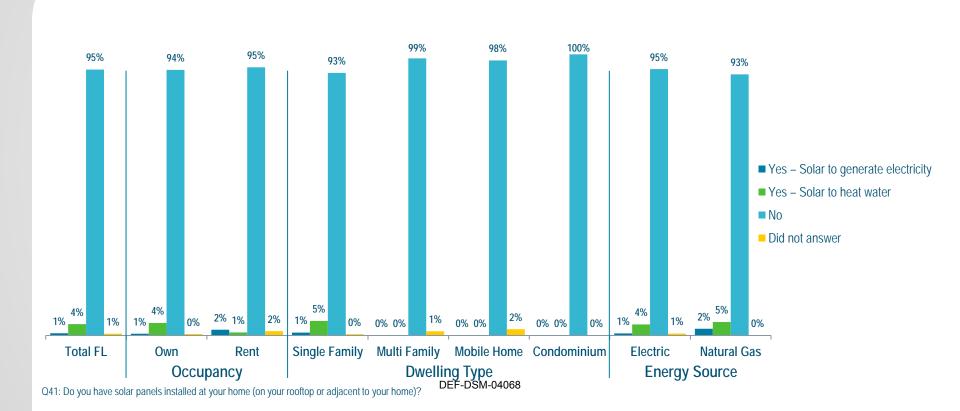
	Total FL	Occu	pancy		Dwellir	ng Type		Energy	Source
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Low flow showerheads/faucets	37%	39%	24%	39%	17%	32%	35%	37%	45%
Insulated ductwork	28%	31%	16%	32%	9%	20%	20%	28%	32%
Storm or multi-pane windows	27%	30%	14%	30%	12%	12%	39%	28%	20%
Exterior wall insulation	21%	24%	7%	24%	5%	25%	9%	21%	32%
Storm or insulated doors	21%	22%	13%	22%	11%	12%	31%	21%	12%
Reflective window film	16%	16%	8%	15%	12%	23%	11%	16%	11%
Water heater wrap	11%	10%	15%	10%	7%	13%	14%	11%	4%
Water heater timer	9%	10%	3%	10%	0%	8%	4%	10%	0%
Low-E windows and/or heat mirror	9%	10%	2%	10%	2%	8%	4%	8%	11%
Water pipe insulation	8%	8%	3%	9%	1%	3%	7%	7%	12%
Basement wall insulation	0%	0%	1%	0%	0%	2%	0%	0%	1%
None of these	28%	23%	53%	24%	61%	31%	30%	27%	29%
Did not answer	2%	2%	4%	2%	3%	4%	3%	3%	0%

Q40: Listed below are various energy-saving measures. Please indicate with which of the following measures your home is equipped.

Multiple responses accepted.

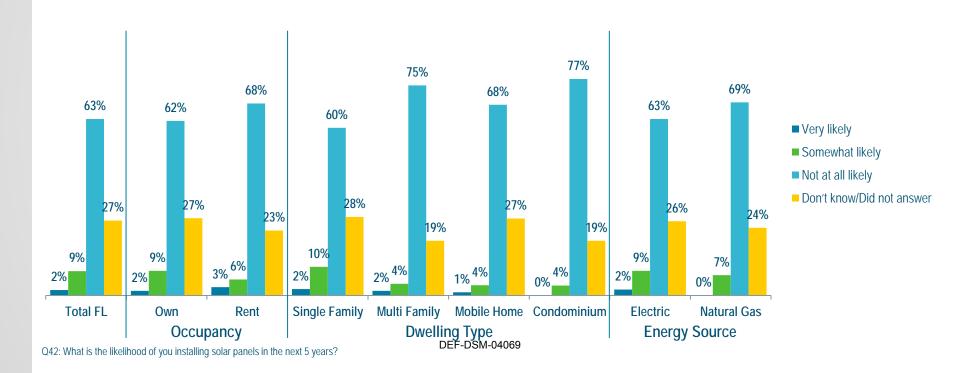
Solar Energy

Very few customers use solar panels.



