



COVID-19: Supply Chain Assessment

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President Biden's \$1.2 trillion infrastructure bill was signed into law this month. While the bill does not immediately solve the current supply chain issues like labor shortages and freight transportation capacity, it will potentially address a historical lack of investment in supply chain infrastructure. A coalition of four major manufacturing associations across technologies — the Air-Conditioning, Heating, and Refrigeration Institute (AHRI), the Association of Home Appliance Manufacturers (AHAM), the North American Association of Food Equipment Manufacturers (NAFEM), and the National Electrical Manufacturers Association (NEMA) — wrote a letter to the Biden Administration to offer solutions that address supply chain challenges, such as, expanding employment opportunities to help offset labor, transportation, and shipping challenges.

As of November 15th, Los Angeles and Long Beach ports in California are charging a temporary fee for ocean carriers whose containers linger too long at terminals. Port backlogs persist with the shortage of chassis (load-bearing equipment required to transport containers from trucks between terminals, warehouses, and ports). Raw material shortages, stock for distribution, and skilled labor continue to affect sales, lead times, and program participation across technologies.

Findings

1. Product Availability

a. HVAC

- i. HVAC manufacturers have re-engineered products to better navigate raw material shortages by using readily available components. Manufacturers have also reported that redirection of certain freight has helped to mitigate labor shortages and offset lags in shipment and lead times.
- ii. A major manufacturer has announced price increases for January 2022 — up to 12% for commercial equipment, 10% for residential, and 4% for parts and supplies.

For these updates, the Trade Ally Team has communicated with the following number of market actors per technology area:

	This Issue	Communications to Date — Vol. 2
HVAC	26	220
Foodservice	19	201
Water Heating	18	151
Pumps	12	99
Lighting	7	100
Total	82	771

Table 1.

b. Foodservice

A dealer reported increased shipping container rates of \$25,000-\$28,000 per container, compared to \$5,000-\$8,000 a year ago. These costs, in addition to lengthy lead times on high efficiency (HE) equipment, are encouraging dealers to bulk order. Dealers report a six-month lead time on fryers and a three-month lead time on convection ovens. One dealer was informed that a specific manufacturer will not produce any HE equipment until March 2022.



c. Water Heating

- i. A distributor reported lengthy lead times and price increases affecting all equipment types as well as pipes, valves, and fittings. Of note, PVC pricing has increased by 20%, and basic items like sheet metal screws have become difficult to procure.
- ii. Other distributors advised that varying lead times, up to four months, and shipping cost variability have affected some customers' ability to commit to the sale. Distributors identified monthly stock orders and increased market communications as effective strategies to help get products on time, barring unforeseen circumstances.
- iii. Specific to Washington State, heat pump water heaters (HPWHs) are required to have a CTA port for demand response connection. Raw material shortages impacted manufacturers' ability to produce code compliant HPWH products, prompting the Department of Commerce in Washington to approve a moratorium on the requirement through March 2022.

d. Lighting

Lighting manufacturers have revamped products to be both lumen- and color- selectable, improving product availability and cutting down on costly customization.

e. Life Sciences

One manufacturer announced a price increase of 7%-9% starting January 2022. Another reported improving lead times, currently averaging 15 days.

2. Equipment Sales

a. HVAC

- i. Demand for HVAC systems has not subsided. In fact, industry insights indicate that demand for chillers has increased over 30% compared to 2020, with one major manufacturer projecting this demand will carry over into 2022. This increased chiller demand reflects increased data center activity; more heat means more cooling is required. The general sentiment across measures is that if distributors had more HE equipment, they would sell it.
- ii. Rooftop Units (RTUs) are seeing similar lead times of 15 weeks when comparing HE and standard efficiency equipment. However, HE tends to lag more than standard, and even more so when there are controls and custom features. Manufacturer representatives indicate that lead times for condensing gas boilers are at 12 weeks, whereas standard efficiency cast iron boilers have lead times at 20-24 weeks, helping distributors upsell HE equipment.
- iii. One manufacturer reports increased sales on high-volume, low-speed fans in states offering incentives.

b. Foodservice

Multiple manufacturers have announced price increases across measures for January 2022 ranging 20%-35%. One dealer mentioned that their quotes are only valid for 30 days and any delays on receiving equipment will result in a re-quote. However, increased promotional incentives from programs on foodservice equipment have empowered dealers to continue to make sales despite the manufacturer and shipping price increases. The benefits from these promotions are especially felt with higher cost measures such as steamers and combination ovens.

c. Water Heating

Equipment sales were impaired by an 8% price increase on storage water heaters and 7% increase on tankless units. One distributor reported that longer lead times for tankless units have also made sales more difficult. However, HPWH sales are projected to continue growing with support from manufacturer led trainings and program incentives.

d. Lighting

Two major manufacturers have announced formal price increases for the fourth time this year.

3. Service Providers/Contractors and Administrative/Application Submittal

a. Across Technologies

- i. The skilled trade shortage persists due to the “Great Resignation” trends in staffing turnover and retirement. These labor shortages translate to reduced staff and contractor knowledge, and resources to upsell HE equipment and submit claims for midstream and upstream programs.
- ii. Distributors have had varying responses to labor shortages. Some have shut down branches and others have found ways to realign internal processes to optimize sales, accounting, and billing coordination for program participation and claim submissions.

From the Field:

On October 27-29th, Energy Solutions attended Lightfair International (LFI) 2021. LFI is the leading event for the lighting industry, where Energy Solutions met with manufacturers to identify up-and-coming trends in the market. Highlights included networked lighting controls (which allow for optimized energy savings and human livability) as well as germicidal lighting in conjunction with advanced HVAC systems that allow for clean, safe air to be used in indoor environments.

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

Disclaimer: The COVID-19 pandemic is an evolving situation, and this report reflects our best estimate of market impacts at this time with the information available. We will be continually updating this forecast and adding details as more information becomes available and the actual impacts of the pandemic on the markets are felt. These updates will be versioned and dated so you can know at what time they apply.

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