June 21 Freight Initiatives Committee Agenda

- Roll Call of Members
- Approval of Minutes
- Update on NJTPA Freight Division Activities
- Trucking Industry Update
 - Nicholas Geale, Vice President for Workforce Policy, American Trucking Associations (ATA)
 - Jeffrey Short, Vice President, American Transportation Research Institute (ATRI)
- Two-minute Reports on Freight Activities from Committee Members
- Next Meeting: <u>Monday</u>, August 15, 2022 NJ State Freight Plan Update
- Adjournment



Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

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NJTPA Freight Division Update: 1Q22 Industrial Market

• Over 860 million SF in the region

NITP

- 15.4 million SF under construction
 - Two buildings in Middlesex County (1.3 million SF and 1.2 million SF)
 - 1 million SF building in Monmouth County
 - 876,000 SF building in Hudson County (UPS)





Direct to Consumer is a Key Market

According a recent National Retail Federation survey of consumers:

- Ecommerce is the preferred means for 68%, up from 52% in 2020 and less than 30% in 2019.
- 37% would choose a "local" store within a 3-mile radius for inperson shopping.

Ecommerce's share of total retail sales by quarter, Q1 2019-Q1 2022

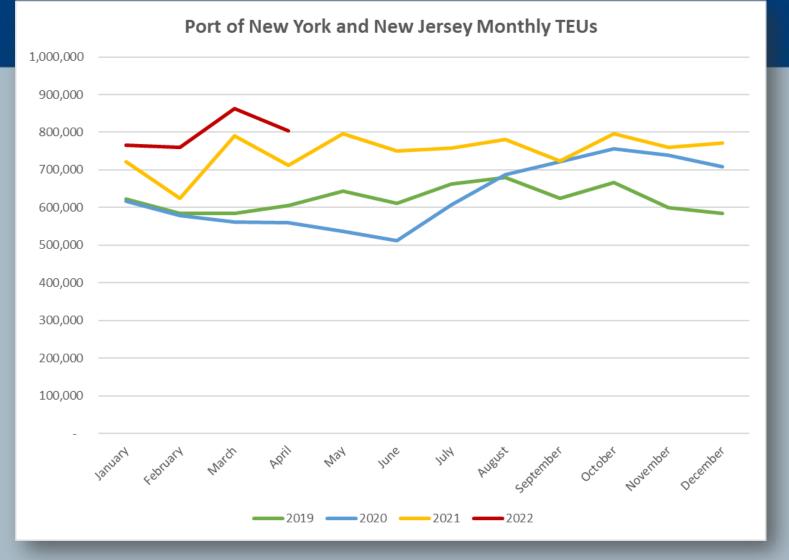


Source: Digital Commerce 360 analysis of U.S. Department of Commerce data; May 2022 *Total retail figures exclude sales of items not normally purchased online such as spending at restaurants, bars, automobile dealers, gas stations and fuel dealers



Source: National Retail Federation, <u>https://nrf.com/blog/how-wfh-is-changing-</u> <u>consumer-behavior</u> February 24, 2022 Source: <u>https://www.digitalcommerce360.com/article/quarterly-online-sales/</u>

Container Movements at the Port



Source: Port Authority of New York and New Jersey



NJTPA Freight Division Update

- Updating and enhancing the Goods Movement Strategies for Communities Webtool
- Advancing FY 2021 Freight Concept Development Program Studies
- Progressing the Freight Rail Grade Crossing Assessment Update
- Beginning work on enhancing last mile commutation options for workers at freight facilities

Trucking Industry Update

- Nicholas Geale, Vice President for Workforce Policy, American Trucking Associations (ATA)
- Jeffrey Short, Vice President, American Transportation Research Institute (ATRI)

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Trucking Industry Update

June 21, 2022

Nick Geale

VP Workforce and Labor Policy American Trucking Associations ngeale@trucking.org



Macro Status: That 70s Show Rerun

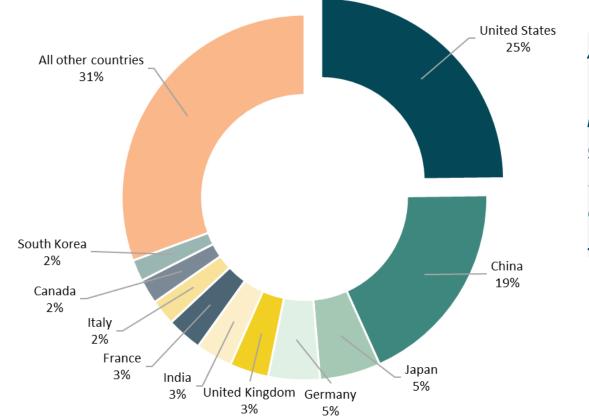
- National security challenges
- Inflation
- Oil prices
- Massive government spending
- Expanded Govt authority COVID Mandates, \$15 minimum wage, Paycheck fairness, PRO Act, paid leave, blacklisting, arbitration limitations, Build Back Better
- Stagflation?
- Disco, bell bottoms and polyester?



The U.S. Economy is Still best Game in Town

World GDP, 2022

U.S. GDP was \$23 trillion in 2021, representing nearly a quarter of global economic output. Despite challenges, we are in much better shape than most economies.



An important feature of the U.S. economy is its primary source of growth: consumers. Roughly 70% of U.S. GDP comes from consumer spending.

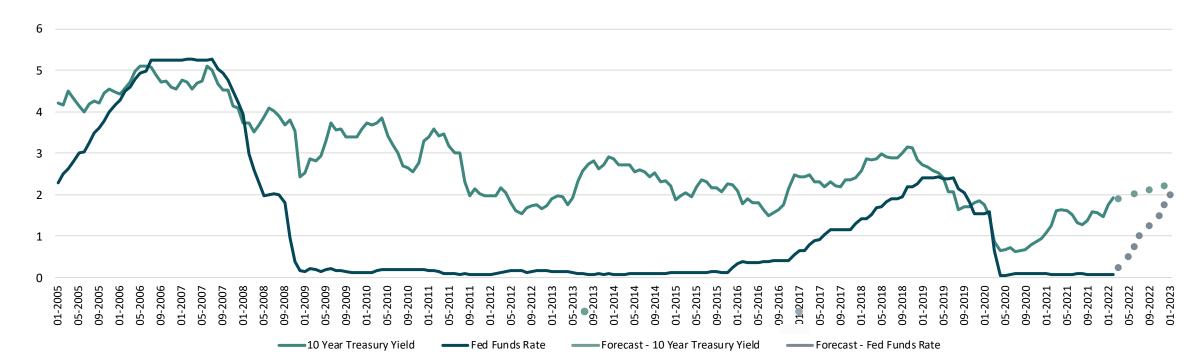
Source: populationU, "Countries by GDP"



Rates Trend Higher

January 31, 2005, to January 31, 2023

Analysts expect the Federal Reserve to start to reverse its quantitative easing policies with the possibility of five to seven rate hikes in 2022. This is a pivot from its very accommodative stance toward a more neutral setting.



Source: New York Federal Reserve, Bloomberg, Federal Reserve Bank of St. Louis

The federal funds rate is the target interest rate set by the Fed at which commercial banks borrow and lend their excess reserves to each other overnight.



A Bumpy Ride

January 1, 2022, to June 17, 2022

The S&P 500 has fallen 22.4% year to date.

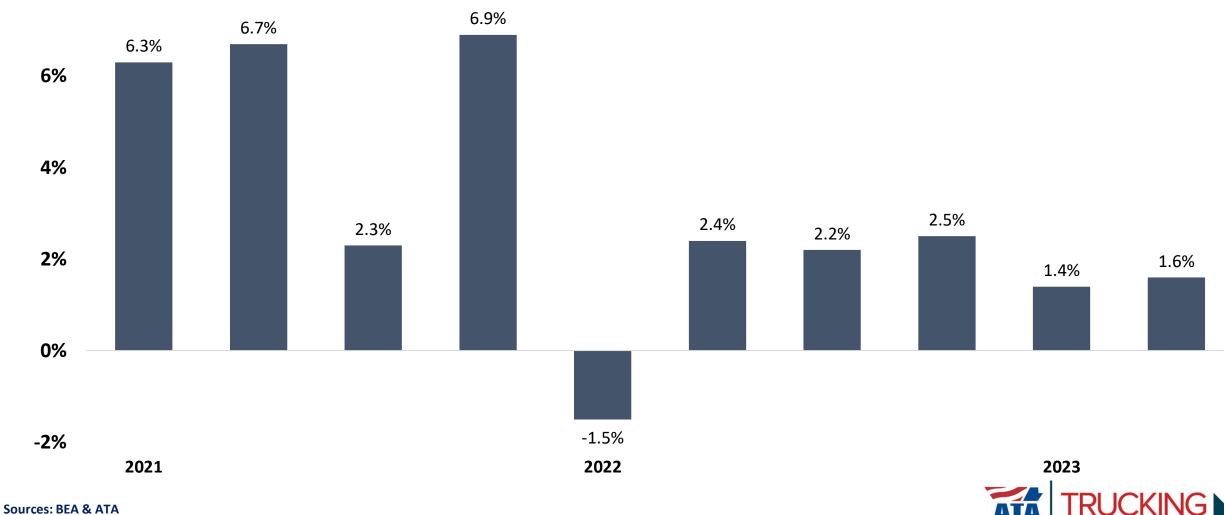


Source: Bloomberg. The Standard & Poor's 500 Stock Index is a broad-based measure of U.S. stock market performance and includes 500 widely held common stocks. Indices are unmanaged, and investors cannot invest directly in an index. Returns include reinvested dividends.



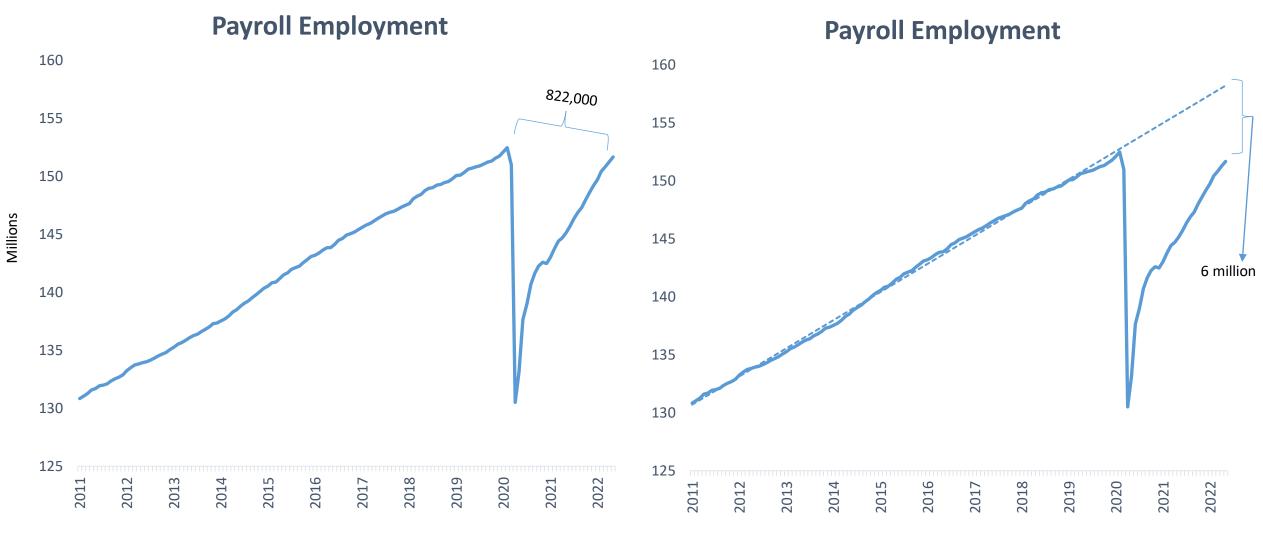
Quarterly Real Gross Domestic Product Growth

