

2014 HVAC Market Report

Prepared for: New York State Energy Research and Development Authority

Issued: December 19, 2016

HVAC Market Share by Efficiency and Capacity

January 1, 2014 - December 31, 2014

This report is based on sales data reported to D+R International by HARDI members participating in the Unitary HVAC Market Report.

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Prepared for: NYSERDA

Data Timeframe: January 1, 2014 - December 31, 2014

Custom Region: NY and Northeastern, excluding NY

Introduction

Heating, Air-conditioning & Distributors International (HARDI) and D+R International have been partnering since 2012. Distributor members of HARDI send their monthly sales data to D+R. In turn, D+R prepares quarterly updates of the HVAC markets for each participating distributor member.

Estimation Methodology

The annual market size estimates are based on a stock-replacement model, developed by D+R using existing HVAC equipment stock data from the Energy Information Administration's 2009 Residential Energy Consumption Survey. D+R estimated equipment sales by dividing the total stock by average lifetimes of equipment to determine the number of probable replacements in a given year. HVAC equipment in new housing was estimated from U.S. Census data. D+R also developed a heat pump adjustment factor to account for heat pumps replacing some air conditioners, particularly in the cooling-dominated regions.

While this model drives the baseline market size, all other reporting metrics are based on the HARDI distributor data. These include:

- market growth
- efficiency distribution
- ducted/ductless percentage (within ASHPs and ACs)
- refrigerant type

Collected sales information always includes the distributor, branch location, model number, ZIP code shipped from, sales date, and quantity. D+R matches the model number to manufacturer specifications to determine values included in this report.

Definitions

This section is an overview of what equipment and metrics D+R tracks and how D+R classifies them.

Products

Air Conditioner: Split and packaged, single fuels air conditioning systems that have a SEER rating.

- Includes: split system AC, packaged AC
- Excludes: room air conditioners, dual fuel packaged units, package terminal air-conditioners

Air-Source Heat Pumps: Split and packaged, single fuels air conditioning systems that have a SEER rating.

- Includes: split system ASHP, packaged ASHP
- Excludes: reverse cycle room air conditioners, dual fuel packaged units, package terminal air-source heat pumps, ground-source heat pumps

Furnaces: All ducted fossil fuel, single fuel furnaces that have an AFUE rating.

- Includes: split system ASHP, packaged ASHP
- Excludes: reverse cycle room air conditioners, dual fuel packaged units, package terminal air-source heat pumps, ground-source heat pumps

Ducted: ACs and ASHPs (as defined above) that have ducting.

Ductless: Split system ACs and ASHPs (as defined above) that do not have ducts but do have an indoor air handler(s). These products often have inverter driven, variable speed compressors and are referred to as ductless mini-splits.

Metrics

SEER (nominal): Nominal Seasonal Energy Efficiency Ratio of the outdoor condensing unit.

HSPF: Heating Season Performance Factor. In the case of split systems, the “lowest matched pair” value is reported.

EER: Energy Efficiency Ratio. In the case of split systems, the “lowest matched pair” value is reported.

AFUE: Annualized Fuel Utilization Efficiency of the equipment.

Capacity (nominal): Nominal heating or cooling capacity for the piece of equipment. For air conditioners, ground source heat pumps, and air source heat pumps, this is the capacity of the equipment to the closest half ton increment. For furnaces and boilers, this is the manufacturer specified input capacity.

Air Conditioners		
	<u>Northeastern</u>	<u>NY</u>
N-value	14,934	12,537

Air Conditioners - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	74.4%	81.8%
14.00 - 14.99	7.0%	3.6%
15.00 - 15.99	0.9%	1.7%
16.00 - 16.99	13.7%	8.5%
17.00 - 17.99	0.4%	1.0%
18.00 - 18.99	1.4%	0.1%
19.00 - 19.99	1.0%	1.9%
20.00 - 20.99	0.1%	0.6%
21.00 - 21.99	1.0%	0.7%
22.00 - 22.99	0.0%	0.0%
23.00 - 23.99	0.0%	0.0%
24.00 - 24.99	0.0%	0.0%
25.00 - 25.99	0.0%	0.0%
>= 26.00	0.0%	0.0%
Est. Unit Sales	73,911	108,082

Air Conditioners, Ducted - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	77.9%	87.1%
14.00 - 14.99	7.0%	3.2%
15.00 - 15.99	0.0%	0.5%
16.00 - 16.99	13.5%	8.9%
17.00 - 17.99	0.1%	0.2%
18.00 - 18.99	1.4%	0.0%
19.00 - 19.99	0.0%	0.0%
20.00 - 20.99	0.1%	0.0%
21.00 - 21.99	0.0%	0.0%
22.00 - 22.99	0.0%	0.0%
23.00 - 23.99	0.0%	0.0%
24.00 - 24.99	0.0%	0.0%
25.00 - 25.99	0.0%	0.0%
>= 26.00	0.0%	0.0%
Est. Unit Sales	70,337	100,288

