

2013 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, 2013 - December 31, 2013

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, 2013 - December 31, 2013

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	12,211	13,215

Air Conditioners - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	78.4%	79.1%
14.00 - 14.99	5.0%	4.8%
15.00 - 15.99	6.0%	2.2%
16.00 - 16.99	6.6%	8.7%
17.00 - 17.99	1.0%	1.2%
18.00 - 18.99	0.6%	0.3%
19.00 - 19.99	1.3%	2.1%
20.00 - 20.99	0.1%	0.7%
21.00 - 21.99	1.1%	1.0%
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	80,591	117,541

Air Conditioners, Ducted - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	83.1%	86.1%
14.00 - 14.99	5.2%	4.4%
15.00 - 15.99	5.1%	0.3%
16.00 - 16.99	6.2%	9.0%
17.00 - 17.99	0.2%	0.2%
18.00 - 18.99	0.3%	0.0%
19.00 - 19.99	0.0%	0.0%
20.00 - 20.99	0.0%	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	75,575	106,503

Air Conditioners, Ductless - Percentage of Sales by Nominal SEER		
<u>SEER</u>	<u>Northeastern</u>	<u>NY</u>
13.00 - 13.99	8.2%	12.2%
14.00 - 14.99	1.8%	8.3%
15.00 - 15.99	19.2%	19.9%
16.00 - 16.99	13.2%	5.4%
17.00 - 17.99	13.0%	11.2%
18.00 - 18.99	5.5%	2.7%
19.00 - 19.99	20.9%	22.0%
20.00 - 20.99	0.9%	7.7%
21.00 - 21.99	17.2%	10.6%
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	5,016	11,038

Air Conditioners - Percentage of Sales by Ducting Type		
<u>Ducting Type</u>	<u>Northeastern</u>	<u>NY</u>
Ducted	93.8%	90.6%
Ductless	6.2%	9.4%
Est. Unit Sales	80,591	117,541

Air Conditioners - Percentage of Sales by Refrigerant Type		
<u>Refrigerant</u>	<u>Northeastern</u>	<u>NY</u>
R-22	21.7%	16.6%
R-410A	78.3%	83.4%
Est. Unit Sales	80,591	117,541

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%	2.1%
1.5	7.1%	11.7%
2.0	21.8%	25.2%
2.5	26.2%	20.2%
3.0	19.8%	22.8%
3.5	6.3%	6.1%
4.0	10.3%	7.0%
4.5	0.0%	0.0%
5.0	7.4%	4.8%
Est. Unit Sales	80,591	117,541

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	6.0%	10.2%
2.0	21.0%	25.2%
2.5	27.6%	21.7%
3.0	19.9%	23.3%
3.5	6.6%	6.5%
4.0	11.0%	7.8%
4.5	0.0%	0.1%
5.0	7.9%	5.3%
Est. Unit Sales	75,575	106,503

Air Conditioners, Ductless - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.5%	0.4%
1.0	18.4%	22.6%
1.5	22.9%	25.5%
2.0	34.3%	25.2%
2.5	5.7%	6.1%
3.0	17.8%	18.0%
3.5	0.4%	2.1%
4.0	0.0%	0.0%
4.5	0.0%	0.0%
5.0	0.0%	0.0%
Est. Unit Sales	5,016	11,038

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%	0.8%
1.0	0.3%	0.0%	0.0%	0.0%	22.0%
1.5	6.7%	5.8%	0.5%	2.0%	34.3%
2.0	21.1%	21.1%	15.4%	28.9%	33.5%
2.5	29.5%	20.1%	21.3%	11.2%	0.8%
3.0	18.3%	24.7%	37.8%	26.3%	4.3%
3.5	6.0%	12.4%	9.8%	5.2%	0.0%
4.0	10.1%	10.2%	10.6%	17.1%	3.1%
4.5	0.0%	0.0%	0.0%	0.1%	0.0%
5.0	7.8%	5.8%	4.5%	9.3%	1.2%
Est. Unit Sales	63,193	4,009	4,842	5,330	3,217