Likelihood of Installing Solar Panels in the Next 5 Years

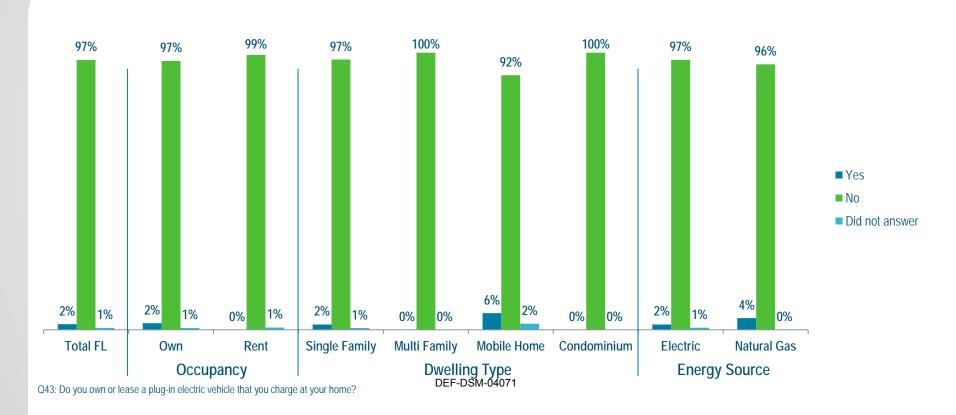
• For those who do not currently use solar panels, one out of ten (11%) customers are either very likely or somewhat likely to install solar panels in the next 5 years.



Electric Vehicles

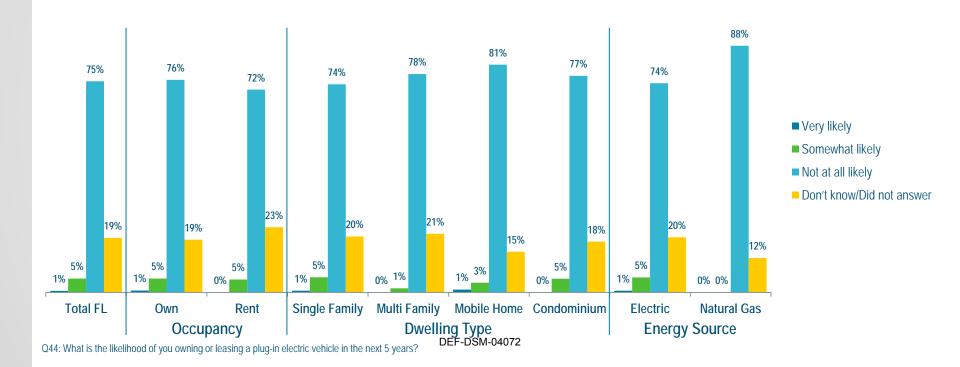
Own or Lease a Plug-In Electric Vehicle

Almost no customers own or lease a plug-in electric vehicle.



DEF'S Response to Sierra Club's 2nd Pods SC-PODS 2-ikelihood of Owning or Leasing a Plug-In Electric Vehicle in the Next 5 Years

• For those who do not currently own or lease an electric vehicle, less than one out of ten (6%) customers are very likely or somewhat likely to own or lease a plug-in electric vehicle in the next 5 years.



Energy Star Appliances



• More than one half (53%) of customers have an energy star refrigerator and slightly more than one out of three (35%) have an energy star automatic dishwasher.

