



Supply Chain Assessment

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West Coast port labor negotiations that began in May of 2022 remain inconclusive, prolonging uncertainty for U.S. companies dependent on the ports of Los Angeles and Long Beach to import shipments from Asia. Coastal port operations at the nation's two busiest ports have been minimally impacted, with tumbling import volumes that reached double-digit declines at the end of 2022, as shippers wary of disruptive outcomes from the contract talks continue to divert cargo to East and Gulf Coast ports. Meanwhile, inland bottlenecks have been exacerbated by national freight truck congestion, particularly in the nation's largest cities of Chicago, Atlanta, and Los Angeles. According to a report from the American Transportation Research Institute (ATRI), average rush hour truck speeds in 2022 slowed by 6.1 percent from the previous year, with average speeds falling below 30 miles per hour among the top ten bottlenecks.

Findings

1. Product Availability

a. HVAC

In addition to emerging federal funding opportunities and recent code changes, persistent supply chain issues have prompted manufacturers to reassess their 2023 production forecasts. Microchip and control component shortages continue to affect product lead times, with one major manufacturer reporting this issue has delayed production of some equipment by over a year. Commercial equipment distributors report lead times ranging from 25 to 50 weeks for direct expansion (DX) units and 25 weeks for water-source heat pumps.

b. Water Heating

In February, multiple manufacturers introduced high efficiency water heater products, including air-source and air-to-water heat pumps with domestic water heating capabilities, residential electric plug-and-play heat pump water heater (HPWH) alternatives, commercial gas water heaters, and commercial HPWHs with CO₂ refrigerant. Other manufacturers are developing new HPWH products with anticipated launches at the end of 2023 and in 2024.

2. Equipment Sales

a. HVAC

- i. Since the 2023 Department of Energy (DOE) code changes became effective on January 1, single-phase residential air-conditioning units deemed noncompliant with the new energy efficiency minimums have become stranded at manufacturing, distribution, and contracting

Trade Ally Team Communications per Technology Domain

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Foodservice	12	29
Water Heating	20	54
Pumps	6	14
Lighting	7	43
Life Sciences	7	13
Total	110	239



companies in the Southeastern and Southwestern regions, where the DOE standards prohibit installation. Large distributors and surplus companies have been warehousing these products to be sold in states without these installation restrictions.

- ii. Northeastern distributors report that program incentives have been an asset to sell more competitively against less efficient units and to further drive eligible heat pump and variable refrigerant flow (VRF) product sales.

b. Foodservice

- i. The industry is seeing a rising trend in market adoption of electric equipment, such as rotisserie ovens, broilers, and induction cooktops. One manufacturer observed that their electric broiler outsold its gas counterpart in 2022.
- ii. Dealers continue to find success in using program incentives to bolster eligible sales, such as for high temperature, undercounter dishwasher equipment. One dealer plans to achieve nationwide participation in the Instant Rebates programs Energy Solutions implements through increased incentives training for sales staff and website program promotion for customers.

c. Lighting and Electrical

According to recent surveys by the National Electrical Manufacturers Association (NEMA) comparing market conditions in January 2023 to December 2022, 79 percent of manufacturer respondents reported no change, 14 percent reported worsened conditions, and 7 percent reported improvement. Although 50 percent of respondents expect conditions will worsen by midyear due to high interest rates and supply constraints, 43 percent expect improved conditions with strong demand supported by electrification project investment.

3. Service Providers, Contractors

a. Across Technologies

Manufacturers anticipate greater project opportunities with retrofits than with new construction due to high interest rates and construction input prices. According to a national survey by Associated Builders and Contractors (ABC), contractors reported a continued year-over-year price decline of 23 percent for iron and steel and 10 percent for petroleum but an increase of nearly 5 percent for plumbing fixtures and fittings.

b. HVAC

- i. Since the expanded Energy Efficient Home Improvement Tax Credit (25C) became effective on January 1 as part of the Inflation Reduction Act (IRA), major manufacturers among other market actors are promoting IRA tax credits and other incentives available



Program Spotlight

Energy Solutions is proud to announce that TECH Clean California received the Groundbreaking Program Design and Implementation Award at the AESP (Association of Energy Services Professionals) Annual Conference in New Orleans on February 28. This award is in recognition of TECH's innovative and comprehensive approach to market transformation in clean heating. Through a combination of market incentives, supply chain engagement, workforce development, consumer education, regional pilots, and a Quick Start Grant program, TECH is accelerating the installation of heat pump space and water heating technologies in California homes. Visit techcleanca.com to learn more.



for qualifying heat pump systems by hosting webinars for contractors seeking accurate information for their customers.

- ii. In February, residential air-source heat pump installers reported that customers' equipment withstood New England temperatures that plunged into subzero temperatures and received minimal service calls. This further supports the region's recent trend in heat pump conversions and anticipated rise in cold climate heat pump installations in the coming decades.

From the Field

The North American Association of Food Equipment Manufacturers (NAFEM) Show, the world's leading commercial foodservice equipment and supplies showcase, was held from February 1 through 3. Energy Solutions attended to meet with manufacturer partners regarding participation in the Instant Rebates (IR) programs we implement, strengthen market relationships to secure partnerships for equipment testing and data, and understand product development priorities for future measure additions. Market conversations revealed themes of growing interest among chains in program incentives and eligible product category expansion, greater IR brand and program awareness among the largest foodservice dealers, and development of new equipment with built-in data collection for increased energy efficiency savings.

About Energy Solutions

For more than 25 years Energy Solutions has provided cost-effective, market-driven solutions that deliver reliable, large-scale 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:

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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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