Annualized Rates



8%

Key Employment Metrics



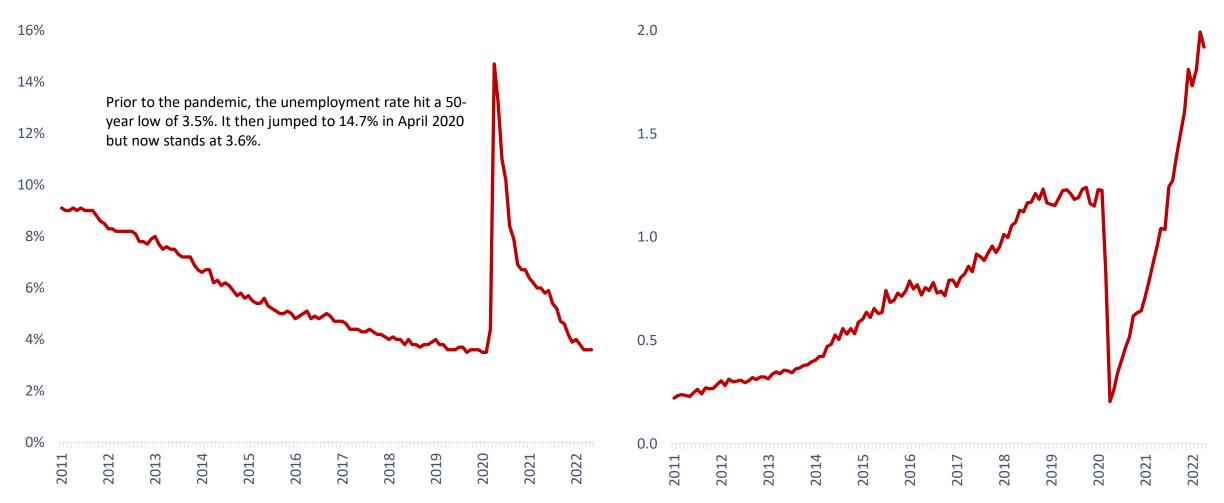
Sources: DOL & ATA



Key Employment Metrics

Unemployment Rate

Job Openings per Unemployed Person



Sources: DOL & ATA

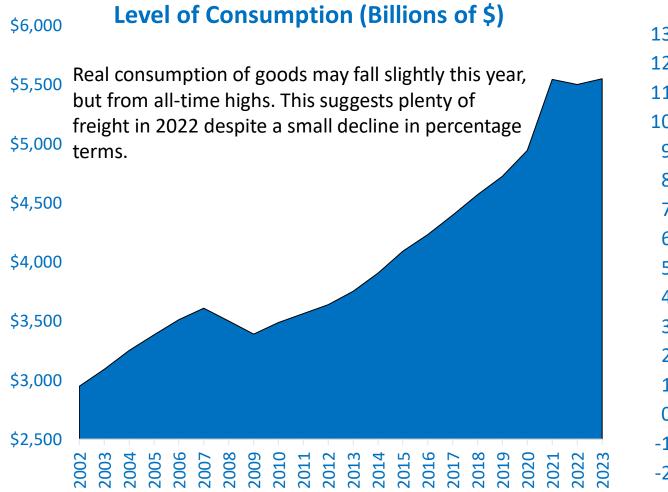


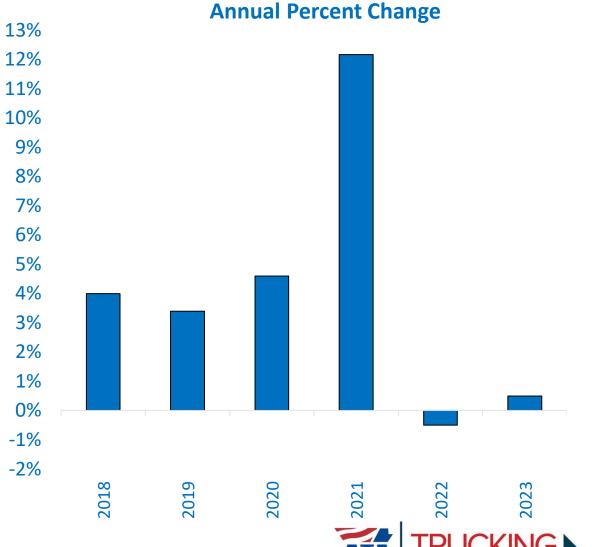
2022 Trucking Industry Expectations

- 1. Freight volumes slow from the 2021, but remain elevated.
 - However, freight is transitioning back to contract from the spot market.
- 2. Spot market rates are under pressure, less so for contract freight.
- 3. But there are some industry risks (not all risks are equal)
 - Diesel prices & DEP
 - Equipment costs & availability
 - Labor costs & availability
 - Economic recession from Fed overtightening



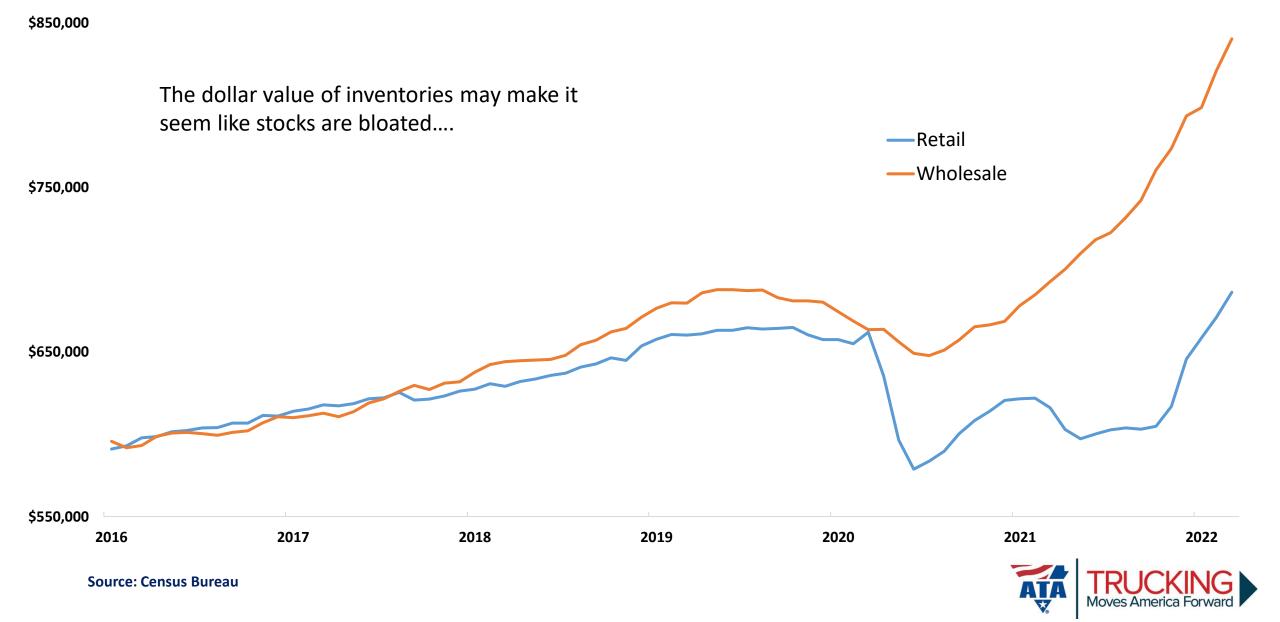
Personal Consumption of Goods (Inflation Adjusted)





Retail & Wholesale Inventories

(Data adjusted for seasonal, holiday, and trading-day differences, but not price changes)



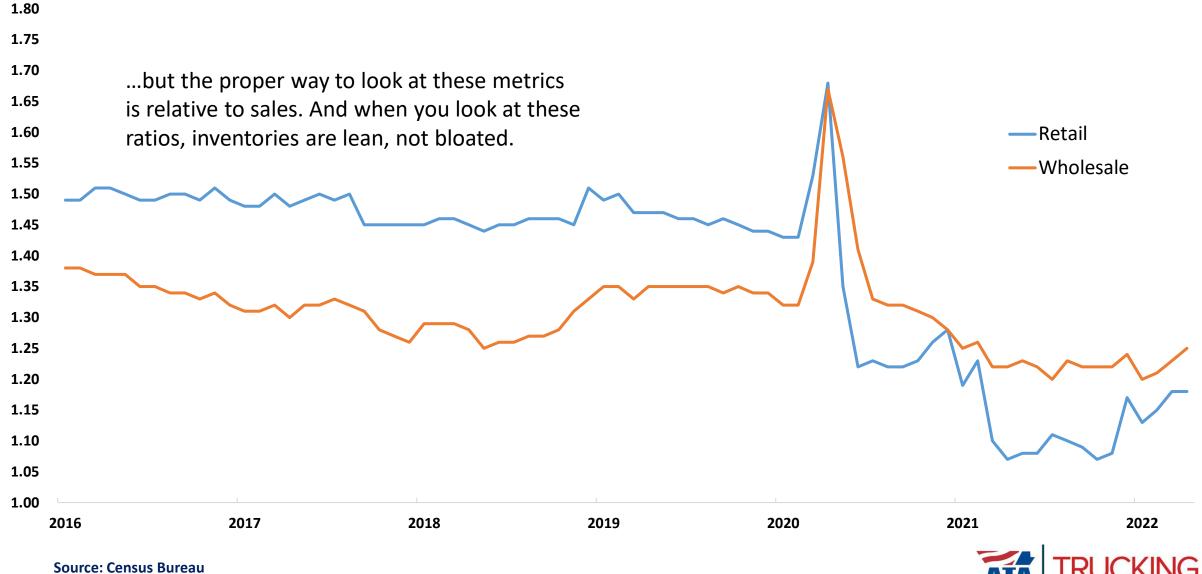
Freight Buckets



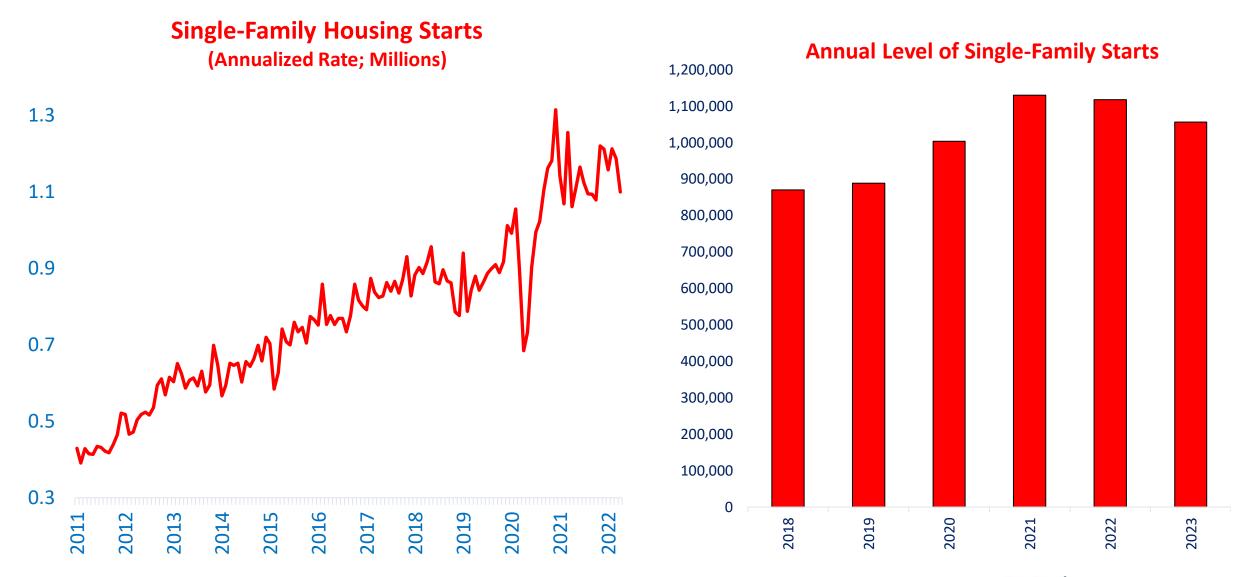


Retail & Wholesale Inventory-to-Sales Ratio

(Data adjusted for seasonal, holiday, and trading-day differences, but not price changes)



