

Supply Chain Assessment

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Editor's Note

As we head into 2023, we reflect on this past year as one marked with persistent supply chain challenges as well as new opportunities. Inflationary pressures, workforce shortages, and labor negotiations have compounded component shortages and equipment delays, contributing to lingering uncertainty. However, material and shipping costs are declining, while forthcoming code changes and federal funding from the Inflation Reduction Act and other legislation are expected to deliver major advancements toward clean energy.

This year, we had over 1,300 conversations with our market partners, who continue to share their insights into current conditions and predictions for the future. At Energy Solutions, we continue to observe creative strategies and solutions from the market, as well as strong program performance across technologies. We would like to thank our program administrator partners for the continued support and dedication to these transformative programs, and look forward to advancing our mutual goals of energy savings and reduced climate impacts in 2023. We wish you all a joyful new year.

Findings

1. Product Availability

a. HVAC

- i. A major manufacturer expanded production of their heat pump offering to meet heightened demand. Some manufacturers, wary of supply chain snags from a trending transition to all-electric equipment, will continue to provide dual fuel product options. Meanwhile, some distributors report up to 40-week lead times for unitary heat pumps.
- ii. Significant acquisitions of regional distributors by a major manufacturer and a national distributor were completed in December, demonstrating a continued trend of consolidation within the industry. This will expand residential and commercial product offerings into new markets.

Trade Ally Team Communications per Technology Domain

This Issue	Volume 3 Total
47	367
26	275
25	228
16	129
16	179
14	124
144	1,302
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iii. Two residential equipment manufacturers partnered to launch technology that simplifies variable speed system installation, commissioning, and remote monitoring.

b. Foodservice

Lengthy lead times persist for refrigeration equipment due to component delays. Still, an overall easing of supply chain slowdowns has allowed for strong stock on other product categories.



c. Lighting & Electrical

Distributors report lead times of three to four weeks for high bay LED equipment.

d. Life Sciences

Lead times range from two to three weeks for popular ultra-low temperature freezer models. Lab grade refrigerators and freezers are delayed two to five weeks, on average.

2. Equipment Sales

a. HVAC

- **i.** A manufacturer, citing persistent cost increases, will raise prices across residential and commercial equipment, accessories, and parts effective January 1, 2023.
- ii. More distributors are stocking high efficiency heat pumps and looking to leverage midstream program incentives to boost sales. One Northeastern distributor observed that December sales are up from November with an overall 50% growth in ductless sales in 2022.

b. Foodservice

Program bonuses and increased incentives in Q4 bolstered efficient fryer sales for participating dealers.

3. Service Providers / Contractors

a. HVAC

Many distributors have shared that their contractor networks have benefitted from Energy Solutions' trainings that address heat pump rebates, integrated controls, and Heat Pump Installer Network (HPIN) requirements.

b. Water Heating

The TECH Clean California initiative, implemented by Energy Solutions, and the ENERGY STAR® Manufacturers Action Council (ESMAC) will continue to offer remote manufacturer-led trainings in 2023, beginning January 16, for contractors nationwide to learn about HPWH equipment and installation, available through free online enrollment.

4. Administrative / Application Submittal

a. Across Technologies

Staffing challenges are impacting claim submissions. Distributors are determined to process outstanding 2022 sales in advance of the year's end and impending code changes and program updates.

Year in Review

The chart below compares rebates paid in 2022, month to month and by percentage change, broken up by technology.

a. HVAC

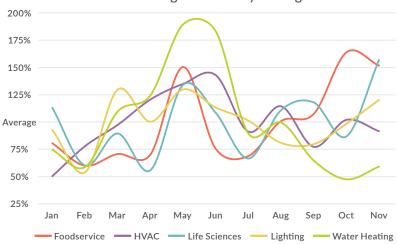
Trends followed expected seasonality, with sales from the summer cooling season translating to a rise in rebates paid in Q₃.

b. Water Heating

Long lead times extending into 2022 significantly impacted inventory at the start of Q1. Easing supply chain constraints reenergized HPWH sales in Q2, particularly for TECH Clean California.



Monthly Rebate Dollars Compared to 2022 Program Monthly Average



c. Foodservice

A rise in Q2 and continuing climb into Q4 resulted from product becoming more readily available and dealers making bulk purchases to secure product. Additionally, a few programs introduced bonuses and increased end-of-year rebates to bolster participation.

d. Lighting & Electrical

Sales volumes held steady through the year, with concentrated submission efforts reflected in the peaks observed.

e. Life Sciences

A sharp increase in May correlated with a peak in equipment purchases due to budgetary cycles closing midyear. Engagement in new programs prompted Q3 growth, followed by another uptick in Q4 with end-of-year budgets.

About Energy Solutions

For more than 25 years Energy Solutions has provided costeffective, market-driven solutions that deliver reliable, largescale impacts. We implement more midstream and upstream programs in North America than any other company, which gives us access to valuable insights across technologies.

Our program success is fueled by a deep connection to the market. These market relationships have allowed us to closely monitor supply chain impacts to keep you informed.



To learn more about Energy Solutions' programs and services, contact Jeff Johnston at: jjohnston@energy-solution.com | www.energy-solution.com

Disclaimer: This report reflects our best estimate of market impacts, with the information available at this time. Energy Solutions will continue to provide valuable reporting on supply chain conditions. These updates will be versioned and dated to indicate at what time they apply.

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