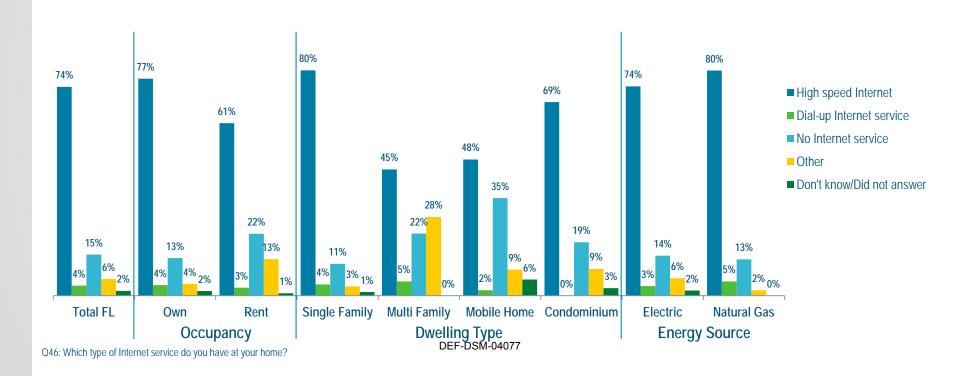
	Total FL	Occupancy			Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Refrigerator	53%	56%	32%	59%	24%	37%	33%	53%	58%
Automatic dishwasher	35%	39%	10%	41%	20%	6%	19%	34%	60%
Water heater	31%	33%	16%	35%	12%	18%	20%	31%	32%
Top loading clothes washer	27%	29%	15%	28%	9%	30%	23%	27%	28%
Front loading clothes washer	25%	28%	8%	28%	8%	17%	16%	25%	40%
Wall air conditioner	6%	7%	2%	6%	0%	16%	3%	7%	0%
Other	3%	3%	3%	3%	0%	4%	6%	3%	0%
None of these	13%	11%	27%	8%	43%	20%	23%	12%	10%
Don't Know/Did not answer	20%	18%	30%	19%	23%	20%	28%	21%	6%

Multiple responses accepted.

Computers, Internet & Phones

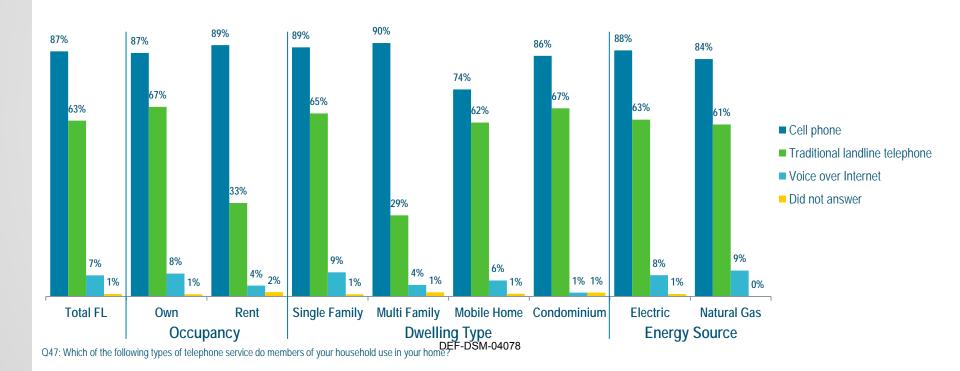
	Total FL	Occu	pancy		Dwellir		Energy Source		
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Computers (Laptop or Desktop)									
Have computer	85%	86%	82%	88%	87%	57%	86%	85%	94%
Do not have computer	11%	10%	13%	9%	12%	25%	12%	10%	6%
Did not answer	4%	4%	5%	3%	1%	17%	3%	5%	0%
Laptop Computers									
1	41%	40%	49%	40%	58%	36%	46%	43%	33%
2+	24%	25%	22%	28%	15%	4%	18%	23%	43%
None	25%	25%	22%	23%	21%	40%	27%	24%	21%
Did not answer	10%	10%	7%	9%	6%	20%	8%	10%	4%
Desktop Computer									
1	46%	48%	33%	50%	16%	34%	42%	46%	47%
2+	9%	10%	4%	11%	4%	3%	4%	9%	14%
None	36%	33%	52%	32%	72%	41%	41%	36%	38%
Did not answer	9%	9%	11%	7%	8%	23%	13%	10%	2%
iPad, Tablets									
1	28%	28%	29%	30%	22%	11%	26%	28%	26%
2+	9%	10%	2%	11%	1%	1%	4%	8%	19%
None	50%	48%	56%	46%	63%	63%	55%	49%	49%
Did not answer	14%	14%	13%	13%	14%	25%	16%	14%	6%

Three out of four (74%) customers have high speed Internet service at their home.