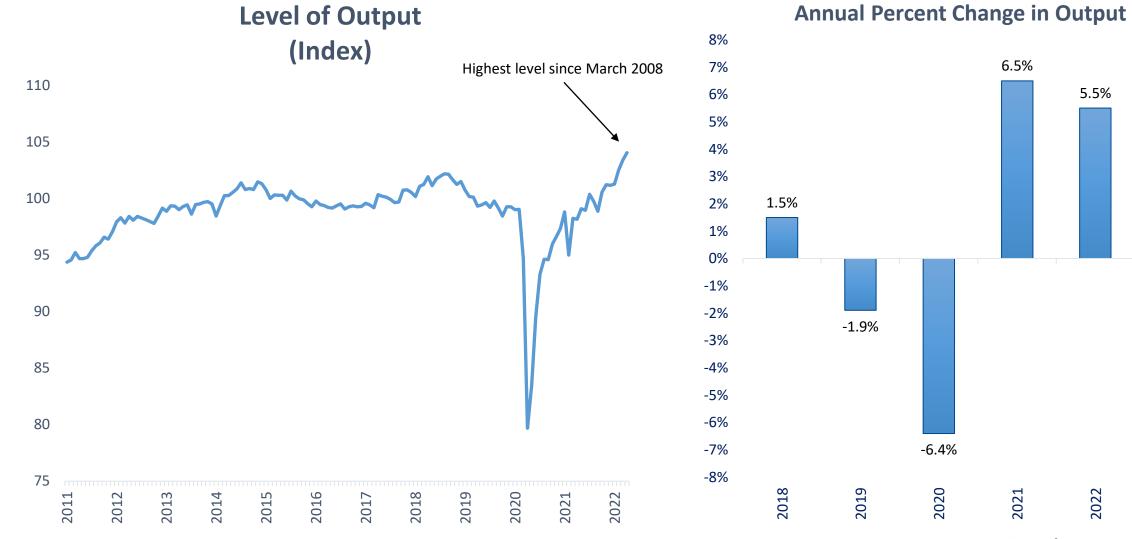
Housing Market: Construction





Sources: Census Bureau & ATA (Note: Interest rate increases will likely impact housing starts substantially).

Factory Output



2.4%

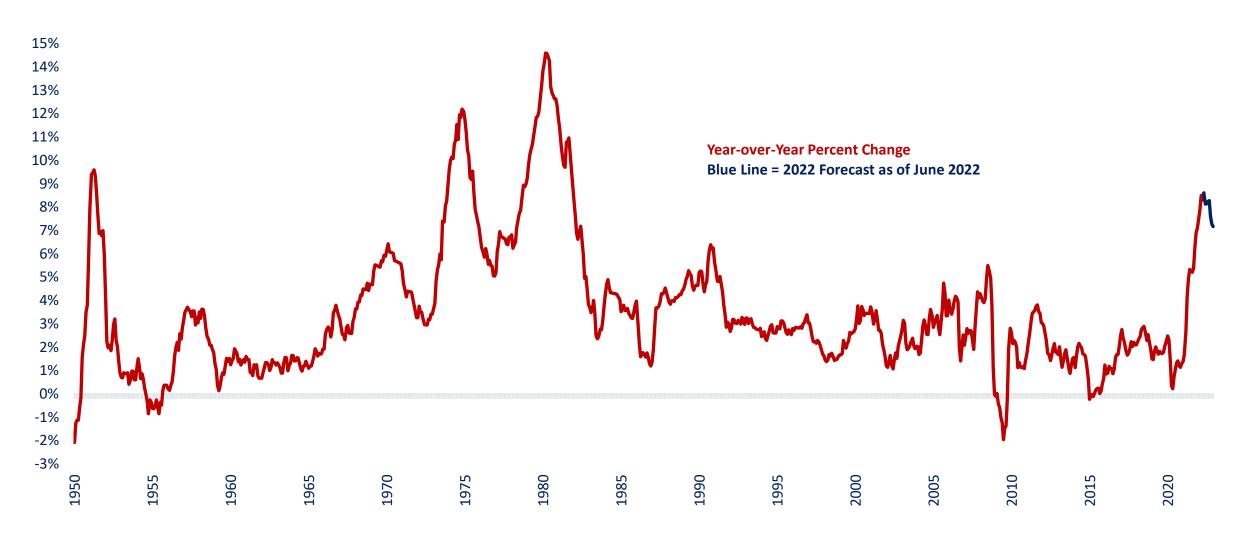
2023

Moves

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Source: Federal Reserve & ATA

Consumer Price Index

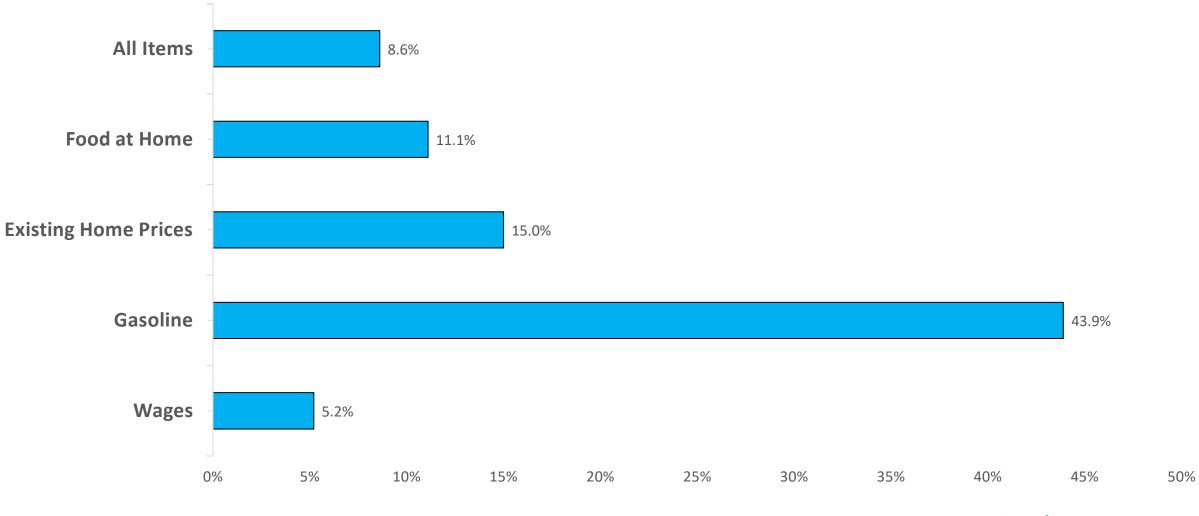


Sources: BLS & ATA



May 2022 Price & Wage Changes

Year-over-Year Percent Change







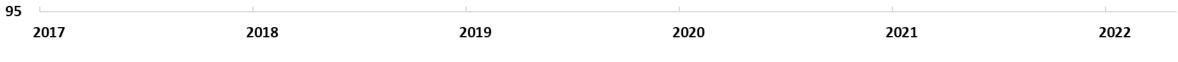
Trucking Demand



Total Truckload Contract Loads

(3 month moving average; index; 2015 = 100)

If the "drivers" of truck freight have been good, then why hasn't contract loads fully recovered to pre-pandemic levels? Because of constrained supply – lack of drivers and equipment – which is why the spot market surged during the pandemic.