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	0.9%	0.0%	0.0%	0.1%	26.0%
1.5	8.3%	56.0%	11.9%	1.9%	37.9%
2.0	27.0%	15.4%	0.0%	16.7%	32.4%
2.5	22.9%	6.8%	18.2%	16.2%	0.3%
3.0	23.3%	14.9%	59.1%	27.1%	1.7%
3.5	5.7%	4.0%	9.1%	13.8%	0.0%
4.0	7.0%	2.4%	1.7%	15.1%	0.9%
4.5	0.0%	0.0%	0.0%	0.1%	0.0%
5.0	4.7%	0.5%	0.0%	9.0%	0.1%
Est. Unit Sales	92,992	5,609	2,550	10,175	6,215

Air Source Heat Pumps		
	Northeastern	NY
N-value	6,033	4,323

Air Source Heat Pumps - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	10.8%	11.2%
14.00 - 14.99	2.7%	2.2%
15.00 - 15.99	4.0%	6.8%
16.00 - 16.99	11.4%	15.9%
17.00 - 17.99	7.9%	8.4%
18.00 - 18.99	20.1%	26.9%
19.00 - 19.99	6.6%	7.2%
20.00 - 20.99	7.5%	3.6%
21.00 - 21.99	10.9%	3.6%
22.00 - 22.99	2.1%	3.0%
23.00 - 23.99	5.6%	5.6%
24.00 - 24.99	0.7%	0.1%
25.00 - 25.99	2.8%	2.5%
>= 26.00	7.0%	3.0%
Est. Unit Sales	19,513	28,225

Air Source Heat Pumps, Ducted - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	59.5%	70.6%
14.00 - 14.99	10.3%	4.2%
15.00 - 15.99	16.3%	20.0%
16.00 - 16.99	10.6%	1.4%
17.00 - 17.99	0.1%	0.3%
18.00 - 18.99	2.6%	1.7%
19.00 - 19.99	0.3%	0.8%
20.00 - 20.99	0.2%	0.9%
21.00 - 21.99	0.0%	0.0%
22.00 - 22.99	0.1%	0.2%
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	3,367	4,348

Air Source Heat Pumps, Ductless - Percentage of Sales by Nominal SEER		
SEER	Northeastern	NY
13.00 - 13.99	0.7%	0.4%
14.00 - 14.99	1.1%	1.8%
15.00 - 15.99	1.4%	4.3%
16.00 - 16.99	11.6%	18.6%
17.00 - 17.99	9.5%	9.8%
18.00 - 18.99	23.7%	31.5%
19.00 - 19.99	7.9%	8.4%
20.00 - 20.99	9.0%	4.1%
21.00 - 21.99	13.2%	4.2%
22.00 - 22.99	2.5%	3.5%
23.00 - 23.99	6.7%	6.7%
24.00 - 24.99	0.9%	0.2%
25.00 - 25.99	3.4%	3.0%
>= 26.00	8.5%	3.5%
Est. Unit Sales	16,146	23,877

Air Source Heat Pumps - Percentage of Sales by Ducting Type		
<u>Ducting Type</u>	<u>Northeastern</u>	<u>NY</u>
Ducted	17.3%	15.4%
Ductless	82.7%	84.6%
Est. Unit Sales	19,513	28,225

Air Source Heat Pumps, Ducted - Percentage of Sales by Refrigerant Type		
<u>Refrigerant</u>	<u>Northeastern</u>	<u>NY</u>
R-22	21.6%	9.8%
R-410A	78.4%	90.2%
Est. Unit Sales	19,513	28,225

