



June 5, 2023

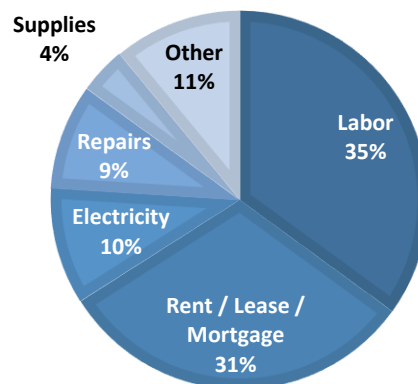
Cold Chain Index: 2023 Quarter 1

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 area 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. Labor was the largest share of expenses, at 35% of the total. Rent/Lease represented 31% of total expenses. Electric power accounted for 10% 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 the Q1 release of the CCI are based on the 2021 IARW Productivity and Benchmarking Survey results (FY2021).

In the current release, the CCI reports the growth rate in expenses in the first quarter of 2023 compared with the first quarter of 2022. 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.¹

Figure 1. Cost Shares of North American Refrigerated Warehouses, based on FY2021 IARW Productivity & Benchmarking Survey



¹ 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 12.58% in the first quarter of 2023 relative to the same period in 2022, marking the fourth consecutive quarter of price increases by more than 10% annually (Figure 2). Rent experienced a significant increase of 29.56%, surpassing the 2022 peak growth rate of 21.57%. Meanwhile, electricity costs rose by 9.43%, a slower pace compared to the escalation in Q4 2022. Labor costs remained relatively stable, with a rise of 3.13% over the first quarter in 2022.

In Q1 2023, national occupancy costs for warehouses and distribution properties exhibited a year-over-year growth of 29.56%. Notably, three metropolitan markets, namely Reno, Philadelphia, and Los Angeles, witnessed significant spikes in asking rents, with rent rising by more than 40% compared to Q1 of 2022. In 15 metropolitan markets, occupancy costs for warehouses in Q1 2023 declined or were unchanged compared with the same period in 2022. This estimation of occupancy cost growth is based on data collected by Cushman & Wakefield on Quarterly Net Asking Warehouse Rents across 80 different metropolitan markets in the United States.

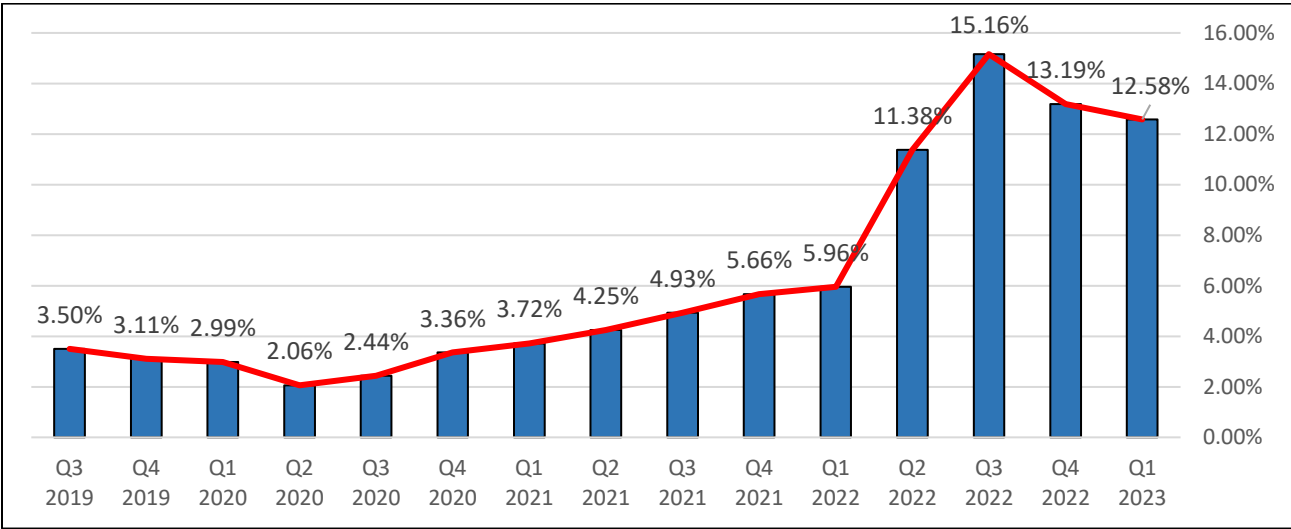
The national average cost of electric power for industrial users increased by 9.43% in Q1 2023 compared with Q1 2022. The prices of electricity at the state level exhibited wide variations, with Western States Montana and Nevada leading the way with growth rates of 61.13% and 59.7% respectively. In only six states, electricity costs fell in the most recent quarter (New Jersey, New Mexico, New York, North Dakota, South Dakota, and Vermont).