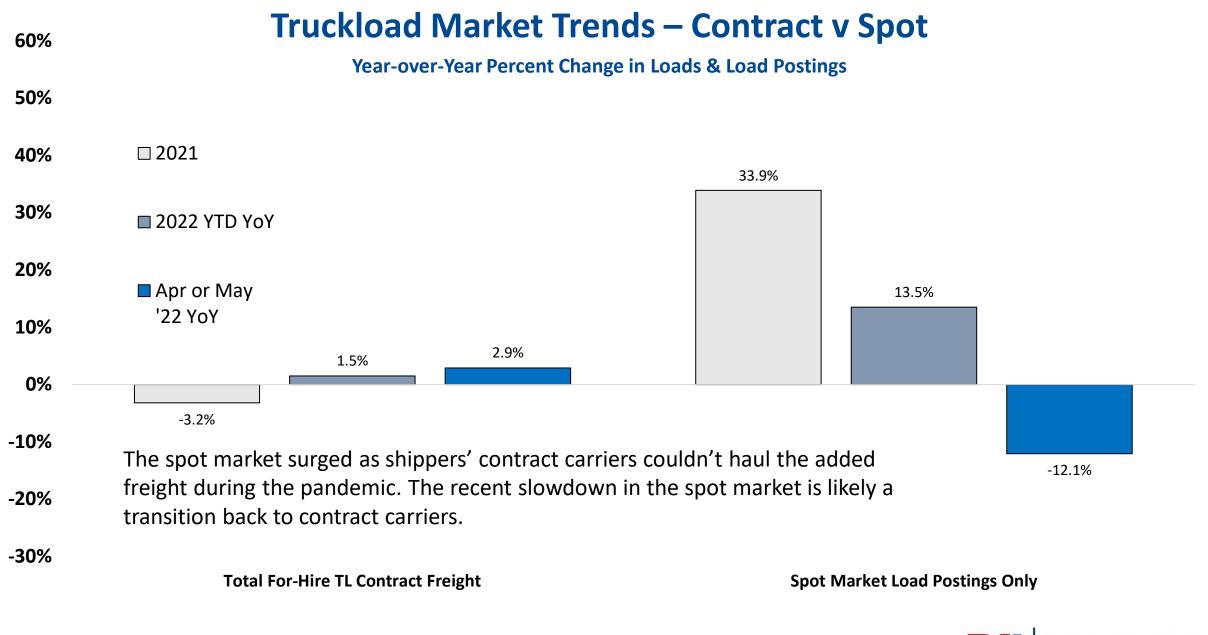




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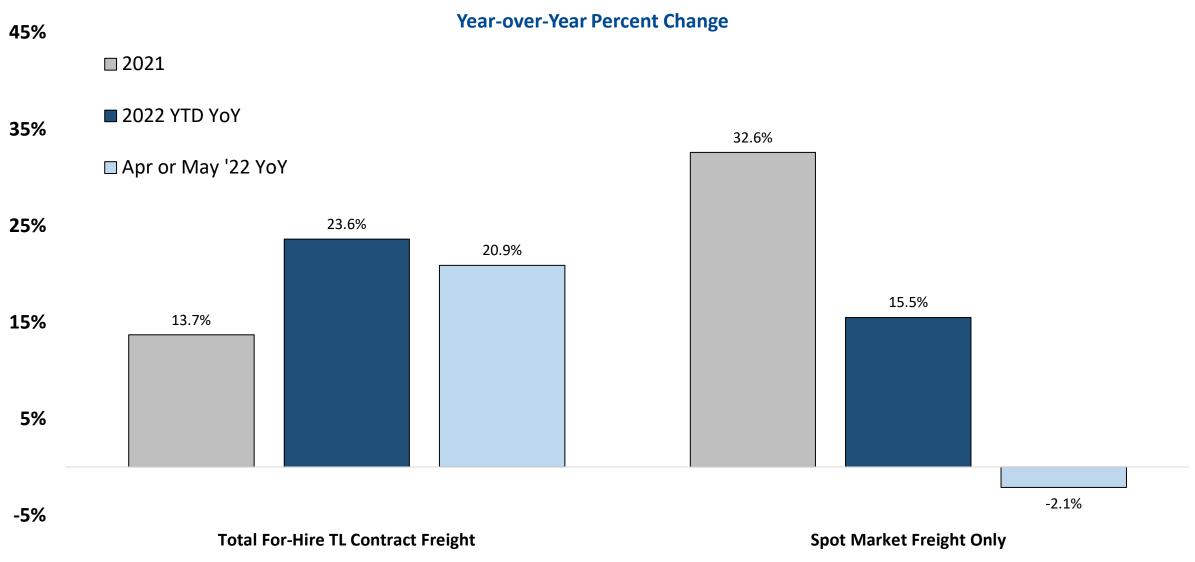
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Truckload Market Trends – Contract vs Spot Pricing Metrics



Sources: ATA's Trucking Activity Report & DAT.com - Contract freight is average revenue per mile excluding fuel surcharge revenue

