

Supply Chain Assessment

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Domestic and international supply chain issues continue to impact product component and equipment availability. As Shanghai factories emerge from China’s COVID lockdown and resume production, an export surge of backlogged cargo is expected to place increased pressure on domestic destination ports, particularly those in Los Angeles and Long Beach which handle more imports from China than any other U.S. port. Earlier this month, the State of Texas implemented an inspection program for trucks crossing the Mexican border, which was terminated less than two weeks later due to severe traffic jams that interrupted the movement of critical commodities and technology components. Amid persisting challenges and changing conditions, the market continues to devise creative solutions and adaptive adjustments such as product redesign to renew inventory levels and price increases to offset rising costs.

Findings

1. Product Availability

a. HVAC

Distributors note minimal to no improvement in lead times, straining inventory levels and building uncertainty in the ability to secure future product. Even those able to stock product report equipment still on order since Q3 2021 and current orders with delivery extended to Q2 2023. Distributors quote lead times of eight weeks for 14 SEER heat pumps, up to 13 weeks for single-phase variable refrigerant flow (VRF) products, 20 to 24 weeks for 16+ SEER air conditioning units, 22 to 25 weeks for high efficiency rooftop units (RTUs), 26 weeks for ductless equipment, and 30 weeks for certain electronically commutated motors (ECMs).

b. Water Heating and Pumps

Manufacturer backlogs have increased fourfold, deterring water heating and pumps distributors from accepting new orders. Lead times for 120-gallon heat pump water heaters range from six weeks to five months depending on brand.

c. Foodservice

Manufacturers are reportedly missing their ship dates by multiple weeks and are quoting fluctuating prices, limiting dealer inventory and delaying project timelines. Ice machine orders placed in January 2022 are not expected to arrive until September. Some dealers unable to procure convection oven components and equipment due to lead times as long as six months have stopped accepting orders on certain units. Costs for fryer oil have doubled, bolstering sales for efficient fryer models that help customers achieve significant savings.

Trade Ally Team Communications per Technology Domain

	This Issue	Volume 3 to Date
HVAC	48	145
Foodservice	22	82
Water Heating	18	78
Pumps	9	48
Lighting	12	50
Life Sciences	7	43
Total	116	446

TABLE 1.



d. Lighting

A major manufacturer will raise prices on traditional lamps, ballasts, and LED tube drivers beginning June 1st due to persisting inflationary pressures, component availability issues, and transportation challenges. Redesigning lighting and controls products based on available components has allowed manufacturers to ensure product output and even grow their sales amid supply chain restrictions.

e. Life Sciences

A major manufacturer reported that the lead time of a frequently quoted ultra-low temperature freezer (ULT) product dropped from nine to seven weeks over the course of a week. They expect lead times to either remain steady or improve over the upcoming months.

2. Equipment Sales

a. HVAC

Multiple manufacturers have announced price increases of up to 9% across their residential and commercial equipment effective May 2022. New construction and retrofit sales for high efficiency equipment are forecasted to grow.

b. Water Heating

Despite at least five instances of manufacturer price increases in 2021 and an overall 48% increase in water heater costs, a major distributor anticipates pricing to stabilize through November 2022.

c. Foodservice

Dealers forecast strong sales through 2023 due to growing customer demand. In addition to equipment replacement needs, customers that have embraced outdoor dining long-term are purchasing more equipment to accommodate their increased capacity. However, some dealers are reporting a pause in hiring sales staff due to a shortage of warehouse staff necessary to fulfill orders. One dealer reports one in four of their locations is short-staffed.

d. Life Sciences

While industry activity overall is slower in 2022 compared to 2021, demand remains strong in the biotechnology and pharmaceutical sectors. Some manufacturers anticipate higher sales rates as the year progresses, with the help of program incentives to offset rising costs and drive large volume quotes.

3. Service Providers / Contractors

a. HVAC

i. Faced with delayed shipments and rising component costs, contractors have observed impacted project timelines and are seeing equipment repairs prioritized over replacement. Limited supply of flexible ductwork and increased ducting costs are bringing residential new construction (RNC) projects to a standstill, although RNC sales are expected to improve in Q2.

ii. The Biden Administration introduced an initiative to improve indoor air quality as part of the National COVID-19 Preparedness Plan. There is planned funding for state and local governments and school districts to reinforce their air ventilation and filtration systems, and HVAC equipment upgrade projects are anticipated to increase.

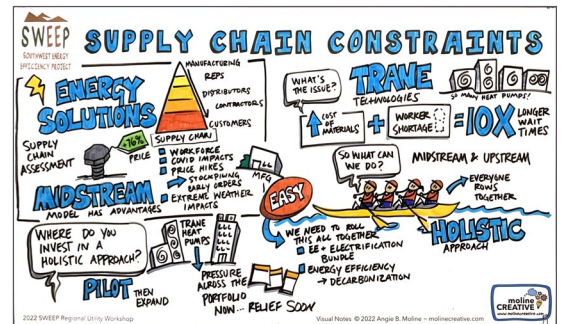
4. Administrative / Application Submittal

a. Across Technologies

Despite active sales across technologies, product availability issues and lengthy lead times continue to present barriers to project installations and therefore timely claims submissions. Significant staff turnover and management shifts have additionally strained capacity for midstream program participation. Distributors are employing existing and additional strategies such as cross-departmental involvement to improve participation and support consistent claims submissions.

From the Field

The annual **Southwest Energy Efficiency Project (SWEEP) Utility Workshop** was held from April 6th through 8th, gathering program managers as well as state and regulatory representatives to discuss demand-side management and emerging energy efficiency technologies and program development in the Southwestern states of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. Energy Solutions presented on a panel alongside HVAC manufacturer Trane Technologies to discuss challenges and solutions in building resilient supply chains, highlighting observed market impacts as reported on in these Supply Chain Assessment publications.



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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: 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. As the pandemic recedes, 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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