Air Conditioners, Ductless - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	7.1%	13.6%
14.00 - 14.99	5.4%	9.1%
15.00 - 15.99	18.1%	18.1%
16.00 - 16.99	17.3%	3.3%
17.00 - 17.99	7.1%	10.4%
18.00 - 18.99	1.9%	1.3%
19.00 - 19.99	21.1%	26.0%
20.00 - 20.99	0.6%	8.2%
21.00 - 21.99	21.5%	10.0%
22.00 - 22.99	0.0%	0.0%
23.00 - 23.99	0.0%	0.0%
24.00 - 24.99	0.0%	0.0%
25.00 - 25.99	0.0%	0.0%
>= 26.00	0.0%	0.0%
Est. Unit Sales	3,573	7,793

Air Conditioners - Percentage of Sales by Ducting Type		
<u>Ducting Type</u>	<u>Northeastern</u>	<u>NY</u>
Ducted	95.2%	92.8%
Ductless	4.8%	7.2%
Est. Unit Sales	73,911	108,082

Air Conditioners - Percentage of Sales by Refrigerant Type		
<u>Refrigerant</u>	<u>Northeastern</u>	<u>NY</u>
R-22	14.8%	15.0%
R-410A	85.2%	85.0%
Est. Unit Sales	73,911	108,082

Air Conditioners - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.0%	0.0%
1.0	1.1%	1.6%
1.5	12.8%	13.2%
2.0	22.3%	23.4%
2.5	24.3%	21.8%
3.0	18.8%	20.5%
3.5	5.2%	6.9%
4.0	9.0%	7.4%
4.5	0.1%	0.1%
5.0	6.3%	5.1%
Est. Unit Sales	73,911	108,082

Air Conditioners, Ducted - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.0%	0.0%
1.0	0.0%	0.0%
1.5	12.4%	12.1%
2.0	22.0%	23.2%
2.5	25.2%	22.9%
3.0	18.9%	20.8%
3.5	5.5%	7.4%
4.0	9.4%	8.0%
4.5	0.1%	0.1%
5.0	6.6%	5.5%
Est. Unit Sales	70,337	100,288

Air Conditioners, Ductless - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.4%	0.4%
1.0	23.4%	22.3%
1.5	20.8%	27.2%
2.0	29.5%	25.7%
2.5	6.5%	7.3%
3.0	18.6%	16.3%
3.5	0.8%	0.8%
4.0	0.0%	0.0%
4.5	0.0%	0.0%
5.0	0.0%	0.0%
Est. Unit Sales	3,573	7,793

Air Conditioners - Capacity SEER Cross-Tabulation for Northeastern Region					
<u>Tonnage</u>	<u>13 SEER</u>	<u>14 SEER</u>	<u>15 SEER</u>	<u>16 SEER</u>	<u>17+ SEER</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.5%
1.0	0.3%	0.0%	0.0%	0.4%	21.0%
1.5	9.8%	37.9%	0.0%	14.2%	24.9%
2.0	21.2%	28.8%	0.0%	26.3%	24.4%
2.5	27.8%	14.1%	16.5%	17.6%	0.2%
3.0	18.8%	10.6%	77.4%	19.6%	18.0%
3.5	5.2%	3.4%	4.5%	7.9%	0.0%
4.0	9.7%	3.8%	1.5%	8.7%	6.9%
4.5	0.0%	0.2%	0.0%	0.4%	0.0%
5.0	7.1%	1.3%	0.0%	4.9%	4.0%
Est. Unit Sales	55,013	5,152	659	10,145	2,942

Air Conditioners - Capacity SEER Cross-Tabulation for NY					
<u>Tonnage</u>	<u>13 SEER</u>	<u>14 SEER</u>	<u>15 SEER</u>	<u>16 SEER</u>	<u>17+ SEER</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.7%
1.0	0.8%	0.0%	0.0%	0.2%	22.2%
1.5	12.1%	24.8%	21.9%	3.9%	37.7%
2.0	24.2%	14.8%	0.5%	19.5%	33.3%
2.5	23.8%	12.8%	22.8%	17.5%	0.4%
3.0	20.1%	21.0%	49.8%	27.3%	3.0%
3.5	6.4%	21.9%	3.2%	9.5%	0.0%
4.0	7.6%	3.8%	1.8%	10.7%	2.2%
4.5	0.0%	0.0%	0.0%	0.2%	0.0%
5.0	5.0%	0.9%	0.0%	11.2%	0.6%
Est. Unit Sales	88,434	3,900	1,890	9,189	4,668