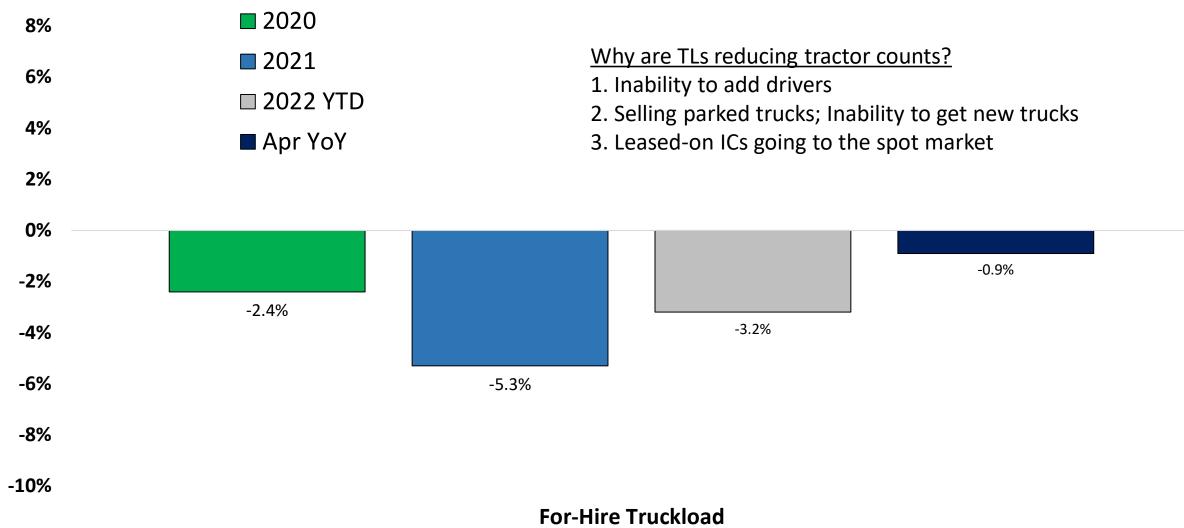


Trucking Supply

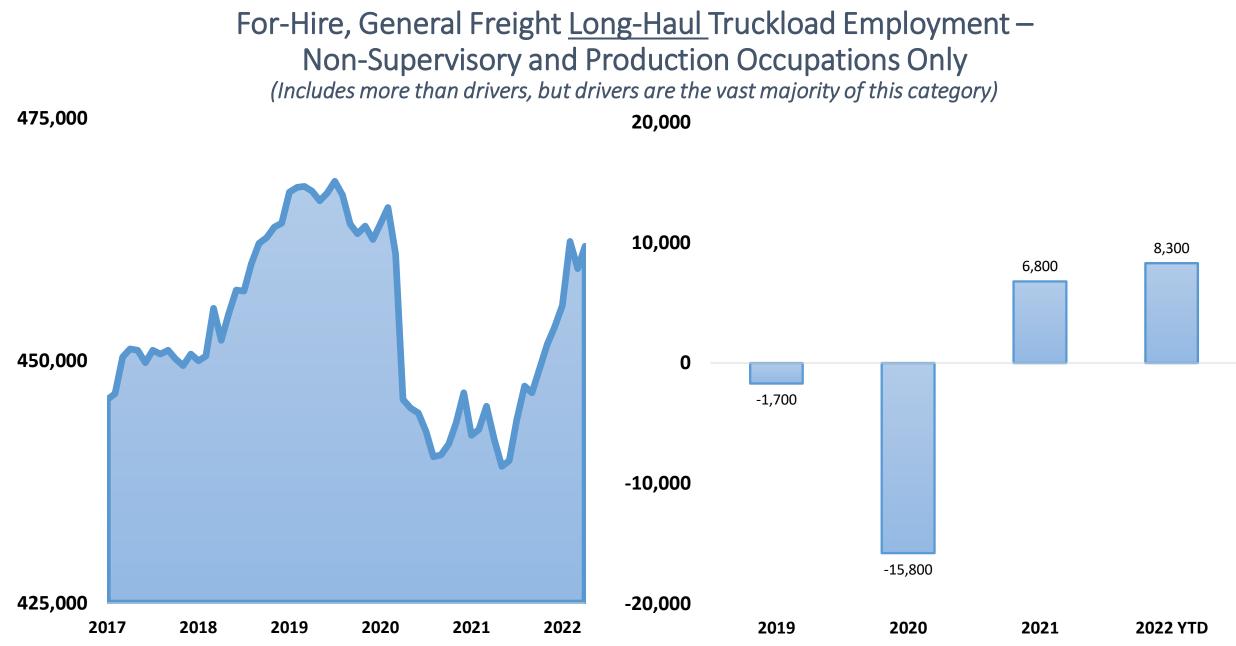


For-Hire Carrier Power Unit Fleet Trends

Year-over-Year Percent Change

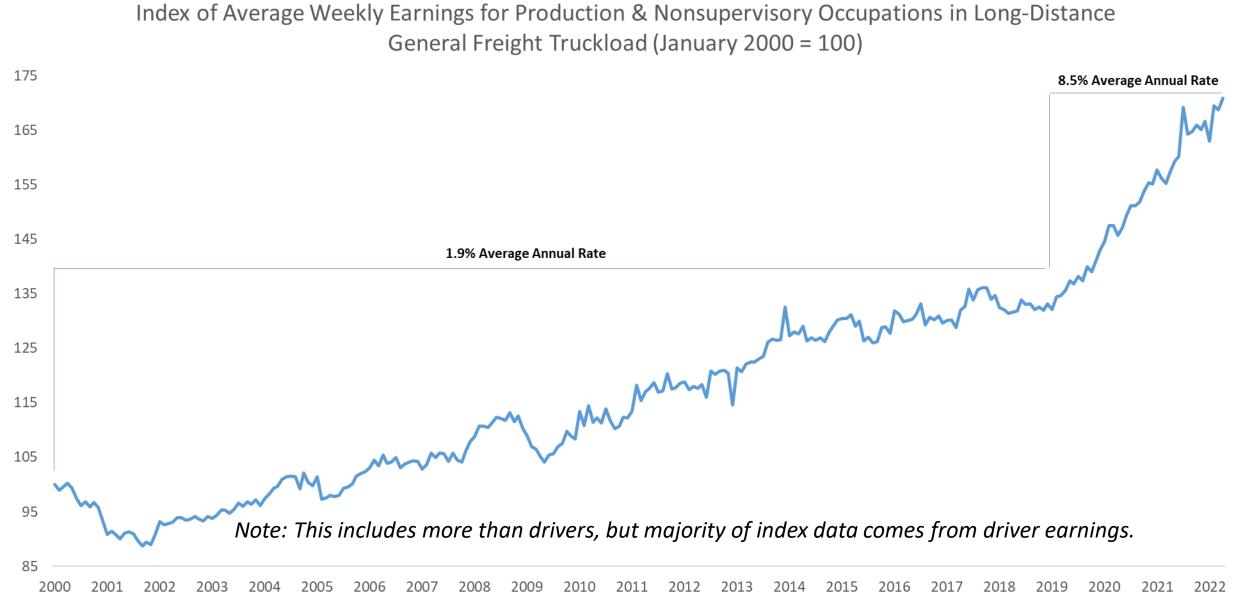






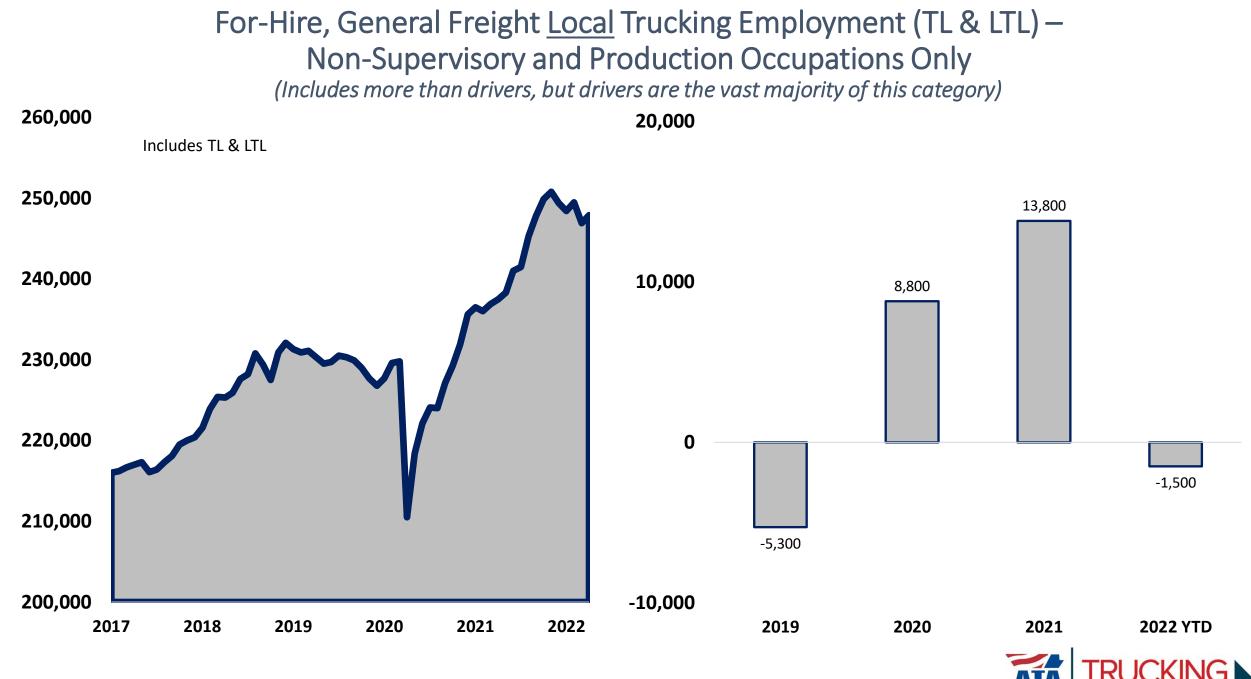


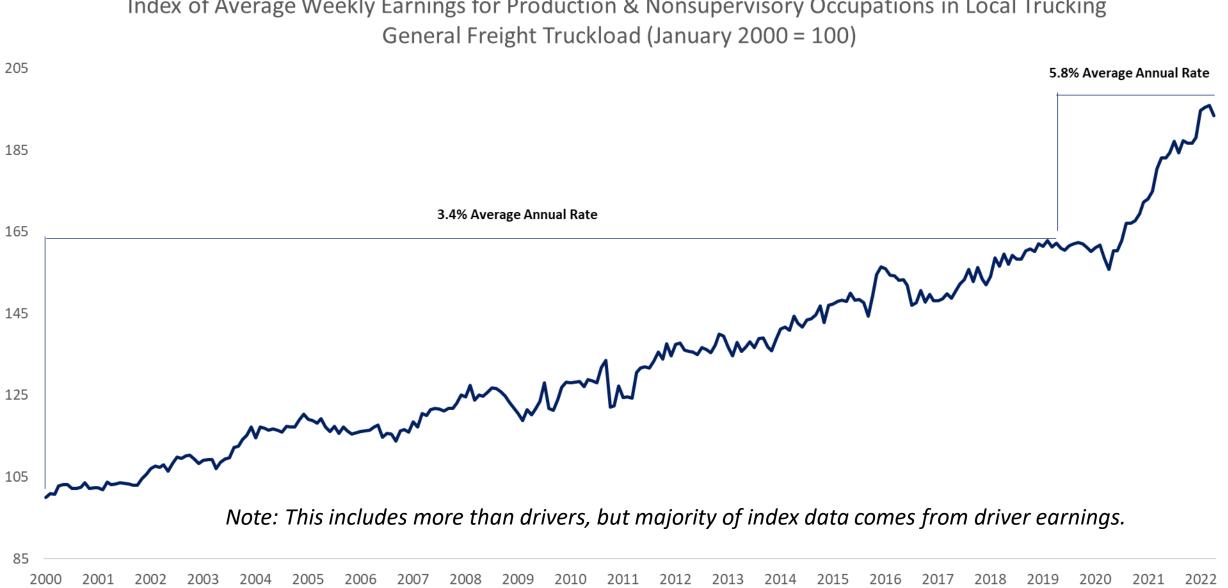
Source: Department of Labor





Sources: Department of Labor & ATA

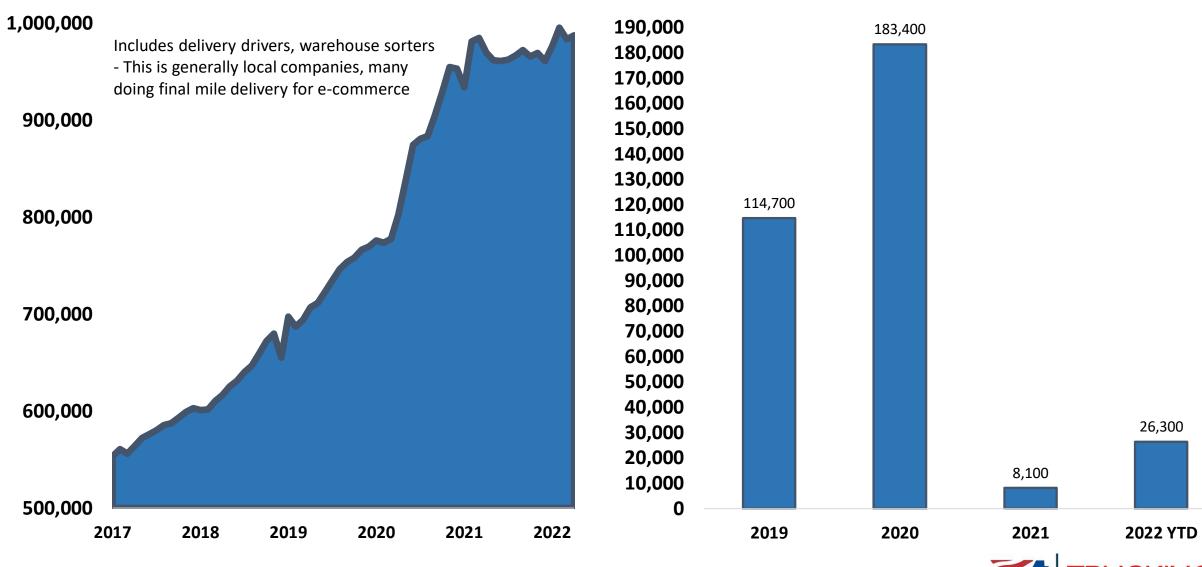




Index of Average Weekly Earnings for Production & Nonsupervisory Occupations in Local Trucking

Sources: Department of Labor & ATA

Couriers and Messengers Industry Employment – Non-Supervisory and Production Occupations Only





Longer-Term, What to Watch For

- 1. The pandemic years, ironically, have been good for the trucking industry generally.
 - Lots of "goods" freight, with a few exceptions
 - Tight capacity and higher rates
- 2. But, costs have been a challenge too
 - Driver wages/ retention/ recruitment
 - Liability insurance
 - Equipment prices (and availability)
 - Fuel Prices
- 3. What happens when the next freight recession hits?
 - Many fleets, especially smaller ones, could be in serious trouble



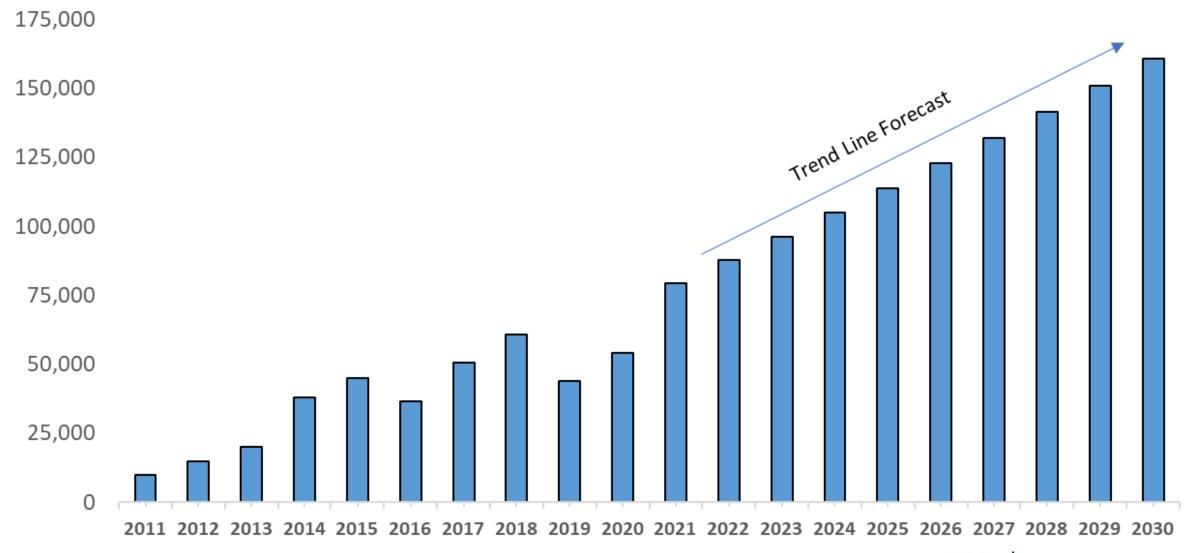
Truck Driver Shortage

The driver shortage is bad for many reasons

- A. Historical structural causes remain (demographics, waiting, lack of parking & lifestyle)
- B. Plus, since 2020 there have been other pressure points
 - a) ATA fully supports FMCSA's Drug & Alcohol Clearinghouse.
 - As of April 1, 2022
 - 89,650 drivers are in prohibited status with at least 1 violation, with 67,368 of those not starting the return to duty process.
 - This means, for very good reasons, we need to recruit even more new drivers to the industry.
 - b) In 2020, pipeline of new drivers is likely less (perhaps much less) schools and DMV's limitations during the pandemic. Back up to 100% capacity now.
 - c) Some drivers left the industry temporarily or permanently due to the pandemic.
 - i. Health concerns, pandemic related government assistance and childcare issues
- <u>Bottom line</u>: Drivers have left the industry and we have not added enough new drivers. It will take a while to dig out of this supply hole and driver pay will continue to go up as a result.



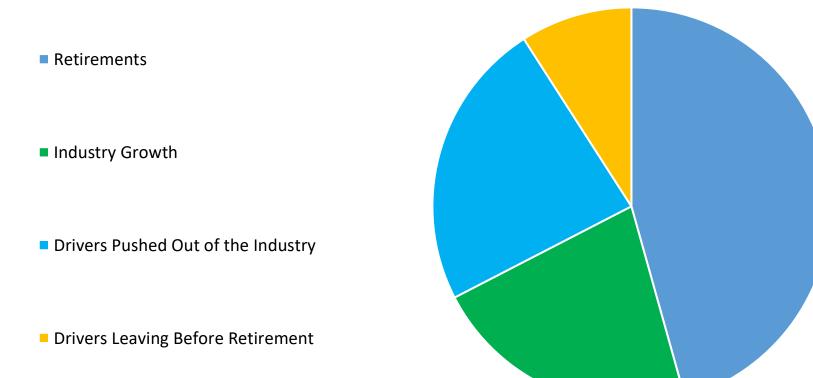
Truck Driver Shortage





Source: ATA

Share of Drivers Needed through 2030





Source: ATA

International Problem

- The International Road Transport Union (IRU) annual driver shortage survey has revealed that, despite reduced demand due to COVID-19, there is still an alarming shortage of drivers.
- Surveying 800 road transport companies from over 20 countries, IRU found that driver shortage was most acute in Eurasia, where last year 20% of driver positions were not filled. China was the least affected country in 2020 with only 4% of jobs open.
- With the average age of professional truck drivers globally now close to 50, and steadily growing older each year, this demographic time bomb will only get worse without action to reduce minimum driver age.