Household Telephone Service Types

- More than eight out of ten (87%) customers use cell phones in their home.
- Almost two out of three (63%) customers use traditional landline telephones.



Demographics

Number of Household Members by Age Group

	Total FL	Total FL Occupancy Dwelling Type				ng Type		Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Under 18									
1	9%	8%	15%	10%	8%	7%	0%	9%	10%
2	9%	9%	9%	10%	0%	7%	0%	9%	5%
3+	5%	5%	7%	6%	0%	0%	0%	4%	17%
None	31%	30%	35%	28%	55%	30%	46%	31%	36%
Did not answer	46%	48%	34%	45%	37%	56%	54%	47%	33%
18-44									
1	15%	14%	17%	16%	11%	5%	16%	14%	21%
2	16%	16%	21%	19%	15%	5%	0%	17%	14%
3+	4%	3%	8%	4%	4%	7%	0%	3%	12%
None	24%	25%	21%	22%	40%	28%	34%	23%	36%
Did not answer	41%	42%	34%	39%	30%	56%	50%	42%	17%
45-64									
1	27%	25%	33%	26%	44%	17%	31%	26%	33%
2	21%	21%	22%	22%	10%	23%	14%	21%	21%
3+	0%	0%	0%	0%	0%	0%	0%	0%	0%
None	17%	17%	16%	17%	18%	17%	19%	17%	21%
Did not answer	35%	36%	29%	35%	28%	43%	36%	36%	25%
65+									
1	24%	25%	12%	22%	21%	39%	27%	24%	17%
2	19%	21%	7%	19%	11%	20%	27%	19%	21%
3+	1%	1%	0%	1%	0%	1%	0%	1%	0%
None	19%	16%	34%	17%	44%	12%	29%	20%	13%
Did not answer	37%	36%	47%	42%	24%	28%	17%	37%	49%

Q48: Please mark the number of people in each age group that live for most of the year in your household.

Median age range of primary household owners is 55 to 64.

	Total FL	Occupancy			Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
18 - 24	1%	0%	4%	0%	11%	0%	0%	1%	0%
25 - 34	4%	4%	4%	5%	0%	1%	4%	5%	0%
35 - 44	13%	13%	14%	16%	7%	0%	5%	12%	32%
45 - 54	21%	18%	39%	20%	42%	20%	19%	22%	9%
55 - 64	19%	19%	20%	20%	6%	16%	19%	19%	18%
65 - 74	21%	23%	10%	22%	7%	24%	19%	21%	23%
75+	19%	21%	8%	16%	22%	38%	34%	19%	18%
Did not answer	2%	2%	2%	1%	5%	1%	1%	2%	0%

Total Annual Household Income

Median customer income is \$48,000.

	Total FL	Occupancy		Dwelling Type				Energy Source	
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Under \$15,000	7%	6%	15%	5%	15%	20%	11%	7%	6%
\$15,000 - \$24,999	11%	11%	16%	9%	23%	26%	5%	11%	10%
\$25,000 - \$34,999	14%	15%	14%	14%	14%	15%	14%	15%	11%
\$35,000 - \$49,999	14%	13%	21%	13%	15%	20%	16%	14%	11%
\$50,000 - \$74,999	18%	18%	19%	20%	23%	2%	17%	18%	18%
\$75,000 - \$99,999	9%	10%	4%	11%	0%	4%	8%	9%	7%
\$100,000 - \$124,999	6%	7%	2%	7%	0%	0%	7%	6%	11%
\$125,000 - \$149,999	4%	5%	1%	5%	0%	0%	0%	4%	0%
\$150,000+	4%	4%	0%	4%	1%	0%	2%	3%	14%
Did not answer	12%	12%	8%	11%	9%	14%	19%	12%	11%

Highest Level of Education

• Four out of ten (39%) customers have earned a bachelor degree or better.