Air Source Heat Pumps - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.5%	0.0%
1.0	32.5%	24.6%
1.5	21.3%	18.0%
2.0	20.3%	24.4%
2.5	8.6%	9.9%
3.0	12.0%	17.4%
3.5	1.2%	2.3%
4.0	2.4%	2.5%
4.5	0.2%	0.3%
5.0	0.9%	0.6%
Est. Unit Sales	19,513	28,225

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	9.4%	6.5%
2.0	30.6%	20.7%
2.5	20.1%	23.9%
3.0	19.7%	25.2%
3.5	4.5%	9.3%
4.0	9.5%	8.7%
4.5	1.0%	2.0%
5.0	5.2%	3.8%
Est. Unit Sales	3,367	4,348

Air Source Heat Pumps, Ductless - Percentage of Sales by Capacity		
<u>Tonnage</u>	<u>Northeastern</u>	<u>NY</u>
0.5	0.6%	0.0%
1.0	39.3%	29.1%
1.5	23.8%	20.1%
2.0	18.1%	25.0%
2.5	6.3%	7.3%
3.0	10.4%	16.0%
3.5	0.5%	1.0%
4.0	1.0%	1.4%
4.5	0.0%	0.0%
5.0	0.0%	0.0%
Est. Unit Sales	16,146	23,877

Air Source Heat Pumps, Ducted - Percentage of Sales by HSPF		
<u>HSPF</u>	<u>Northeastern</u>	<u>NY</u>
7.70-8.19	63.8%	66.5%
8.20-8.49	16.9%	5.3%
8.50-8.99	5.1%	2.4%
9.00-9.49	13.5%	14.1%
9.50-9.99	0.8%	1.2%
10.00-10.49	0.0%	0.6%
10.50-10.99	0.0%	0.0%
11.00+	0.0%	10.0%
Est. Unit Sales	3,367	4,348

Air Source Heat Pumps, Ductless - Percentage of Sales by HSPF		
<u>HSPF</u>	<u>Northeastern</u>	<u>NY</u>
7.70-8.19	1.3%	0.9%
8.20-8.49	2.5%	1.2%
8.50-8.99	10.9%	8.1%
9.00-9.49	18.6%	29.5%
9.50-9.99	8.0%	17.9%
10.00-10.49	27.5%	23.4%
10.50-10.99	9.0%	7.4%
11.00+	22.2%	11.6%
Est. Unit Sales	16,146	23,877

Air Source Heat Pumps, Ducted - Percentage of Sales by Nominal EER		
<u>EER</u>	<u>Northeastern</u>	<u>NY</u>
< 10.00	1.6%	3.6%
10.00 - 10.99	0.0%	0.8%
11.00 - 11.99	69.0%	68.1%
12.00 - 12.99	13.7%	24.7%
13.00 - 13.99	13.4%	1.7%
14.00 - 14.99	2.1%	1.0%
15.00 - 15.99	0.0%	0.0%
16.00 - 16.99	0.0%	0.0%
17.00 - 17.99	0.2%	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	3,367	4,348

Air Source Heat Pumps, Ductless - Percentage of Sales by Nominal EER		
<u>EER</u>	<u>Northeastern</u>	<u>NY</u>
< 10.00	18.1%	23.6%
10.00 - 10.99	7.0%	8.4%
11.00 - 11.99	1.9%	4.2%
12.00 - 12.99	46.8%	44.6%
13.00 - 13.99	11.0%	12.1%
14.00 - 14.99	5.6%	3.5%
15.00 - 15.99	4.0%	2.0%
16.00 - 16.99	5.5%	1.5%
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	16,146	23,877

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	1.8%	0.0%	0.8%	0.1%	0.3%
1.0	0.8%	3.1%	1.3%	13.1%	43.3%
1.5	14.7%	2.5%	4.6%	21.1%	24.0%
2.0	31.0%	22.8%	20.9%	16.7%	19.1%
2.5	20.7%	20.4%	25.5%	2.2%	6.4%
3.0	13.7%	35.2%	17.2%	40.3%	6.1%
3.5	4.1%	4.3%	10.0%	2.2%	0.0%
4.0	7.7%	7.4%	17.2%	2.6%	0.6%
4.5	0.2%	2.5%	0.8%	0.4%	0.0%
5.0	5.4%	1.9%	1.7%	1.2%	0.1%
Est. Unit Sales	2,109	524	773	2,222	13,884