Air Source Heat Pumps		
	Northeastern	NY
N-value	9,801	5,058

Air Source Heat Pumps - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	9.3%	16.7%
14.00 - 14.99	2.1%	2.8%
15.00 - 15.99	2.7%	5.0%
16.00 - 16.99	8.2%	15.0%
17.00 - 17.99	7.6%	7.5%
18.00 - 18.99	19.9%	24.1%
19.00 - 19.99	5.7%	5.3%
20.00 - 20.99	11.1%	4.6%
21.00 - 21.99	11.4%	3.5%
22.00 - 22.99	5.6%	4.7%
23.00 - 23.99	4.3%	4.0%
24.00 - 24.99	0.4%	0.1%
25.00 - 25.99	2.8%	2.0%
>= 26.00	8.8%	4.6%
Est. Unit Sales	25,701	37,071

Air Source Heat Pumps, Ducted - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	59.9%	70.7%
14.00 - 14.99	7.4%	5.3%
15.00 - 15.99	12.8%	13.8%
16.00 - 16.99	15.3%	6.7%
17.00 - 17.99	0.0%	0.8%
18.00 - 18.99	3.6%	0.8%
19.00 - 19.99	0.1%	0.5%
20.00 - 20.99	0.9%	1.3%
21.00 - 21.99	0.0%	0.0%
22.00 - 22.99	0.0%	0.1%
23.00 - 23.99	0.0%	0.0%
24.00 - 24.99	0.0%	0.0%
25.00 - 25.99	0.0%	0.0%
>= 26.00	0.0%	0.0%
Est. Unit Sales	3,923	8,780

Air Source Heat Pumps, Ductless - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	0.2%	0.0%
14.00 - 14.99	1.1%	2.0%
15.00 - 15.99	0.9%	2.2%
16.00 - 16.99	6.9%	17.6%
17.00 - 17.99	9.0%	9.6%
18.00 - 18.99	22.8%	31.4%
19.00 - 19.99	6.8%	6.8%
20.00 - 20.99	13.0%	5.7%
21.00 - 21.99	13.5%	4.5%
22.00 - 22.99	6.6%	6.1%
23.00 - 23.99	5.1%	5.2%
24.00 - 24.99	0.5%	0.1%
25.00 - 25.99	3.3%	2.6%
>= 26.00	10.4%	6.0%
Est. Unit Sales	21,778	28,291

Air Source Heat Pumps - Percentage of Sales by Ducting Type		
<u>Ducting Type</u>	<u>Northeastern</u>	<u>NY</u>
Ducted	15.3%	23.7%
Ductless	84.7%	76.3%
Est. Unit Sales	25,701	37,071

Air Source Heat Pumps, Ducted - Percentage of Sales by Refrigerant Type		
<u>Refrigerant</u>	<u>Northeastern</u>	<u>NY</u>
R-22	15.8%	9.3%
R-410A	84.2%	90.7%
Est. Unit Sales	25,701	37,071

Air Source Heat Pumps - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.2%	0.0%
1.0	32.9%	24.1%
1.5	23.6%	18.1%
2.0	18.9%	22.1%
2.5	7.7%	9.8%
3.0	11.9%	17.9%
3.5	1.7%	3.3%
4.0	2.1%	2.9%
4.5	0.1%	0.7%
5.0	0.9%	1.1%
Est. Unit Sales	25,701	37,071

Air Source Heat Pumps, Ducted - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.0%	0.0%
1.0	0.0%	0.0%
1.5	7.8%	4.8%
2.0	32.6%	23.5%
2.5	15.6%	19.8%
3.0	23.1%	26.0%
3.5	4.7%	9.4%
4.0	10.0%	8.9%
4.5	0.3%	2.9%
5.0	6.0%	4.6%
Est. Unit Sales	3,923	8,780

Air Source Heat Pumps, Ductless - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.2%	0.0%
1.0	38.9%	31.6%
1.5	26.5%	22.3%
2.0	16.4%	21.7%
2.5	6.2%	6.7%
3.0	9.9%	15.3%
3.5	1.2%	1.4%
4.0	0.6%	1.1%
4.5	0.0%	0.0%
5.0	0.0%	0.0%
Est. Unit Sales	21,778	28,291