	Total FL	Occupancy			Dwellir	Energy Source			
		Own	Rent	Single Family	Multi Family	Mobile Home	Condominium	Electric	Nat. Gas
Less than high school diploma	6%	6%	6%	4%	9%	20%	1%	6%	6%
High school diploma	21%	21%	22%	20%	20%	36%	23%	21%	22%
Some college	32%	31%	36%	34%	24%	27%	21%	33%	30%
Bachelor degree	23%	22%	25%	23%	36%	8%	24%	22%	31%
Graduate degree	16%	17%	8%	17%	3%	2%	29%	16%	11%
Did not answer	3%	3%	4%	2%	8%	7%	1%	3%	0%

Appendix

Letter, Questionnaire and Reminder Postcard

Invite Letter and Reminder Postcard



<Mail Ship Date>

<Customer Name> <Customer Address 1> <Customer Address 2>

Dear <Customer Name>,

Duke Energy sincerely appreciates your business. Our goal is to provide you and all our customers reliable, affordable electric service, both now and in the future.

To help us meet this goal, we are asking a representative sample of our customers to participate in an important survey. We would like to include your household located at the address shown above. The results of this survey will help guide our plans and actions to assure that we meet customer needs in the years ahead.

As a token of our appreciation for your participation, we will make a \$1 donation on your behalf to one of the following charities. Just check your choice at the end of the survey.

- · American Cancer Society
- . Children's Miracle Network

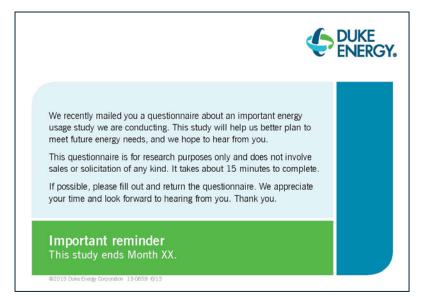
Your answers will be entirely conflidential, and **no solicitation of any kind** will result from your participation. Your responses will be combined with those provided by other households and used for statistical research purposes only.

Please complete the questionnaire and return it in the postage-paid envelope no later than Month XX, 2013. It takes about 15 minutes to complete. And don't forget to indicate which charity you want to receive our donation on your behalf.

Thank you in advance for helping with this important project.

