

New York HVAC Market Report - Frequently Asked Questions

Through agreement with D+R International, NYSERDA is making/will make 2013, 2014, 2015, 2016, and 2017 HVAC market data for New York State and the HARDI Northeast Region available to the public. This background document is provided for convenience in understanding the data and its source.

Questions	Answers
<p>What is HARDI data and who is D+R?</p>	<p>HARDI is a non-profit trade organization dedicated to advancing the science of wholesale distribution in the HVAC industry. Today HARDI represents more than 475 wholesale companies (including 17 international companies), more than 300 manufacturing associates and nearly 140 manufacturer representatives. It is estimated that HARDI members represent 80 percent of the dollar value of the HVAR products sold through distribution.</p> <p>D+R is the leading analyst of confidential market data relating to energy efficiency. The HARDI organization has partnered with D+R and authorized them to provide HVAC sales data for purchase.</p>
<p>What percentage of manufactures in NYS are HARDI members? What percentage of distributors in NYS are HARDI members?</p>	<p>Not available: D+R does not currently track this.</p>
<p>How many HARDI members provided data on NYS?</p>	<p>The number of participants that provide data varies from year to year, but at least 23 distributors reported at least 1 unit sales in NYS for all reporting years.</p> <p>HARDI participants supplying data represent all levels (both large and small) of the HVAC market – (both high and low volume branches), and distributors ranging in size from one location to hundreds of locations nationwide.</p>
<p>What is the source/sample for the HVAC data?</p>	<p>The data source is sales from HARDI distributors. D+R estimates that, roughly, this is at least 23 distributors representing 5-25% of the products sold within NYS</p> <ul style="list-style-type: none"> • Lennox sales are direct to contractors; by-passing distributors. Unit sales estimates are inclusive of these sales as the estimates are based on existing housing stock and replacement rates. • Manufacturer Reps are part of HARDI, but currently, the data collection is limited to wholesale distributor members.
<p>What percentage of the estimated sales are represented by the participants?</p>	<p>It is difficult to know of the exact share of the market captured, since there is no definitive public estimate produced for the U.S., let alone NY.</p> <p>Based on the building stock and replacement rate estimate, HARDI data currently represents between 5-25% of the NYS market, depending on product category.</p>
<p>What is the methodology for the stock replacement model?</p>	<p>The basic description of the methodology is that shipments are based on replacement rates of existing stock plus new construction</p>

Questions	Answers
	units. D+R checks these values against other sources such as the Air Conditioning, Heating and Refrigeration Institute (AHRI) and the magazine “Appliance Design”.
How does D&R address the growth in cooling saturation (and sales) in homes that did not previously have AC systems?	<p>Estimates from 2013* (base year) forward use distributors’ sales growth to account for further saturation gains. Distributors’ sales growth by product category is the primary driver for the model because it should capture growth across all markets, whether it’s new construction or increases in existing saturation.</p> <p>*Up to 2013 adjustment for additional cooling saturation was scaled based on the increased cooling saturation in new housing stock using census data located at:</p>
How are or were fuel conversions handled?	Although additional adjustments were considered, ultimately the same methodology used for cooling was used for fuel conversions, i.e., examining the saturation of equipment of equipment in new housing in the period between 2009 and 2013.
What data is in the reports?	Analyzed results from aggregated distributor sales data, and manufacturer metrics on products from fact sheet data e.g., for heating/cooling: AFUE, HSPF, fuel type, capacity.
Clarify if the sales data for the state of New York is based on purchases made in the state or if it is based on manufacturers/distributors who are based in NY?	<p>Data represented in this report is based on “ship-to” zip code when available and “ship-from”, when it is not. Generally, ship-to is the shipping destination of the product, which could be the final delivery/installation location zip code, or another zip code designated by the customer (contractor). Ship-from is the branch zip code where the shipment originates from.</p> <p>This report includes sales data for which there is a ZIP code (either “ship-to” or “ship-from”) in the state of New York. In the case of these reports, approximately 30% of sales contained a ship-to zip code, while the remainder is ship-from.</p>
What sectors are the sales data for (residential, commercial, industrial) and where can it be seen?	The data is not broken out by sector, however, data is broken down by capacity which can provide some insight into the size of building where the equipment may be installed.
Does the data cover both upstate and down state?	The market share results for these NYS-specific reports cover all of NY state, including New York City and Long Island (these two geographic areas are normally include with data for HARDI’s Mid-Atlantic region).
According to Methodology section, the EIA 2009 RECS HVAC stock data that was used for NYS, what does this mean?	<p>Residential Energy Consumption Survey (RECS) 2009* contains microdata on the higher population states, of which NY is one.</p> <p>*Most current RECS data available for reports 2013, 2014, 2015, & 2016.</p>

Questions	Answers
<p>Are the sales data weighted?</p>	<p>D+R reports are based on unweighted data. Efficiency and product characteristic breakdowns are based solely on reported data from participating HARDI members and no adjustments are made to this data.”</p> <p>D+R has found that most HARDI participants sell similar efficiency mixes, i.e., the efficiency mix represented in the reported data is most likely similar to the remaining New York State market.</p>
<p>In a report, what does the “N=value” represent for various categories (Air Conditioners, Heat Pumps, Furnaces and Boilers)?</p>	<p>The N=value is the total reported equipment count for the category.</p>
<p>In a report, what does “Q” indicate?</p>	<p>Q denotes areas where there was insufficient data to release a number or to develop market estimates.</p>
<p>Which states are included in the comparison “Northeastern” for these NY specific reports?</p>	<p>States (with NY excluded) in HARDI’s Northeast Region are: Rhode Island, Connecticut, Massachusetts, Vermont, New Hampshire, and Maine.</p>
<p>What counties are covered by the HARDI data?</p>	<p>All counties except for 2 (Yates and Putnam) had sales reported in the dataset. Generally, sales were concentrated in or around areas of higher population. While sales based on the “ship-from” methodology (see “clarify if the sales data for…” questions for definition) cannot be guaranteed to remain in the county of sale, generally, sales originating from a branch do remain within the state of sale.</p>
<p>When are the annual reports delivered?</p>	<p>A year’s annual report is targeted for delivered in April of the following year.</p>

Products included in the HARDI reports:

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

Boilers: All natural gas and fuel oil boilers that have an AFUE rating.

- Excludes: Water furnaces or other systems that contain an air-handler

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

Ground-Source Heat Pumps: Split and packaged, single fuel air conditioning systems that uses the ground (as opposed to the air) as a heat transfer mechanism.

- Includes: split system GSHP, packaged GSHP
- Excludes: All room type air conditioners, ASHPs of all kinds

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 are often have inverter driven, variable speed compressors and are referred to as ductless mini-splits.

Additional Notes on data coverage

- D+R International does not make any distinctions between residential and commercial sales of HVAC systems/products. D+R International only aggregates and publishes distributor data. D+R International does not track the type of consumer that distributors sell to.
- HARDI includes data collected from NYC and Long Island in the HARDI Mid-Atlantic region, while the rest of NY State is covered under the HARDI Northeast region. NYSERDA incorporates all of NYS into its NY data. This may lead to differences and discrepancies between NYSERDA reports and HARDI data.

The NE region defined by NYSERDA (does not contain NYS) is to be included for comparison purposes.

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