Air Source Heat Pumps, Ducted - Percentage of Sales by HSPF		
<u>HSPF</u>	<u>Northeastern</u>	<u>NY</u>
7.70-8.19	60.8%	68.6%
8.20-8.49	26.1%	12.7%
8.50-8.99	3.4%	2.0%
9.00-9.49	9.6%	10.0%
9.50-9.99	0.2%	2.3%
10.00-10.49	0.0%	0.2%
10.50-10.99	0.0%	0.0%
11.00+	0.0%	4.3%
Est. Unit Sales	3,923	8,780

Air Source Heat Pumps, Ductless - Percentage of Sales by HSPF		
<u>HSPF</u>	<u>Northeastern</u>	<u>NY</u>
7.70-8.19	0.4%	0.2%
8.20-8.49	2.1%	1.3%
8.50-8.99	6.8%	5.6%
9.00-9.49	15.8%	29.4%
9.50-9.99	8.5%	18.4%
10.00-10.49	29.3%	21.3%
10.50-10.99	8.0%	5.6%
11.00+	29.0%	18.1%
Est. Unit Sales	21,778	28,291

Air Source Heat Pumps, Ducted - Percentage of Sales by Nominal EER		
<u>EER</u>	<u>Northeastern</u>	<u>NY</u>
< 10.00	4.7%	7.9%
10.00 - 10.99	0.2%	0.7%
11.00 - 11.99	64.2%	71.5%
12.00 - 12.99	20.1%	17.5%
13.00 - 13.99	10.6%	1.3%
14.00 - 14.99	0.0%	0.8%
15.00 - 15.99	0.0%	0.0%
16.00 - 16.99	0.0%	0.4%
17.00 - 17.99	0.1%	0.0%
18.00 - 18.99	0.0%	0.0%
19.00 - 19.99	0.0%	0.0%
20.00+	0.0%	0.0%
Est. Unit Sales	3,923	8,780

Air Source Heat Pumps, Ductless - Percentage of Sales by Nominal EER		
<u>EER</u>	<u>Northeastern</u>	<u>NY</u>
< 10.00	19.4%	22.2%
10.00 - 10.99	3.7%	7.7%
11.00 - 11.99	0.9%	4.1%
12.00 - 12.99	48.4%	44.5%
13.00 - 13.99	10.9%	12.6%
14.00 - 14.99	10.8%	5.0%
15.00 - 15.99	3.2%	1.7%
16.00 - 16.99	2.8%	2.2%
17.00 - 17.99	0.0%	0.0%
18.00 - 18.99	0.0%	0.0%
19.00 - 19.99	0.0%	0.0%
20.00+	0.0%	0.0%
Est. Unit Sales	21,778	28,291

Air Source Heat Pumps - Capacity SEER Cross-Tabulation for Northeastern Region					
<u>Tonnage</u>	<u>13 SEER</u>	<u>14 SEER</u>	<u>15 SEER</u>	<u>16 SEER</u>	<u>17+ SEER</u>
0.5	0.2%	0.0%	2.6%	0.0%	0.1%
1.0	0.1%	0.0%	3.0%	9.8%	41.2%
1.5	10.8%	2.0%	12.4%	6.5%	27.9%
2.0	28.2%	19.3%	27.3%	19.1%	17.5%
2.5	17.6%	22.8%	19.5%	4.4%	6.0%
3.0	19.8%	44.1%	15.0%	55.1%	5.5%
3.5	5.5%	4.5%	5.6%	1.4%	1.1%
4.0	9.9%	6.9%	13.1%	2.5%	0.6%
4.5	0.1%	0.5%	0.0%	0.4%	0.0%
5.0	7.7%	0.0%	1.5%	0.9%	0.1%
Est. Unit Sales	2,382	530	700	2,099	19,990

Air Source Heat Pumps - Capacity SEER Cross-Tabulation for NY					
<u>Tonnage</u>	<u>13 SEER</u>	<u>14 SEER</u>	<u>15 SEER</u>	<u>16 SEER</u>	<u>17+ SEER</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.0%
1.0	0.0%	0.7%	1.2%	34.7%	31.1%
1.5	6.5%	0.0%	3.6%	1.1%	27.7%
2.0	18.9%	7.7%	31.5%	8.5%	26.3%
2.5	22.6%	15.4%	19.9%	1.1%	7.4%
3.0	24.0%	71.3%	13.1%	53.9%	5.1%
3.5	10.6%	3.5%	16.7%	0.0%	0.9%
4.0	9.3%	0.7%	9.2%	0.5%	1.3%
4.5	3.1%	0.0%	3.2%	0.0%	0.0%
5.0	5.1%	0.7%	1.6%	0.3%	0.2%
Est. Unit Sales	6,208	1,048	1,840	5,577	22,398

