

June 1, 2022

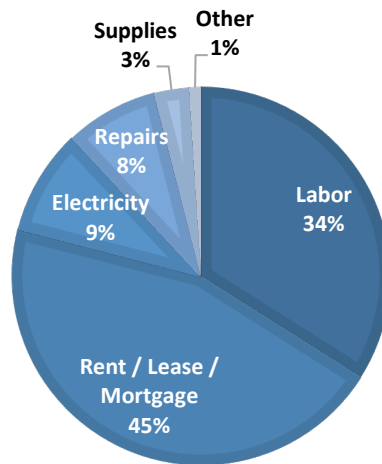
**Cold Chain Index: 2022 Quarter 1**

In order to improve the economic information available to industry participants, the Global Cold Chain Alliance has commissioned a Cold Chain Index (CCI), reported since the end of 2018. The CCI tracks the growth rates of costs associated with cold storage using predominantly official sources of economic data. The CCI can be customized to the region, state, and metro where a warehouse facility operates.

The CCI includes five classes of expenses: labor, electric power, supplies, repairs, and rent; the cost shares typical of a North American refrigerated warehouse are shown in Figure 1. Property rent or lease was the largest share of expenses, at 45% of the total. Labor represented 34% of total expenses. Electric power accounted for 9% of total expenses. The “other” category included the leases on material handling equipment, expenses on utilities other than electric power, and un-specified other expenses. The cost shares used in all 2022 releases of the CCI are based on the 2021 IARW Productivity and Benchmarking Survey results (FY2020).

In the current release, the CCI reports the growth rate in expenses in the first quarter of 2022 compared with the first quarter of 2021. Members of the Global Cold Chain Alliance and their customers may access a template to better understand the index and customize cost shares to the experience of their business, and to account for variation across geographic regions.<sup>1</sup>

Figure 1. Cost Shares of North American Refrigerated Warehouses, based on FY2020 IARW Productivity & Benchmarking Survey



<sup>1</sup> The regions in the CCI are from the Bureau of Labor Statistics geographic information: **Mid-Atlantic** = New Jersey, New York, Pennsylvania. **New England** = Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont. **South** = Alabama, Arkansas, Delaware, District of Columbia, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, West Virginia. **Midwest** = Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin. **Pacific** = Alaska, California, Hawaii, Oregon, Washington. **Mountain** = Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming.

## Results

Expenses for refrigerated warehouses rose by 5.96% in the first quarter of 2022 relative to the same period in 2021, continuing the pattern of increasing costs that began in the second quarter of 2020 and has persisted for the last seven consecutive quarters (Figure 2). The first quarter of 2022 marked the highest year-to-year jump in total expenses since this Cold Chain Index was developed in 2018.