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	2.5%	9.7%	1.0%	30.2%	30.1%
1.5	8.5%	0.0%	4.1%	1.5%	25.8%
2.0	19.9%	9.7%	30.5%	5.1%	29.8%
2.5	23.9%	8.6%	28.8%	1.7%	7.4%
3.0	21.2%	71.0%	9.9%	61.0%	4.9%
3.5	9.5%	0.0%	17.8%	0.0%	0.1%
4.0	8.3%	1.1%	6.8%	0.3%	1.7%
4.5	2.3%	0.0%	0.7%	0.0%	0.0%
5.0	3.9%	0.0%	0.3%	0.1%	0.1%
Est. Unit Sales	3,148	607	1,907	4,494	18,068

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	4.1%	0.0%	0.2%	0.0%	0.0%	0.5%
1.0	0.3%	5.9%	11.9%	11.9%	2.2%	60.0%
1.5	20.1%	4.9%	69.6%	14.5%	2.2%	21.2%
2.0	35.8%	15.7%	9.3%	17.1%	70.0%	13.0%
2.5	19.8%	17.8%	1.1%	5.9%	19.6%	5.0%
3.0	7.8%	43.2%	0.7%	48.6%	0.0%	0.2%
3.5	7.8%	1.1%	1.4%	0.0%	0.2%	0.0%
4.0	1.0%	11.4%	5.9%	1.2%	5.7%	0.0%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	3.1%	0.0%	0.0%	0.7%	0.0%	0.0%
Est. Unit Sales	2,360	972	1,930	3,456	1,322	9,472

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	0.7%	37.7%	6.6%	20.2%	4.3%	49.4%
1.5	13.6%	0.0%	44.9%	19.7%	3.3%	23.0%
2.0	37.4%	5.7%	18.9%	8.2%	67.3%	18.8%
2.5	20.4%	17.0%	5.6%	0.6%	19.0%	7.2%
3.0	15.6%	37.7%	9.0%	51.3%	0.3%	0.4%
3.5	2.0%	0.0%	9.3%	0.0%	0.3%	0.5%
4.0	3.4%	1.9%	5.0%	0.1%	5.5%	0.4%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	6.8%	0.0%	0.7%	0.0%	0.0%	0.3%
Est. Unit Sales	3,112	517	2,041	7,665	4,328	10,561

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	18.1%	0.0%	0.0%	0.0%	0.0%	0.0%
2.0	38.3%	20.0%	72.2%	0.0%	0.0%	0.0%
2.5	25.6%	18.3%	0.0%	0.0%	0.0%	0.0%
3.0	10.1%	23.3%	0.0%	60.4%	0.0%	0.0%
3.5	2.6%	3.3%	0.0%	0.0%	0.0%	0.0%
4.0	1.3%	35.0%	27.8%	25.0%	100.0%	0.0%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	4.0%	0.0%	0.0%	14.6%	0.0%	0.0%
Est. Unit Sales	2,147	567	170	454	28	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	17.7%	0.0%	0.0%	0.0%	0.0%	0.0%
2.0	19.5%	33.3%	0.0%	0.0%	0.0%	0.0%
2.5	26.5%	22.2%	0.0%	0.0%	0.0%	0.0%
3.0	20.4%	33.3%	50.0%	95.8%	100.0%	38.9%
3.5	2.7%	0.0%	0.0%	0.0%	0.0%	0.0%
4.0	4.4%	11.1%	0.0%	4.2%	0.0%	38.9%
4.5	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
5.0	8.8%	0.0%	50.0%	0.0%	0.0%	22.2%
Est. Unit Sales	2,890	230	102	614	51	460