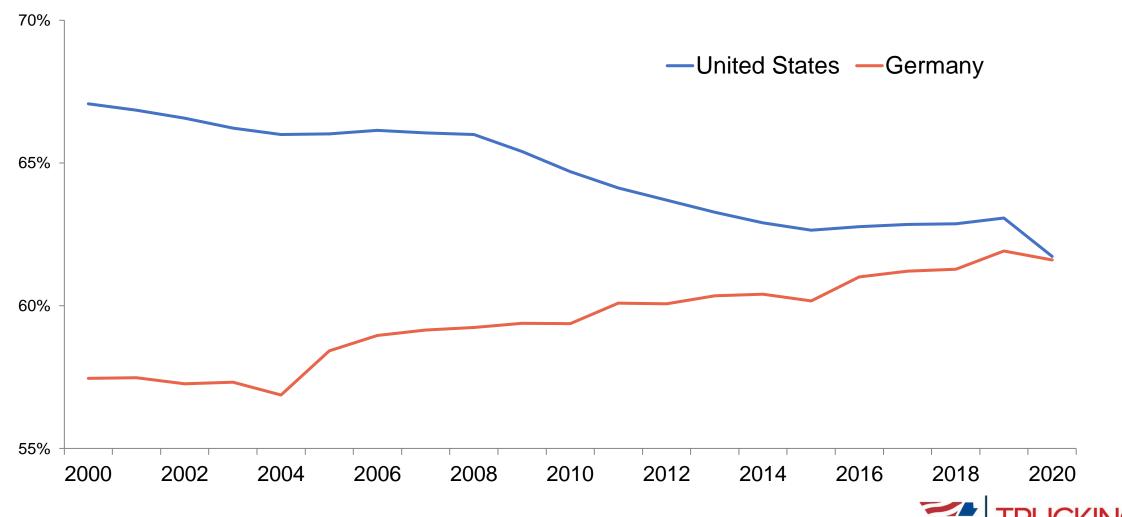


Simple Math Dictates Increasing Need For Drivers

- Drivers are working 20% fewer hours down to 100,000 average miles from 125,000 fifteen years ago. This decline in mileage per truck long predates the COVID emergency.
- If you factor that decrease in mileage, drivers are actually making more per mile than they ever have, that means there is something else driving our problem.
- They, like the rest of us, want to spend more time with families and friends, and they should have that option.
- 25,000 fewer miles per truck per year, however, means we need more trucks and more drivers just to maintain the same level of service.



Labor Force Participation Rate



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Moves Ame

Source: World Bank

Trucking Labor Force Solutions



An All of the Above Approach

- Short Term Solutions: Drive Safe Pilot, Registered Apprenticeship, Task Force on Women in Trucking, DOT Public Service Outreach, Red Tape Reductions at DOT, Expanded Third-Party Testing, Incentives in Surface Transportation Reauthorization, Making Truck Driver a National In Demand Position for Workforce Training Funding, Scheduling Improvements, Independent Contractors, Immigration/Visas, Bonding Program
- Longer Term Solutions: Additional Recruitment and Outreach (Diversity and Inclusion Efforts), Greater Use of Technology, Mentoring Expansion (particularly urban areas), WIOA Reauthorization, new funding at state and federal level to promote driving and similar trades (driver credit)



DRIVE SAFE ACT PILOT

- 3000 Drivers Between 18 and 20 Starting Soon (May)
- Application Process
- Equipment Requirements
- Reporting Requirements
- INSURANCE!!!!!
- Added Requirement: Registered Apprenticeship
- DOT/ DOL funding for support possible.



Registered Apprenticeships

- Historically military has been the focus for trucking and registered programs.
- Competency rather than classroom.
- Fastport as intermediary for federal; state apprenticeship agencies in 27 states.
- DRIVE Safe Act (under 21) will require.
- Technicians & movers also possibly.
- DOT/ DOL funding for support possible.
- CAVEAT: Companies will not get \$ to train their own workers generally.



Workforce Innovation and Opportunity Act

- The Workforce Innovation and Opportunity Act (WIOA) was signed into law on July 22, 2014. Congress passed the Act by a wide bipartisan majority. It is now up for reauthorization.
- Designed to help job seekers access employment, education, training, and support services to succeed in the labor market and to match employers with the skilled workers they need to compete in the global economy.
- Problems with current allocation of funding....incumbent worker training (for those most likely to be able to become drivers are underfunded).

Source: U.S. Department of Labor https://www.dol.gov/agencies/eta/wioa/about



Workforce Boards & WIOA

- Integrate industry needs into employment services locally
- Advertise opportunities and industries- PSAs
- Support training financially- CDL subsidy; other training technicians
- Wrap around services: child care, health care
- Sector partnerships



Protecting Independent Contractor Status

- AB5 litigation in Supreme Court (FAAAA Preemption)
- NLRB Filing on IC status —likely they will try to go back to Obama standard, ATA filed brief opposing and joined coalition
- NLRB- XPO Logistics case -- organizing ICs in CA
- DOL Wage and Hour targeting "logistics" industry
- FTC- ICs as anticompetitive, antitrust exemptions
- Good news in some states WV, MO, FL, AZ, WI



Visa Programs for Truck Drivers

	H2-A / H2-B	B-1	EB-3
Administered by	Departments of State & Homeland Security	Departments of State & Homeland Security	Departments of State, Labor & Homeland Security
Visa Type	Non-immigrant	Non-immigrant	Immigrant
Visa Validity	Up to 9 months yearly	10 years (renewable)	10 years (renewable)
Used for	Seasonal Help	International Commerce	Labor Shortages
Qualifying Criteria	 Pay Market Wages Demonstrate Labor Shortage Demonstrate Seasonality 	 Foreign remuneration for work done while in U.S. Drivers must prove entry is temporary and only to engage in international trade No Delivery/Unloading within the territory where goods were originated and loaded 	 Pay Market Wages Demonstrate Labor Shortage Demonstrate Financial Strength
Area of Employment	Limited	Limited to stream of International Commerce	No restrictions
Yearly Visa Cap	66,000 H-2B, No Cap for H2-A	No Cap	40,000



Longer Term: Expanding the Pool

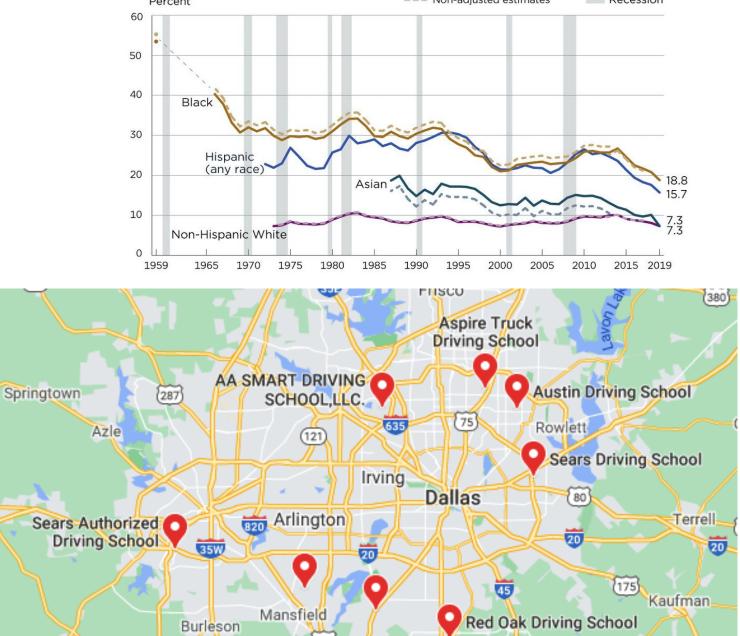
- Women –safety and security improvements
- Former felons DOL Bonding program, TWIC, Hazmat suitability
- Youth- Under 21 pilot aka SDAP
- Urban populations drivers licenses, outreach
- Veterans- better documentation of 88mike experience for insurance, licensing, improved waiver
- More trucking schools and funding Pell grants, creative financing, scholarships, registered apprenticeships
 - Louisiana offered 100 scholarships ---3500 people applied



Untapped Opportunity

- Below the Poverty Line
 - 18.8% of African Americans
 - 15.7% of Hispanic Americans
 - 70% live in the inner city
 - 39% do not have a valid driver's license
- Where are the driving schools?
 - Not in the public schools
 - Not in the inner city
 - They are where the money is

Poverty Rate by Race and Hispanic Origin: 1959 to 2019 Percent Recession Recession



Questions?



ATRI Trucking Research Update

Jeffrey Short Vice President

American Transportation Research Institute





Trucking industry's not-for-profit research organization

Safety
Mobility
Economic Analysis
Technology
Environment

www.TruckingResearch.org



Analysis of Class 8 Battery Electric Trucks

Understanding the CO₂ Impacts of Zero-Emission Trucks

Infrastructure Considerations for Electric Trucks



Understanding the CO₂ Impacts of Zero-Emission Trucks

2021 RAC Priority

Life-cycle CO₂ emissions study for:

- Internal combustion engine (ICE) trucks powered by diesel
- Battery electric vehicle (BEV) trucks powered by electricity
- Fuel cell electric vehicle (FCEV) trucks powered by hydrogen
- Compares CO₂ emissions across from the full vehicle life-cycle:
 - Vehicle production
 - Energy production and consumption
 - Vehicle disposal/recycling

Understanding the CO₂ Impacts of Zero-Emission Trucks

A Comparative Life-Cycle Analysis of Battery Electric, Hydrogen Fuel Cell and Traditional Diesel Trucks



Prepared by the American Transportation Research Institute



May 2022



Research Approach

Federal data – utilized GREET Model from USDOE Argonne National Lab

- Industry data sources
- Key vehicle assumptions
 - Class 8 sleeper cab
 - Vehicle life: 1,000,000 miles
 - Vehicle minimum range: 500 miles

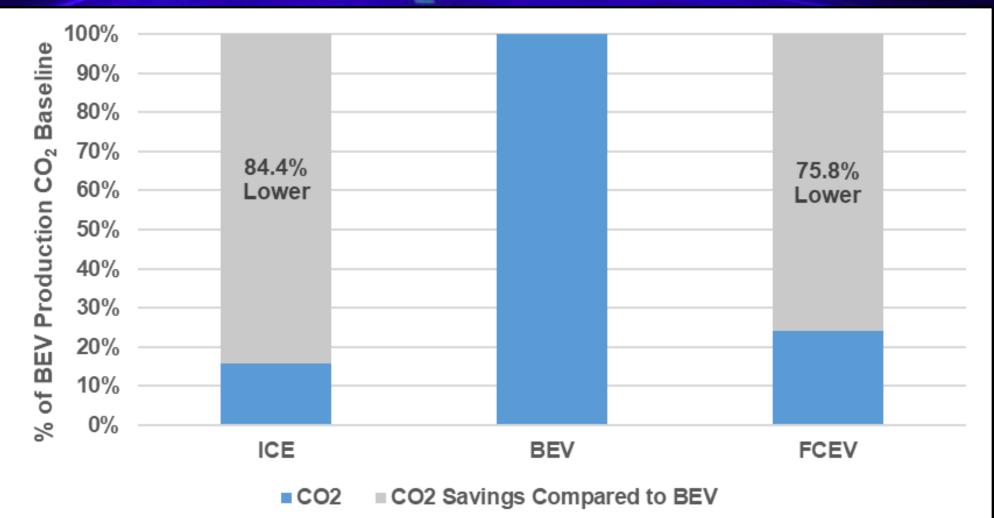


Vehicle Production Co₂ Emissions (lbs.)