Air Source Heat Pumps - Capacity HSPF Cross-Tabulation for Northeastern Region						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	0.5%	0.0%	0.0%	0.0%	0.0%	0.3%
1.0	0.3%	1.9%	13.7%	8.6%	1.4%	54.6%
1.5	9.9%	4.1%	66.6%	15.3%	4.1%	28.1%
2.0	36.5%	22.4%	10.8%	16.9%	65.0%	11.0%
2.5	20.8%	20.8%	0.9%	5.1%	12.4%	5.4%
3.0	16.8%	39.7%	2.7%	52.7%	1.0%	0.5%
3.5	9.6%	2.2%	0.0%	0.0%	12.1%	0.0%
4.0	1.3%	8.5%	5.3%	0.8%	3.9%	0.0%
4.5	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
5.0	4.3%	0.3%	0.0%	0.6%	0.0%	0.0%
Est. Unit Sales	2,470	1,469	1,622	3,821	1,868	14,450

Air Source Heat Pumps - Capacity HSPF Cross-Tabulation for NY						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.0	0.0%	1.9%	7.9%	22.9%	5.3%	50.5%
1.5	5.5%	3.7%	55.5%	22.2%	3.1%	25.6%
2.0	36.9%	12.1%	15.4%	5.4%	63.8%	15.9%
2.5	16.8%	21.5%	2.2%	0.0%	18.1%	6.3%
3.0	22.7%	45.8%	7.9%	49.0%	1.4%	0.6%
3.5	5.2%	6.5%	4.8%	0.0%	3.8%	0.7%
4.0	6.5%	6.5%	4.4%	0.3%	4.7%	0.1%
4.5	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	6.1%	1.9%	1.8%	0.2%	0.0%	0.3%
Est. Unit Sales	6,063	1,486	1,777	9,185	5,402	13,157

Air Source Heat Pumps, Ducted - Capacity HSPF Cross-Tabulation for Northeastern Region						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.5	8.2%	0.0%	0.0%	0.0%	0.0%	0.0%
2.0	38.2%	41.5%	47.4%	1.9%	0.0%	0.0%
2.5	22.7%	5.4%	0.0%	0.0%	0.0%	0.0%
3.0	18.4%	29.3%	5.3%	63.0%	0.0%	0.0%
3.5	6.4%	4.8%	0.0%	0.0%	0.0%	0.0%
4.0	1.5%	18.4%	47.4%	20.4%	100.0%	0.0%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	4.7%	0.7%	0.0%	14.8%	0.0%	0.0%
Est. Unit Sales	2,386	1,022	132	376	7	0

Air Source Heat Pumps, Ducted - Capacity HSPF Cross-Tabulation for NY						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.5	5.6%	5.4%	0.0%	0.0%	0.0%	0.0%
2.0	36.3%	23.2%	11.1%	0.0%	0.0%	20.0%
2.5	17.2%	17.9%	0.0%	0.0%	0.0%	0.0%
3.0	23.1%	25.0%	11.1%	86.4%	100.0%	45.0%
3.5	4.6%	12.5%	0.0%	0.0%	0.0%	0.0%
4.0	6.6%	12.5%	33.3%	9.1%	0.0%	10.0%
4.5	0.3%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	6.3%	3.6%	44.4%	4.5%	0.0%	25.0%
Est. Unit Sales	6,019	1,112	179	874	199	397

Air Source Heat Pumps, Ductless - Capacity HSPF Cross-Tabulation for Northeastern Region						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	6.3%	0.0%	0.0%	0.0%	0.0%	0.3%
1.0	3.1%	3.5%	14.1%	8.9%	1.4%	54.6%
1.5	28.1%	7.6%	68.8%	15.9%	4.1%	28.1%
2.0	18.8%	5.9%	9.5%	17.5%	65.1%	11.0%
2.5	0.0%	34.1%	0.9%	5.3%	12.4%	5.4%
3.0	0.0%	48.8%	2.6%	52.3%	1.0%	0.5%
3.5	43.8%	0.0%	0.0%	0.0%	12.1%	0.0%
4.0	0.0%	0.0%	3.9%	0.0%	3.8%	0.0%
4.5	0.0%	0.0%	0.2%	0.0%	0.0%	0.0%
5.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Est. Unit Sales	84	447	1,490	3,446	1,861	14,450