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	18.2%	0.0%	0.2%	0.0%	0.0%	0.5%
1.0	1.5%	8.8%	12.3%	12.5%	2.3%	60.0%
1.5	27.3%	7.2%	71.9%	15.3%	2.3%	21.2%
2.0	27.3%	13.6%	7.2%	18.0%	70.5%	13.0%
2.5	0.0%	17.6%	1.1%	6.3%	19.8%	5.0%
3.0	0.0%	52.8%	0.7%	48.0%	0.0%	0.2%
3.5	25.8%	0.0%	1.5%	0.0%	0.3%	0.0%
4.0	0.0%	0.0%	5.1%	0.0%	5.0%	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	214	404	1,760	3,002	1,294	9,472

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	2.9%	45.5%	6.7%	20.6%	4.3%	50.0%
1.5	0.0%	0.0%	45.5%	20.1%	3.4%	23.3%
2.0	97.1%	0.0%	19.2%	8.3%	67.5%	19.0%
2.5	0.0%	15.9%	5.7%	0.6%	19.1%	7.2%
3.0	0.0%	38.6%	8.4%	50.3%	0.0%	0.0%
3.5	0.0%	0.0%	9.4%	0.0%	0.3%	0.5%
4.0	0.0%	0.0%	5.1%	0.0%	5.5%	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	222	287	1,939	7,051	4,277	10,100

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		
	<u>Northeastern</u>	<u>NY</u>
N-value	9,373	10,368

Furnaces - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	25.7%	33.8%
81.00 - 81.99	0.2%	0.0%
82.00 - 82.99	1.6%	0.7%
83.00 - 83.99	3.8%	3.1%
84.00 - 84.99	0.2%	0.3%
85.00 - 85.99	5.9%	3.1%
86.00 - 86.99	0.5%	0.4%
87.00 - 87.99	0.0%	0.0%
88.00 - 88.99	0.1%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.3%	0.2%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	17.5%	10.7%
93.00 - 93.99	0.1%	1.3%
94.00 - 94.99	0.1%	0.1%
95.00 - 95.99	33.4%	37.2%
96.00 - 96.99	7.2%	8.3%
97.00 - 97.99	3.2%	0.8%
98.00 - 98.99	0.1%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	66,708	133,422

Furnaces, Natural Gas - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	28.9%	35.5%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.0%	0.0%
83.00 - 83.99	0.4%	0.2%
84.00 - 84.99	0.1%	0.1%
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	20.0%	11.8%
93.00 - 93.99	0.2%	1.4%
94.00 - 94.99	0.1%	0.1%
95.00 - 95.99	38.3%	40.9%
96.00 - 96.99	8.2%	9.1%
97.00 - 97.99	3.7%	0.8%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	55,058	121,175

Furnaces, Fuel Oil - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	4.3%	16.8%
81.00 - 81.99	1.5%	0.4%
82.00 - 82.99	12.2%	7.8%
83.00 - 83.99	26.8%	31.6%
84.00 - 84.99	1.4%	2.7%
85.00 - 85.99	45.6%	33.9%
86.00 - 86.99	4.2%	4.4%
87.00 - 87.99	0.3%	0.0%
88.00 - 88.99	0.6%	0.0%
89.00 - 89.99	0.3%	0.0%
90.00 - 90.99	2.3%	2.3%
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	0.4%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	11,632	11,908

Furnaces - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.5%	0.9%
40,000 - 59,999	12.4%	13.7%
60,000 - 79,999	32.1%	36.6%
80,000 - 99,999	27.1%	25.8%
100,000 - 119,999	20.1%	16.4%
120,000 - 139,999	4.4%	4.5%
>= 140,000	3.4%	2.0%
Est. Unit Sales	66,708	133,422