Sincerely,

David L. Fruend Manager, Market Research Duke Energy



Questionnaire

electric service to you now ar	ing electricity demand and to provide reliable, affordable id in the future, Duke Energy is asking for your assistance. bout your home appliances and energy use. As a token of	Which of the following do you use to cool your home? (Mark all that apply.)	 How many refrigerators and/or stand-alone freezers of each type do you have in your home? (Mark one response for each refrigerator and/or freezer type.)
our appreciation for your participation, we will make a \$1 Society or the Children's Miracle Network. Just check you	donation on your behalf to either the American Cancer	□ None; do not cool the home (Skip to Q.17.) □ Central air conditioning (not a heat pump) □ Heat pump for cooling	None 1 2+
,		☐ Window or through the wall unit	Manual defrost refrigerator
MARKING INSTRUCTIONS:		 How many rooms in your home (excluding bathrooms, 	Frost free stand-alone freezer
Using a blue or black pen, please mark your answers by pl Correct: ☑ Incorrect: ☑ ■ ☑	acing an X inside the correct box.	hallways and foyers but including finished basements) are cooled? (Mark one only.)	Manual stand-alone defrost freezer
HOUSING CHARACTERISTICS	HEATING/AIR CONDITIONING	1	unheated area (e.g., unheated garage)? (Mark one response for each refrigerator and/or freezer type.)
1. Do you own or rent your residence? (Mark one only.)	8. What is the main energy source or fuel used to heat your	15. How old is your cooling system? (Mark one only.)	None 1 2+
☐ Own/Purchasing ☐ Rent ☐ Other	home? (Mark one only.)	□ Less than 3 years □ 11 – 15 years	Frost free refrigerator
About how long have you lived at this residence?	☐ Electricity ☐ Wood/Pellets ☐ Natural gas ☐ Coal	☐ 3 – 5 years ☐ More than 15 years	Manual defrost refrigerator
years (Write a whole number in each box. Ex: '0 7' for seven years. Enter '0 0' (zero) if less than a year.)	Propane Other	☐ 6 – 10 years	
	☐ Oil/Kerosene	16. How many window-units or through the wall air conditioners	manda denost neede
In what type of building do you live? (Mark one only.) Single-family detached house	 Which of the following types of equipment best describes your main heating system? (Mark one only.) 	do you use?	 How many of these refrigerators and/or freezers are operable but not in use? (Mark one response for each refrigerator and/or freezer type.)
☐ Single-family attached to two or more houses (townhomes)	☐ Standalone forced air furnace	17. What are your typical daytime and nighttime thermostat	None 1 2+
Duplex two-family building	Heat pump combined with a forced air furnace Standalone heat pump	settings during summer and winter? (Mark one response for each time period.)	Frost free refrigerator
An apartment building (3-4 units) An apartment building (5 or more units)	☐ Circulating hot water or steam	Don't Lower Higher	Manual defrost refrigerator
A mobile home	☐ Electric baseboard heat/ceiling or floor coil	know than 69F 69-72F 73-78F than 78F Off	Frost free freezer
☐ Condominium (or Landominium)	Propane, oil, kerosene stove/heater (not a furnace) Wood/pellet burning stoves/fireplace(s)	Summer daytime	Manual defrost freezer
4. How many heated rooms are in your home (excluding	Other	Summer nighttime	23. How many automatic dishwashers do you use in your home?
bathrooms, hallways, foyers but including finished basements)? (Mark one only.)	10. How old is your main heating system? (Mark one only.)	Winter daytime	(Mark one only.) ☐ None ☐ 1 ☐ 2+
1	☐ Less than 3 years ☐ 11 — 15 years ☐ 3 — 5 years ☐ More than 15 years	KITCHEN APPLIANCES	WATER HEATING
5. How many bathrooms are in your home? (Mark one only.)	☐ 6 — 10 years		24. What energy source does your main water heater use?
□ 1 □ 1·1/2 □ 2 □ 2·1/2 □ 3 □ 3·1/2 □ 4+	How many of the following do you have in your home? (Mark one response for each thermostat type.) None 1 2 3+	 How many ovens of each type (excluding microwaves) do you use in your home? (Mark one response for each oven type.) 	(Mark one only.)
	None 1 2 3+ Non-programmable thermostats	None 1 2+	☐ Electricity ☐ Propane ☐ Natural Gas
In what year was your home built? (Mark one only.)	Programmable thermostats	Natural gas oven	25. How many of each of the following types of water heaters do
☐ Before 1950 ☐ 1990 - 1999 ☐ 1950 - 1959 ☐ 2000 - 2004	Thermostats accessible by a smart	Propane oven	you have? (Mark one response for each type of water heater.)
□ 1950 - 1959 □ 2000 - 2004 □ 1960 - 1969 □ 2005 - 2010	phone and/or the Web Thermostats that are part of a	Other	None 1 2+
☐ 1970 - 1979 ☐ After 2010	home security system	19. How many ranges or cooktops (excluding microwaves) of	Tank
☐ 1980 - 1989 ☐ Don't know	12. Which of the following supplemental heating systems do you	each type do you use in your home? (Mark one response for each range or cooktop.)	Tankless
7. About how many square feet of living space does your home	use? (Mark all that apply.)	None 1 2+	Tank with solar collectors
have? (Do not include garages or other unheated areas. Note: A 10 foot by 12 foot room is 120 square feet.) (Mark	☐ No supplemental heating system ☐ Portable electric heaters	Natural gas range	Other
one only.)	Portable electric heaters Portable oil or kerosene heaters	Electric range	Specify Other
☐ Less than 500 ☐ 2,500 − 2,999	Gas fireplace(s)	Propane range	26. How old is your main water heater? (Mark one only.)
☐ 500 − 999 ☐ 3,000 − 3,499	☐ Electric fireplace(s)	Other L L	☐ Less than one year ☐ 5 – 9 years
☐ 1,000 − 1,499 ☐ 3,500 − 3,999 ☐ 4,000 or more	☐ Wood/pellet burning stoves/fireplace(s) ☐ Other		☐ 1 – 2 years ☐ 10 – 14 years ☐ 3 – 4 years ☐ 15 or more years
2,000 - 2,499			□ 5 - 4 years □ 15 or more years
	12345		
501.0		M-04086	