Air Source Heat Pumps, Ductless - Capacity HSPF Cross-Tabulation for NY						
<u>Tonnage</u>	<u>7.70-8.19</u>	<u>8.20-8.49</u>	<u>8.50-8.99</u>	<u>9.00-9.49</u>	<u>9.50-9.99</u>	<u>10.00+</u>
0.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
1.0	0.0%	3.9%	8.3%	23.8%	5.4%	51.1%
1.5	0.0%	2.0%	57.8%	23.0%	3.1%	25.8%
2.0	66.7%	0.0%	15.6%	5.6%	64.6%	15.9%
2.5	0.0%	25.5%	2.3%	0.0%	18.3%	6.4%
3.0	0.0%	68.6%	7.8%	47.5%	0.0%	0.1%
3.5	33.3%	0.0%	5.0%	0.0%	3.8%	0.7%
4.0	0.0%	0.0%	3.2%	0.0%	4.8%	0.0%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Est. Unit Sales	44	374	1,598	8,311	5,204	12,760

Ground Source Heat Pumps - Percentage of Sales by Nominal EER			
<u>EER</u>	<u>N-value</u>	<u>Northeastern</u>	<u>NY</u>
10.00 - 10.99	NY	1	0.0%
11.00 - 11.99	Northeastern	1	0.0%
12.00 - 12.99			0.0%
13.00 - 13.99			100.0%
14.00 - 14.99			0.0%
15.00 - 15.99			0.0%
16.00 - 16.99			0.0%
17.00 - 17.99			0.0%
18.00 - 18.99			0.0%
19.00 - 19.99			0.0%
20.00+			0.0%
Est. Unit Sales			Q

Furnaces		
	Northeastern	NY
N-value	11,780	12,467

Furnaces - Percentage of Sales by Nominal AFUE		
AFUE	Northeastern	NY
80.00 - 80.99	23.1%	34.7%
81.00 - 81.99	0.2%	0.0%
82.00 - 82.99	1.2%	0.7%
83.00 - 83.99	3.3%	2.4%
84.00 - 84.99	0.3%	0.4%
85.00 - 85.99	4.9%	3.3%
86.00 - 86.99	1.1%	0.5%
87.00 - 87.99	0.1%	0.0%
88.00 - 88.99	0.1%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.3%	0.1%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	18.3%	11.6%
93.00 - 93.99	0.2%	0.2%
94.00 - 94.99	0.0%	0.2%
95.00 - 95.99	28.4%	28.3%
96.00 - 96.99	14.7%	15.5%
97.00 - 97.99	3.5%	1.8%
98.00 - 98.99	0.1%	0.2%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	73,791	147,588

Furnaces, Natural Gas - Percentage of Sales by Nominal AFUE		
AFUE	Northeastern	NY
80.00 - 80.99	25.9%	36.7%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.0%	0.0%
83.00 - 83.99	0.6%	0.1%
84.00 - 84.99	0.1%	0.0%
85.00 - 85.99	0.0%	0.0%
86.00 - 86.99	0.0%	0.0%
87.00 - 87.99	0.0%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.0%	0.0%
91.00 - 91.99	0.1%	0.0%
92.00 - 92.99	20.6%	12.7%
93.00 - 93.99	0.3%	0.2%
94.00 - 94.99	0.1%	0.3%
95.00 - 95.99	32.0%	30.9%
96.00 - 96.99	16.6%	17.0%
97.00 - 97.99	3.8%	2.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	61,625	134,565

Furnaces, Fuel Oil - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	1.2%	14.6%
81.00 - 81.99	1.9%	0.2%
82.00 - 82.99	10.8%	7.9%
83.00 - 83.99	25.1%	25.7%
84.00 - 84.99	1.7%	4.5%
85.00 - 85.99	43.6%	37.7%
86.00 - 86.99	10.1%	6.3%
87.00 - 87.99	0.7%	0.2%
88.00 - 88.99	1.0%	0.0%
89.00 - 89.99	0.2%	0.0%
90.00 - 90.99	2.3%	1.3%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	0.0%	0.0%
93.00 - 93.99	0.0%	0.0%
94.00 - 94.99	0.0%	0.0%
95.00 - 95.99	0.0%	0.0%
96.00 - 96.99	0.0%	0.0%
97.00 - 97.99	0.0%	0.0%
98.00 - 98.99	1.2%	1.8%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	12,077	12,660

Furnaces - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.6%	0.7%
40,000 - 59,999	16.3%	13.1%
60,000 - 79,999	32.3%	34.3%
80,000 - 99,999	26.7%	31.9%
100,000 - 119,999	17.6%	14.2%
120,000 - 139,999	3.9%	3.7%
>= 140,000	2.5%	2.0%
Est. Unit Sales	73,791	147,588

Furnaces, Natural Gas - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.6%	0.8%
40,000 - 59,999	19.0%	14.3%
60,000 - 79,999	34.1%	37.0%
80,000 - 99,999	27.6%	31.4%
100,000 - 119,999	13.7%	11.6%
120,000 - 139,999	4.5%	4.0%
>= 140,000	0.5%	0.9%
Est. Unit Sales	61,625	134,565