Furnaces, Natural Gas - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.6%	1.0%
40,000 - 59,999	14.7%	15.1%
60,000 - 79,999	35.5%	40.0%
80,000 - 99,999	27.9%	24.6%
100,000 - 119,999	15.4%	13.6%
120,000 - 139,999	5.2%	5.0%
>= 140,000	0.7%	0.7%
Est. Unit Sales	55,058	121,175

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	14.1%	1.4%
80,000 - 99,999	22.4%	38.1%
100,000 - 119,999	45.0%	45.1%
120,000 - 139,999	0.3%	0.0%
>= 140,000	18.2%	15.5%
Est. Unit Sales	11,632	11,908

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	19.4%	24.4%
PSC	80.6%	75.6%
Est. Unit Sales	66,708	133,422

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	20.5%	25.5%
PSC	79.5%	74.5%
Est. Unit Sales	55,058	121,175

Furnaces - Percentage of Sales by Motor Type		
<u>Motor Type</u>	<u>Northeastern</u>	<u>NY</u>
ECM	13.4%	13.6%
PSC	86.6%	86.4%
Est. Unit Sales	11,632	11,908

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	11.2%	29.3%
81.00 - 81.99	0.0%	0.2%
82.00 - 82.99	1.7%	1.6%
83.00 - 83.99	5.4%	3.4%
84.00 - 84.99	0.0%	0.2%
85.00 - 85.99	2.3%	6.5%
86.00 - 86.99	1.4%	0.2%
87.00 - 87.99	0.0%	0.1%
88.00 - 88.99	0.0%	0.1%
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%	22.1%
93.00 - 93.99	0.0%	0.2%
94.00 - 94.99	0.4%	0.0%
95.00 - 95.99	45.5%	30.7%
96.00 - 96.99	16.1%	5.0%
97.00 - 97.99	16.1%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	12,944	53,764

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	12.5%	32.8%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.1%	0.0%
83.00 - 83.99	0.0%	0.6%
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%	25.4%
93.00 - 93.99	0.0%	0.2%
94.00 - 94.99	0.4%	0.0%
95.00 - 95.99	50.9%	35.3%
96.00 - 96.99	18.1%	5.7%
97.00 - 97.99	18.0%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	11,295	43,763

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%	5.2%
81.00 - 81.99	0.0%	1.8%
82.00 - 82.99	15.1%	12.3%
83.00 - 83.99	50.5%	22.7%
84.00 - 84.99	0.0%	1.6%
85.00 - 85.99	21.4%	50.2%
86.00 - 86.99	13.0%	1.8%
87.00 - 87.99	0.0%	0.4%
88.00 - 88.99	0.0%	0.8%
89.00 - 89.99	0.0%	0.3%
90.00 - 90.99	0.0%	3.0%
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	1,554	10,078

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	11.7%	41.2%
81.00 - 81.99	0.0%	0.1%
82.00 - 82.99	0.0%	0.9%
83.00 - 83.99	3.7%	2.8%
84.00 - 84.99	0.0%	0.3%
85.00 - 85.99	0.6%	3.7%
86.00 - 86.99	0.6%	0.4%
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%	0.3%
91.00 - 91.99	0.0%	0.0%
92.00 - 92.99	0.0%	14.3%
93.00 - 93.99	0.0%	1.7%
94.00 - 94.99	0.4%	0.0%
95.00 - 95.99	69.2%	27.0%
96.00 - 96.99	10.9%	7.4%
97.00 - 97.99	3.1%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	32,573	100,849

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	12.3%	43.6%
81.00 - 81.99	0.0%	0.0%
82.00 - 82.99	0.0%	0.0%
83.00 - 83.99	0.0%	0.3%
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%	0.0%
92.00 - 92.99	0.0%	15.9%
93.00 - 93.99	0.0%	1.9%
94.00 - 94.99	0.4%	0.0%
95.00 - 95.99	72.7%	30.0%
96.00 - 96.99	11.4%	8.2%
97.00 - 97.99	3.2%	0.0%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	30,929	90,246