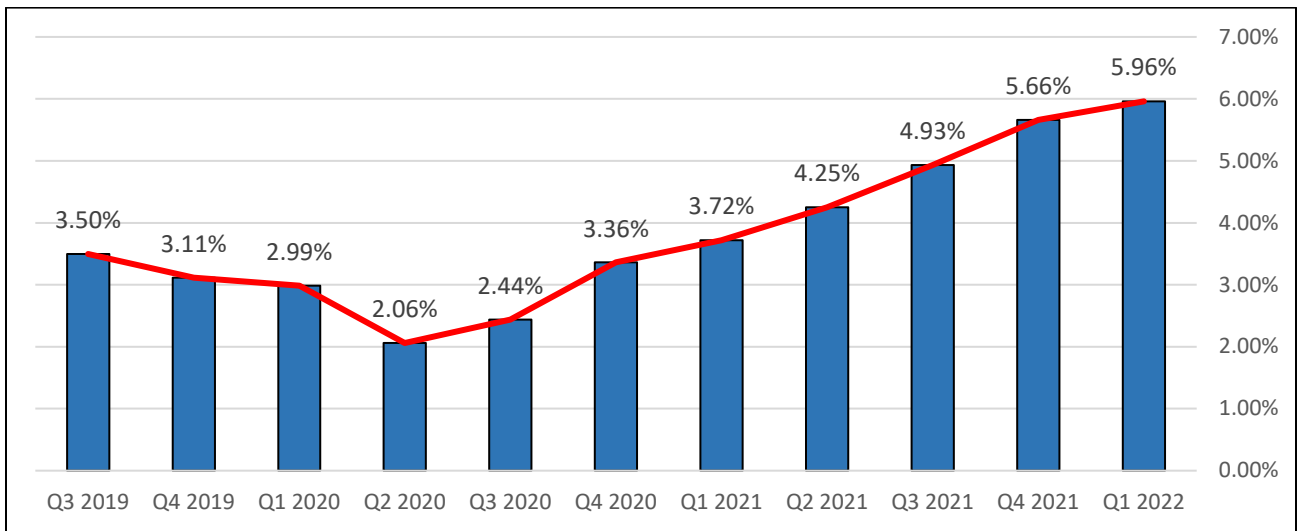
Among the types of expenses, the maintenance and repair cost index for non-residential buildings grew at the fastest pace, at 14.12% year-over-year in the first quarter of 2022. This is the second consecutive quarter of double-digit growth in the cost index for maintenance and repair. Electric power costs increased by 5.85%, which was the slowest annual growth rate in electricity since the first quarter of 2021. Certain states deviated from the national pattern of more moderate growth in energy expenses. In Nevada, New York, Hawaii, and Pennsylvania the cost of electricity increased by more than 20%. The national average price of electric power for industrial sectors increased to 7.42 cents per Kilowatt-hour in Q1 2022.

The cost of labor for the transportation and warehousing industry continued to rise in Q1 2022, by 3.85%. Q1 2022 marked acceleration of the national-level pace of growth in the employment cost index for the sector. Regional differences in employment costs were based on the employment cost index for all workers, whereas the national trends were specific to the transportation and warehousing industry. The highest annual growth rate in labor costs was in the Mountain region for the second consecutive quarter, where labor costs grew by 5.8%. Labor cost pressures were slightly below the national average in the South and Mid-Atlantic regions in the first quarter of 2022.

The national supplies price index, which is the producer price index (PPI) for final demand finished goods, not including food and energy, grew by 8.35% in Q1 2022. This was the highest year-over-year increase in the price of supplies over the past twenty years.

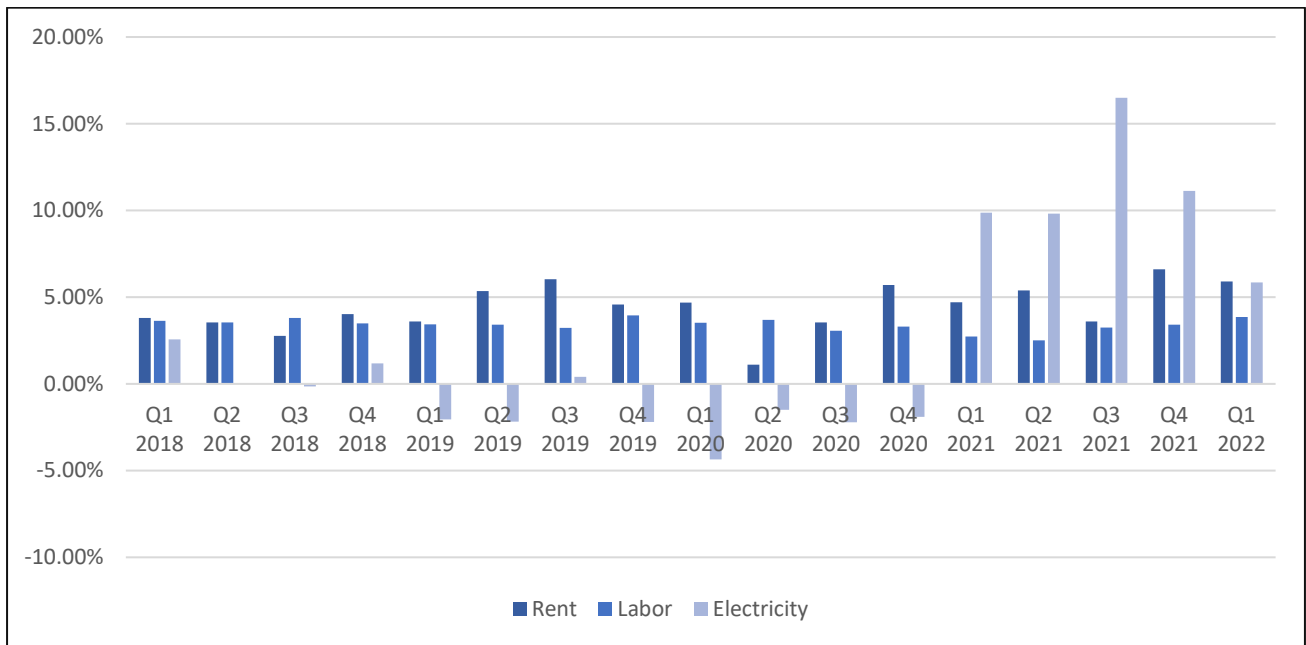
Finally, national occupancy costs for warehouses and distribution properties grew by 5.91% year-over-year in Q1 2022, continuing the trajectory of rental expenses increasing. Occupancy cost growth was estimated from data on Quarterly Net Asking Warehouse Rents collected by Cushman & Wakefield across 80 different metro markets in the United States. Industrial rents grew more than 50% faster than the national average in Boise, Charleston, California's Inland Empire, Memphis, Durham, and Rochester, NY. On the other hand, some metro areas experienced declining occupancy costs for warehouse and distribution properties on a seasonal year-over-year basis, including Birmingham, Nashville, New Haven, Pittsburgh, Tulsa, and North Bay in San Francisco.