Furnaces, Fuel Oil - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.0%	0.0%
40,000 - 59,999	0.0%	0.0%
60,000 - 79,999	21.2%	4.6%
80,000 - 99,999	21.1%	37.7%
100,000 - 119,999	42.3%	43.0%
120,000 - 139,999	0.4%	0.2%
>= 140,000	15.0%	14.5%
Est. Unit Sales	12,077	12,660

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	22.5%	28.0%
PSC	77.5%	72.0%
Est. Unit Sales	73,791	147,588

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	23.1%	29.0%
PSC	76.9%	71.0%
Est. Unit Sales	61,625	134,565

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	18.8%	17.0%
PSC	81.2%	83.0%
Est. Unit Sales	12,077	12,660

Furnaces - Percentage of Sales by Nominal AFUE and Motor Type in Northeastern Region		
<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	7.9%	27.9%
81.00 - 81.99	0.0%	0.2%
82.00 - 82.99	0.6%	1.4%
83.00 - 83.99	4.6%	2.8%
84.00 - 84.99	0.0%	0.2%
85.00 - 85.99	2.5%	5.4%
86.00 - 86.99	3.6%	0.1%
87.00 - 87.99	0.0%	0.1%
88.00 - 88.99	0.0%	0.2%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.0%	0.4%
91.00 - 91.99	0.0%	0.1%
92.00 - 92.99	0.0%	24.2%
93.00 - 93.99	0.2%	0.3%
94.00 - 94.99	0.2%	0.0%
95.00 - 95.99	30.8%	28.0%
96.00 - 96.99	34.7%	8.8%
97.00 - 97.99	14.9%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	16,639	57,151

Furnaces, Natural Gas - Percentage of Sales by Nominal AFUE and Motor Type in Northeastern Region

<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	8.9%	30.9%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.0%	0.0%
83.00 - 83.99	0.0%	0.7%
84.00 - 84.99	0.0%	0.0%
85.00 - 85.99	0.0%	0.0%
86.00 - 86.99	0.0%	0.0%
87.00 - 87.99	0.0%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.0%	0.0%
91.00 - 91.99	0.0%	0.1%
92.00 - 92.99	0.0%	27.0%
93.00 - 93.99	0.3%	0.3%
94.00 - 94.99	0.2%	0.0%
95.00 - 95.99	34.8%	31.3%
96.00 - 96.99	39.3%	9.8%
97.00 - 97.99	16.5%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	14,214	47,411

Furnaces, Fuel Oil - Percentage of Sales by Nominal AFUE and Motor Type in Northeastern Region

<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	0.0%	1.7%
81.00 - 81.99	0.0%	2.4%
82.00 - 82.99	5.1%	13.8%
83.00 - 83.99	40.7%	20.8%
84.00 - 84.99	0.0%	1.9%
85.00 - 85.99	22.4%	52.1%
86.00 - 86.99	31.9%	1.0%
87.00 - 87.99	0.0%	1.0%
88.00 - 88.99	0.0%	1.5%
89.00 - 89.99	0.0%	0.3%
90.00 - 90.99	0.0%	3.3%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	0.0%	0.0%
93.00 - 93.99	0.0%	0.0%
94.00 - 94.99	0.0%	0.0%
95.00 - 95.99	0.0%	0.0%
96.00 - 96.99	0.0%	0.0%
97.00 - 97.99	0.0%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	2,268	9,809

Furnaces - Percentage of Sales by Nominal AFUE and Motor Type in NY		
<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	7.6%	45.4%
81.00 - 81.99	0.1%	0.0%
82.00 - 82.99	0.0%	1.0%
83.00 - 83.99	3.5%	1.9%
84.00 - 84.99	0.0%	0.4%
85.00 - 85.99	0.9%	3.8%
86.00 - 86.99	0.4%	0.6%
87.00 - 87.99	0.1%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.1%	0.2%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	2.4%	15.4%
93.00 - 93.99	0.0%	0.2%
94.00 - 94.99	0.8%	0.0%
95.00 - 95.99	43.7%	22.7%
96.00 - 96.99	33.9%	8.4%
97.00 - 97.99	6.6%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	41,264	106,324

Furnaces, Natural Gas - Percentage of Sales by Nominal AFUE and Motor Type in NY		
<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	7.9%	48.2%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.0%	0.0%
83.00 - 83.99	0.0%	0.2%
84.00 - 84.99	0.0%	0.0%
85.00 - 85.99	0.0%	0.0%
86.00 - 86.99	0.0%	0.0%
87.00 - 87.99	0.0%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.1%	0.0%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	2.5%	17.0%
93.00 - 93.99	0.0%	0.3%
94.00 - 94.99	0.9%	0.0%
95.00 - 95.99	46.0%	25.0%
96.00 - 96.99	35.7%	9.3%
97.00 - 97.99	7.0%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	39,034	95,531