	ICE	BEV	FCEV
Vehicle Components	56,103	49,916	97,348
Assembly	8,563	7,531	10,922
Battery	374	416,891	3,527
Fluid	9,687	3,717	3,717
Total	74,728	478,055	115,514



Vehicle Production





	ICE	BEV	FCEV
	(diesel)	(electricity)	(hydrogen)
Lifetime Average	7.19 mpg	0.438 miles per	10.61 miles per
Fuel Economy		kWh	kg
Lifetime Fuel Consumption (1 million miles)	139,082 gallons	2,280,897 kWh	94,251 kg

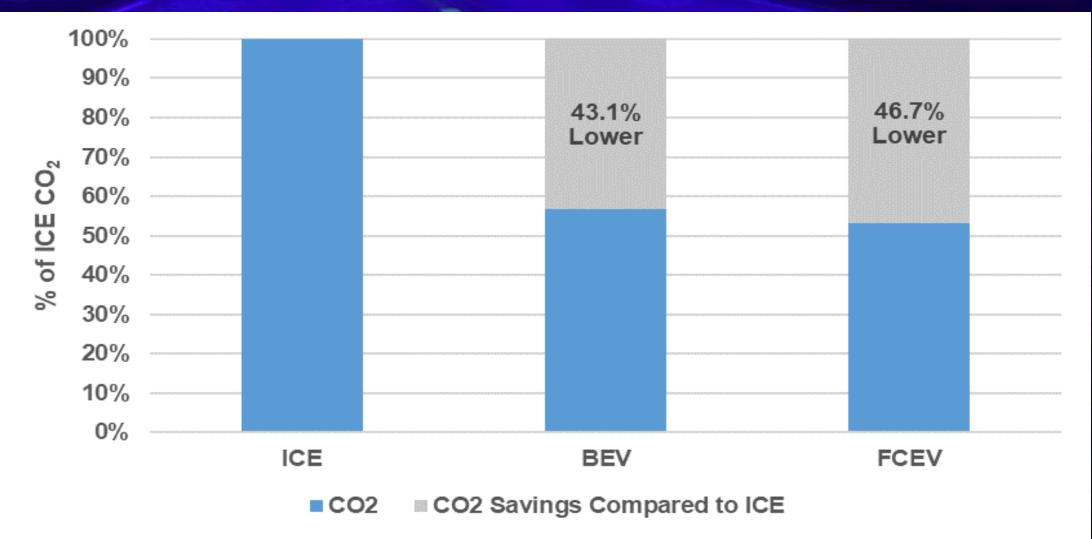


	Fuel Production: Lbs. of CO ₂ per Energy Unit	Fuel Consumption: Lbs. of CO ₂ per Energy Unit	Total Lbs. of CO ₂ per Energy Unit
Diesel (per gallon)	3.68	22.39	26.08
Electricity (per kWh)	0.91	-	0.91
Hydrogen (per kg)	20.50	_	20.50



CO ₂ Emissions from Energy to Drive 1M Miles	ICE	BEV	FCEV
Energy Production (Lifetime Lbs. of CO ₂)	511,655	2,065,341	1,932,422
Energy Consumption (Lifetime Lbs. of CO ₂)	3,115,244	-	-
Total	3,626,899	2,065,341	1,932,422







Disposal/Recycling

Total Lbs. of CO ₂ for Vehicle End-of-Life Disposal/Recycling	ICE	BEV	FCEV
Disposal	2,268	2,268	2,268
Li-Ion Battery Recycling	-	48,255	575
Total	2,268	50,523	2,843

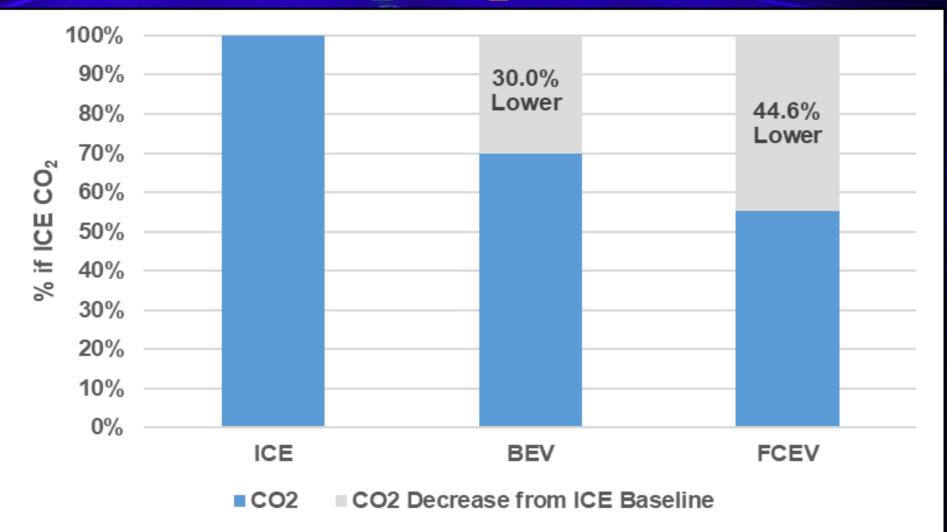


Total Life-Cycle

	ICE	BEV	FCEV
Vehicle Production CO ₂	74,728	478,055	115,514
Energy Production and Consumption CO ₂	3,626,899	2,065,341	1,932,422
Disposal/Recycling CO ₂	2,268	50,523	2,843
Total Life-Cycle CO ₂	3,703,895	2,593,919	2,050,779