Figure 2. Cold Chain Index, by Quarter during 2019-2022



Note: The percentages in Figure 2 are growth rates in the quarter, relative to the same quarter in the previous year.

Figure 3. Main Drivers of the Cold Chain Index, by Quarter during 2018-2022



Note: The percentages in Figure 3 are growth rates in the quarter, relative to the same quarter in the previous year.

## Data References and Methods

The following data sources were used to track changes in costs:

- National Labor: The U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI) was used; specifically, the ECI for the private industry workers in the “Transportation and Warehousing” industry (Series ID CIU2014300000000I). The labor metric includes all worker classifications and includes both wages and benefits. Accessed at <https://fred.stlouisfed.org/> using Series ID.
- Regional Labor: The U.S. Bureau of Labor Statistics (BLS) Employment Cost Index (ECI) was used; specifically, the ECI for the private industry workers in all industries and occupations (Series IDs CIU2010000000230I, CIU2010000000249I, CIU2010000000220I, CIU2010000000212I, CIU2010000000248I, CIU2010000000211I). The labor metric includes all worker classifications and includes both wages and benefits. Index is used to determine premium for each region relative to national baseline. Accessed at <https://fred.stlouisfed.org/> using Series ID.
- National and State Energy: The U.S. Energy Information Administration Electric Power Prices, by state, were used. The series is the Average Price of Electricity to Ultimate Customers. (Industrial) found in table a Table 5.6.a. The data used in the index is the average of monthly reported rates by state by taking three months of revenue and sales to generate quarterly data. Accessed at <https://www.eia.gov/electricity/monthly/>.
- National and Metro Rent/Lease/Mortgage: Cushman & Wakefield Quarterly Warehouse Net Asking Rents, were used. Overall U.S. rent is based on the average asking rents weighted by vacancy by market. In addition, a surcharge for rental rate growth in 80 selected metro markets was based on the same quarterly data provided by Cushman & Wakefield.
- National Supplies and “Other”: To represent the growth in supplies and also “other” warehouse expenses, the U.S. Bureau of Labor Statistics (BLS) Producer Price Index (PPI) was used; specifically Final Demand: finished goods less foods and energy (Series ID WPUFD4131). Accessed at <https://fred.stlouisfed.org/> using Series ID.
- National Maintenance: To represent the growth in repair and maintenance cost, the U.S. Bureau of Labor Statistics (BLS) Producer Price Index (PPI) by Industry was used; specifically Nonresidential building maintenance and repair (Series ID PCU2381MR2381MR). Accessed at <https://fred.stlouisfed.org/> using Series ID.