Furnaces, Fuel Oil - Percentage of Sales by Nominal AFUE and Motor Type in NY		
<u>AFUE</u>	<u>ECM</u>	<u>PSC</u>
80.00 - 80.99	0.0%	18.9%
81.00 - 81.99	1.2%	0.0%
82.00 - 82.99	0.0%	10.2%
83.00 - 83.99	70.4%	17.8%
84.00 - 84.99	0.0%	4.7%
85.00 - 85.99	18.3%	40.4%
86.00 - 86.99	8.9%	6.3%
87.00 - 87.99	1.2%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.0%	1.7%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	0.0%	0.0%
93.00 - 93.99	0.0%	0.0%
94.00 - 94.99	0.0%	0.0%
95.00 - 95.99	0.0%	0.0%
96.00 - 96.99	0.0%	0.0%
97.00 - 97.99	0.0%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	2,150	10,510

Boilers		
	<u>Northeastern</u>	<u>NY</u>
N-value	5,903	3,759

Boilers - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	0.6%	4.0%
81.00 - 81.99	0.3%	1.0%
82.00 - 82.99	11.4%	23.0%
83.00 - 83.99	6.1%	8.4%
84.00 - 84.99	6.9%	10.6%
85.00 - 85.99	36.7%	29.4%
86.00 - 86.99	8.3%	2.8%
87.00 - 87.99	3.2%	1.9%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.6%	2.1%
91.00 - 91.99	9.7%	1.5%
92.00 - 92.99	0.3%	1.3%
93.00 - 93.99	2.0%	0.9%
94.00 - 94.99	2.6%	1.8%
95.00 - 95.99	8.6%	6.2%
96.00 - 96.99	2.7%	5.0%
97.00 - 97.99	0.1%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	87,150	108,240

Boilers, Natural Gas - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	1.2%	6.2%
81.00 - 81.99	0.2%	1.5%
82.00 - 82.99	23.3%	31.3%
83.00 - 83.99	11.2%	12.4%
84.00 - 84.99	5.9%	10.3%
85.00 - 85.99	3.6%	11.9%
86.00 - 86.99	0.0%	0.0%
87.00 - 87.99	0.0%	0.0%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	1.2%	3.2%
91.00 - 91.99	20.1%	2.3%
92.00 - 92.99	0.6%	1.4%
93.00 - 93.99	4.3%	1.4%
94.00 - 94.99	5.5%	2.3%
95.00 - 95.99	17.5%	9.4%
96.00 - 96.99	5.1%	6.3%
97.00 - 97.99	0.2%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	44,065	66,420

Boilers, Fuel Oil - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	0.0%	0.0%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.9%	4.1%
83.00 - 83.99	1.1%	0.8%
84.00 - 84.99	7.8%	12.0%
85.00 - 85.99	67.3%	68.3%
86.00 - 86.99	16.4%	8.9%
87.00 - 87.99	6.4%	5.9%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.0%	0.0%
91.00 - 91.99	0.1%	0.0%
92.00 - 92.99	0.0%	0.0%
93.00 - 93.99	0.0%	0.0%
94.00 - 94.99	0.0%	0.0%
95.00 - 95.99	0.0%	0.0%
96.00 - 96.99	0.0%	0.0%
97.00 - 97.99	0.0%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	43,085	41,820

Boilers - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.2%	0.6%
40,000 - 59,999	1.0%	0.4%
60,000 - 79,999	6.2%	9.7%
80,000 - 99,999	24.6%	23.0%
100,000 - 119,999	35.3%	19.1%
120,000 - 139,999	7.0%	17.3%
>= 140,000	25.7%	29.7%
Est. Unit Sales	87,150	108,240

Boilers, Natural Gas - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.4%	1.0%
40,000 - 59,999	2.1%	0.6%
60,000 - 79,999	12.6%	14.3%
80,000 - 99,999	8.6%	18.6%
100,000 - 119,999	37.0%	19.1%
120,000 - 139,999	8.6%	12.3%
>= 140,000	30.6%	34.1%
Est. Unit Sales	44,065	66,420

Boilers, Natural Gas - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.0%	0.0%
40,000 - 59,999	0.0%	0.0%
60,000 - 79,999	0.2%	0.8%
80,000 - 99,999	40.0%	34.3%
100,000 - 119,999	34.3%	17.2%
120,000 - 139,999	5.5%	25.9%
>= 140,000	20.1%	21.8%
Est. Unit Sales	43,085	41,820