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%	19.7%
81.00 - 81.99	0.0%	0.5%
82.00 - 82.99	0.0%	9.3%
83.00 - 83.99	76.4%	24.6%
84.00 - 84.99	0.0%	3.2%
85.00 - 85.99	12.2%	36.6%
86.00 - 86.99	11.4%	3.5%
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%	2.7%
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	1,620	10,288

Boilers		
	<u>Northeastern</u>	<u>NY</u>
N-value	4,821	3,065

Boilers - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	1.1%	3.7%
81.00 - 81.99	0.4%	0.8%
82.00 - 82.99	11.8%	24.9%
83.00 - 83.99	7.5%	12.6%
84.00 - 84.99	8.6%	6.9%
85.00 - 85.99	40.7%	28.0%
86.00 - 86.99	8.2%	2.7%
87.00 - 87.99	2.7%	1.8%
88.00 - 88.99	0.0%	0.0%
89.00 - 89.99	0.0%	0.0%
90.00 - 90.99	0.2%	2.5%
91.00 - 91.99	8.4%	1.9%
92.00 - 92.99	0.4%	0.4%
93.00 - 93.99	0.3%	0.6%
94.00 - 94.99	1.4%	1.8%
95.00 - 95.99	6.3%	7.9%
96.00 - 96.99	2.0%	3.5%
97.00 - 97.99	0.2%	0.1%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	89,992	88,000

Boilers, Natural Gas - Percentage of Sales by Nominal AFUE		
<u>AFUE</u>	<u>Northeastern</u>	<u>NY</u>
80.00 - 80.99	2.5%	5.7%
81.00 - 81.99	0.4%	1.3%
82.00 - 82.99	26.2%	34.8%
83.00 - 83.99	14.6%	18.0%
84.00 - 84.99	8.5%	5.8%
85.00 - 85.99	6.5%	8.1%
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	0.4%	3.8%
91.00 - 91.99	19.1%	2.9%
92.00 - 92.99	0.9%	0.6%
93.00 - 93.99	0.6%	0.8%
94.00 - 94.99	3.2%	2.7%
95.00 - 95.99	13.0%	11.4%
96.00 - 96.99	3.7%	3.9%
97.00 - 97.99	0.5%	0.2%
98.00 - 98.99	0.0%	0.0%
99.00 - 99.99	0.0%	0.0%
Est. Unit Sales	45,502	54,000

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	0.7%	3.2%
83.00 - 83.99	1.5%	2.2%
84.00 - 84.99	9.0%	9.6%
85.00 - 85.99	68.3%	71.1%
86.00 - 86.99	15.3%	8.4%
87.00 - 87.99	5.1%	5.5%
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%	0.0%
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	44,490	34,000

Boilers - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.0%	0.1%
40,000 - 59,999	0.6%	0.7%
60,000 - 79,999	8.9%	6.2%
80,000 - 99,999	25.6%	24.8%
100,000 - 119,999	34.4%	21.5%
120,000 - 139,999	7.7%	15.7%
>= 140,000	22.9%	31.1%
Est. Unit Sales	89,992	88,000

Boilers, Natural Gas - Percentage of Sales by Input Capacity		
<u>BTU/hr.</u>	<u>Northeastern</u>	<u>NY</u>
< 40,000	0.1%	0.1%
40,000 - 59,999	1.3%	1.0%
60,000 - 79,999	19.0%	9.0%
80,000 - 99,999	8.5%	19.6%
100,000 - 119,999	36.7%	22.0%
120,000 - 139,999	8.8%	12.1%
>= 140,000	25.7%	36.2%
Est. Unit Sales	45,502	54,000

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	0.5%	0.0%
80,000 - 99,999	39.9%	36.7%
100,000 - 119,999	33.4%	19.1%
120,000 - 139,999	6.6%	20.9%
>= 140,000	19.7%	23.2%
Est. Unit Sales	44,490	34,000