Questionnaire

CLOTHES WASHING AND DRYING	HOME SAFETY AND SECURITY	SOLAR ENERGY	 Which of the following types of telephone service do members of your household use in your home? (Mark all
27. Please indicate the type and number of each clothes washing machine and/or driver that you have in your home. (Mark one response for each washer and/or driver.) Some 1	33. Which of the following home safety and security systems or devices do you have in your home? (Mark alt that apply.) Home security system Whole-house surge protector Plug-in, point-of-use surge protector POOL & SPAS 34. If you own a private swimming pool, does it use a pump to circulate the water? (Mark one only.)	41. Do you have solar panels installed at your home (on your rooftop or algicent to your home)? 'Yes - Solar to generate electricity Yes - Solar to heat water No 42. (If answer above is 'No') What is the likelihood of you unstalling solar panels in the next 5 years? (Mark one only.) Yery likely Somewhat likely Not at all likely	that apply.] Traditional landline telephone Cell phone Wiske over Internet (Magiclack, Yonage, etc.) 48. Please mark the number of people in each age group that live for most of the year in your household, (its sure to include infants and yourself) (Mark one response for each age range). None 1 2 3 4 5 6+ Under 18 0 0 0 0 0
home? (Mark one response for each appliance type.) None 1 2 3 4 5 6+	□ Do not own □ Yes □ No 3.5. If you own a private swimming pool, do you use a pool-pump	☐ Don't know	4564 0 0 0 0 0 0
Microwave	timer? (Mark one only.) Do not own Yes No	### ELECTRIC VEHICLES 43. Do you own or lease a plug-in electric vehicle that you charge at your home? Yes	65+
LIGHTING	indicate with which of the following measures your home is equipped. (Mark all that apply.)	□ None of these □ Don't Know	CHARITABLE DONATION
30. What fraction of your household bulbs have you replaced with compact fluorescent light bulbs (CFLs)? (Mark one only.)	Storm or multi-pane windows Low-E windows and/or heat mirror	YOUR HOUSEHOLD	As a token of our appreciation for your participation, we will make a \$1 donation on your behalf to one of the following charities. Please select the charity of your choice. (Mark one only)
1/3 to less than 2/3 2/3 or more	Reflective window film Storm or insulated doors Exterior wall insulation Basement wall insulation Insulated ductwork Water heater wrap Low flow showerheads/flaucets Water pipe insulation Water bater timer None of these	These questions are about your household. Please keep in mind that all information you provide will be keep strictly confidential and will not be released to anyone. This information will be combined with information provided by other households and will be used for statistical pur proses only. 45. Which type of internet service do you have at your home? (Mairk one only.) No Internet service Disk up Internet service High speed internet.	Preses select the chartry of your choice. (Nairs one only.) American Cancer Solite Children's Mirade Network