In the first quarter of 2023, the maintenance and repair cost index for non-residential buildings grew by 4.62%. This growth rate was the slowest in the past four quarters.

In Q1 2023, the national average cost of labor for the transportation and warehousing industry continued to grow at its usual rate, at 3.13% (Figure 3). Regional differences in employment costs were based on the employment cost index for all workers, while national trends were specific to the transportation and warehousing industry. The Mountain region had the highest annual growth rate in labor costs at .4 percent more than the national average.

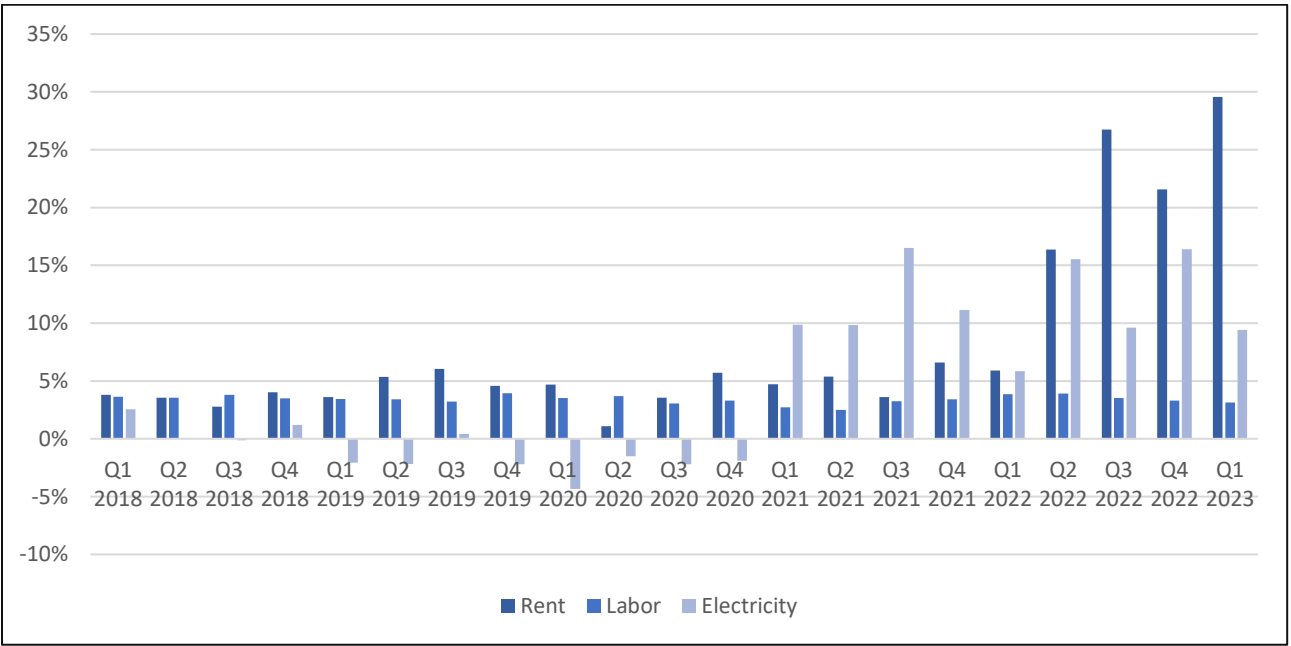
The cost of supplies is proxied by the producer price index (PPI) for final demand finished goods excluding food and energy. This cost item grew by 6.39% in Q1 2023. While this showed a decrease compared to the same quarter of the previous year, it still represented one of the highest year-over-year increases in the cost of supplies over the past twenty years.

Figure 2. Cold Chain Index, by Quarter during 2019-2023



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 2019-2023



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 5.6.b. Beginning in 2022, EIA provided a quarterly estimate for each state. 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. Warehouse / Distribution category within Industrial Rents. Accessed at <https://www.cushmanwakefield.com/en/united-states/insights/us-marketbeats/us-industrial-marketbeat>
- 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.