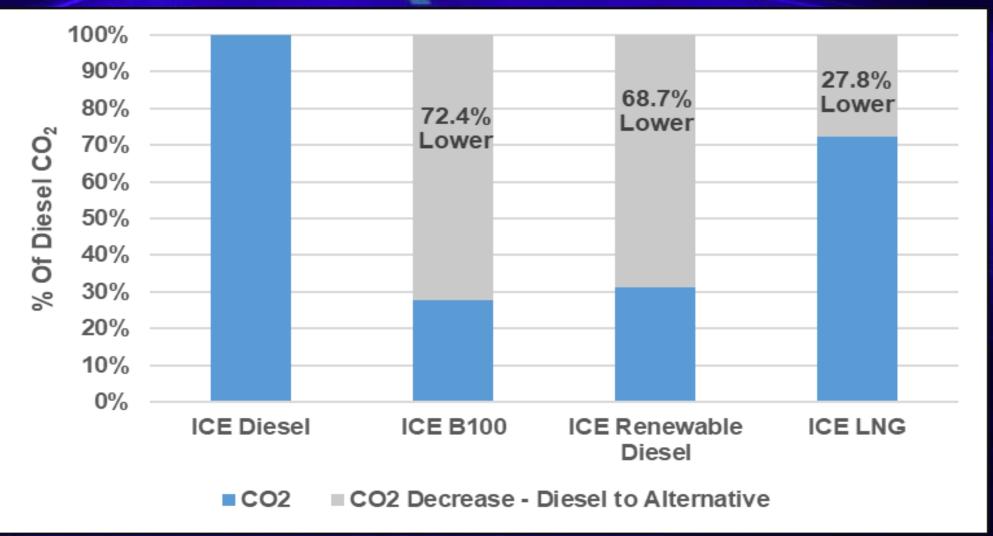


ICE Life-Cycle CO₂ vs BEV & FCEV



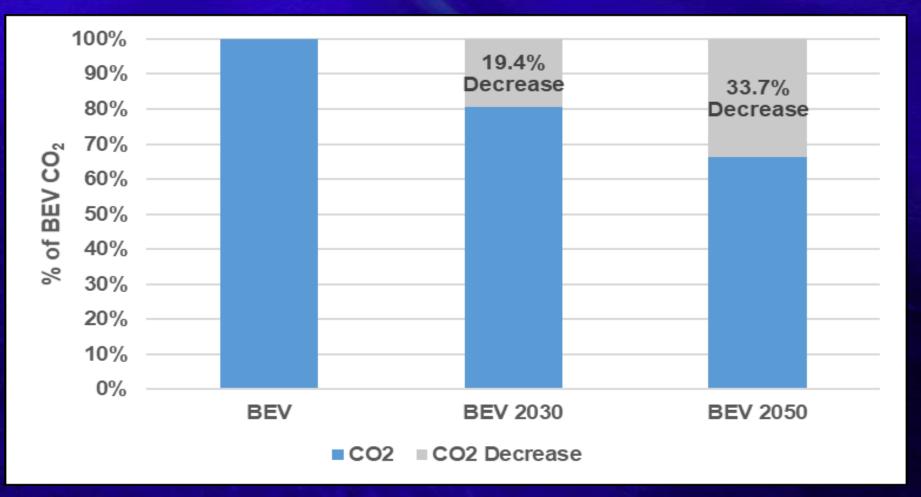


Diesel Alternatives



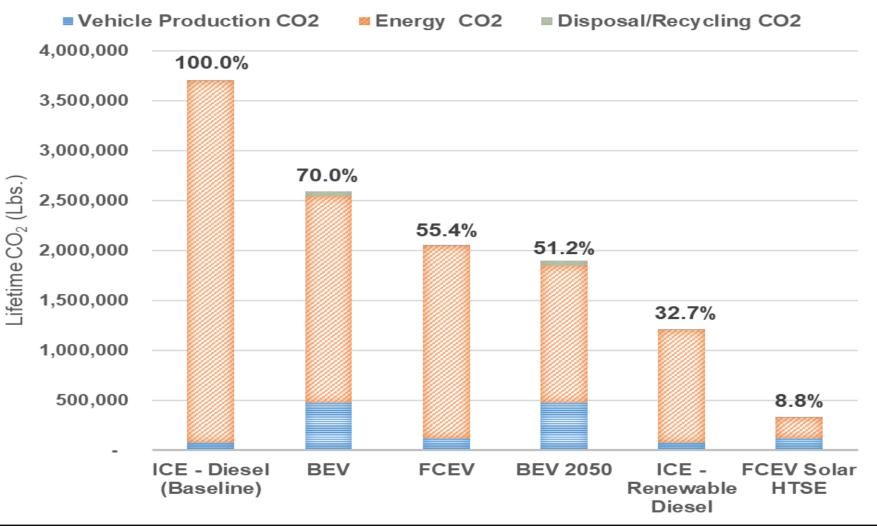


Projected Decrease in Fuel Production CO₂ for BEV











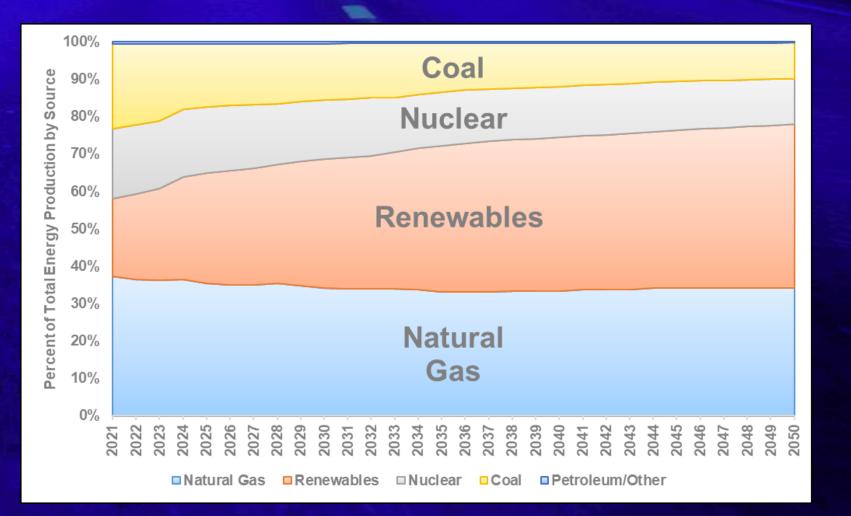
Infrastructure for Class 8 BEV

Energy Production and Distribution Considerations

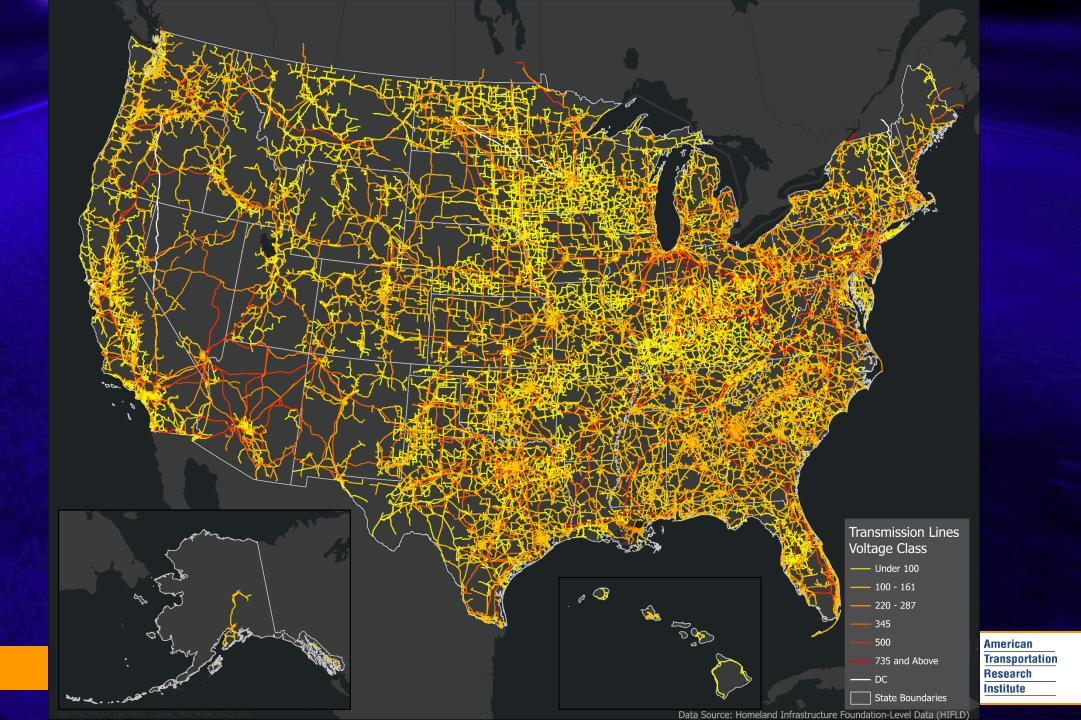
- Power Sources
- Electricity Transmission/Distribution (the grid)
- Supply/Demand

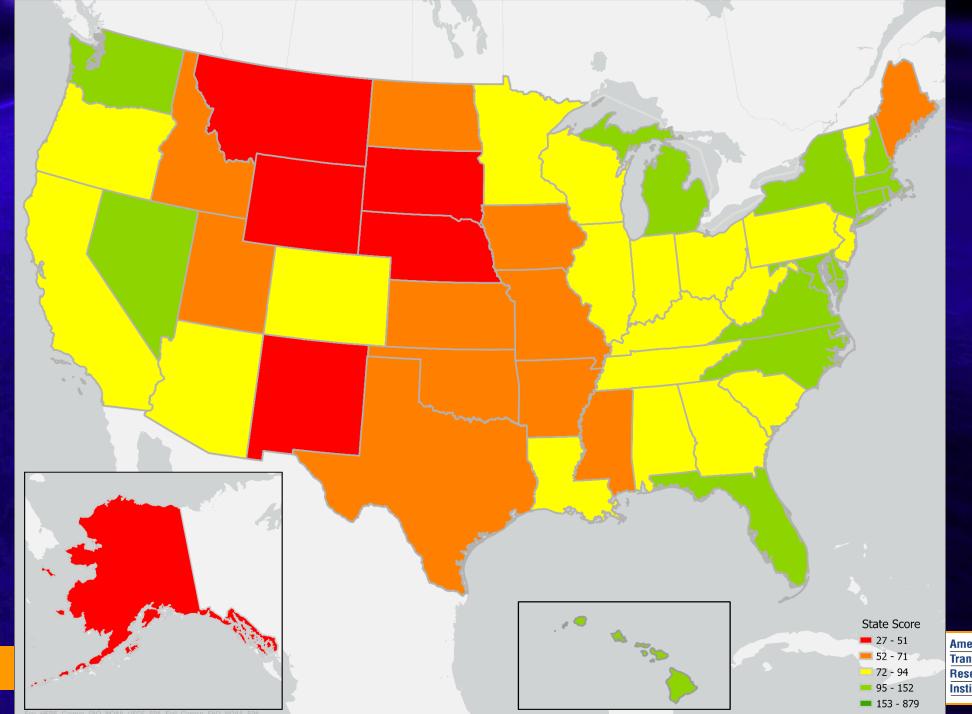


EIA Electricity Source Projections

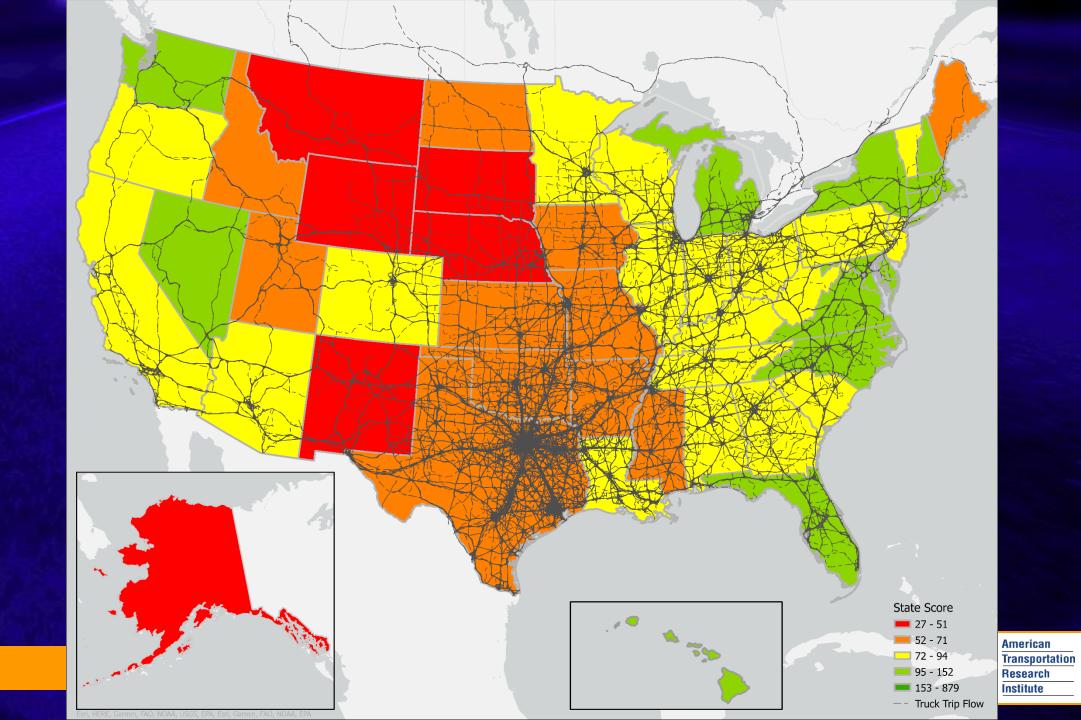








American Transportation Research Institute



Infrastructure for Class 8 BEV

Vehicle Considerations Components Weight and Cargo

Charging Locations and the Impact on Operations



Source Countries for Key Materials

Mineral	Key Source Countries	Global Production (metric tons)	U.S. Production (% of global)
Lithium	Australia (55%), Chile (26%), China (14%), Argentina (6.2%)	100,000	<5.00%
Graphite	China (82%), Brazil (6.8%), Mozambique (3%), Russia (2.7%)	1,000,000	0.00%
Cobalt	Democratic Republic of Congo (70.5%), Russia (4.4%), Australia (3.2%)	170,000	0.40%
Manganese	South Africa (37%), Gabon (18%), Australia (16.5%), China (6.5%)	20,000	0.00%
Nickel	Indonesia (37%), Philippines (13.7%), Russia (9.2%)	2,700,000	0.60%

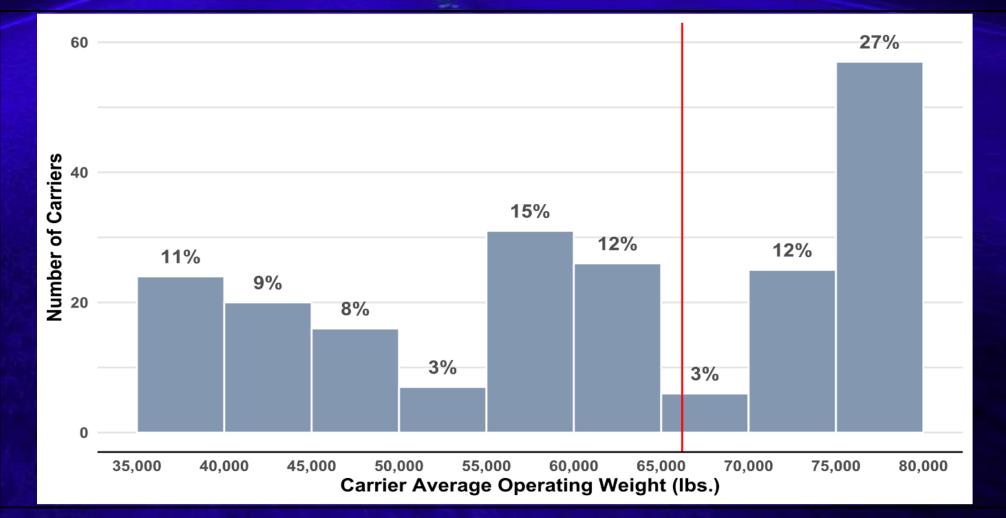


Lost Revenue Weight Analysis

Weight (lbs.)	ICE	BEV
Maximum Gross Weight	80,000	80,000
Tractor Weight	18,216	32,016
Trailer Weight	11,264	11,264
Vehicle Tare Weight	29,480	43,280
Available Revenue Weight	50,520	36,720
Lost Revenue Weight from Baseline		-13,800









ATRI 2022 Research Priorities

- Marijuana: Impacts of Decriminalization on Trucking Industry
- Quantifying Industry Impacts from Predatory Towing
- Efficacy of Driver Training on Safety Outcomes and Driver Retention
- Utilizing EB-3 Work Permits to Help Mitigate the Driver Shortage
- SEC Climate Rule Impacts on the Trucking Industry



Questions? Jeff Short jshort@trucking.org 404-731-9637 www.TruckingResearch.org



Trucking Industry Update



Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

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June Freight Initiatives Committee Agenda

- Roll Call of Members
- Approval of Minutes
- Update on NJTPA Freight Division Activities
- Annual Trucking Industry Update
- Two-minute Reports on Freight Activities from Committee Members
- Next Meeting: <u>Monday</u>, August 15, 2022 – NJ State Freight Plan Update *Thank you.* Stay healthy and safe.

Please use the Chat box to ask questions during the presentations and if requesting credits, please post your name, followed with either AICP or PE with your PE license number

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