# State of the Steel Industry

## Kevin Dempsey

President & CEO
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AWPA
American Wire Producers Association

# The State of the American Steel Industry

AWPA Annual Meeting

March 1, 2023

Kevin M. Dempsey

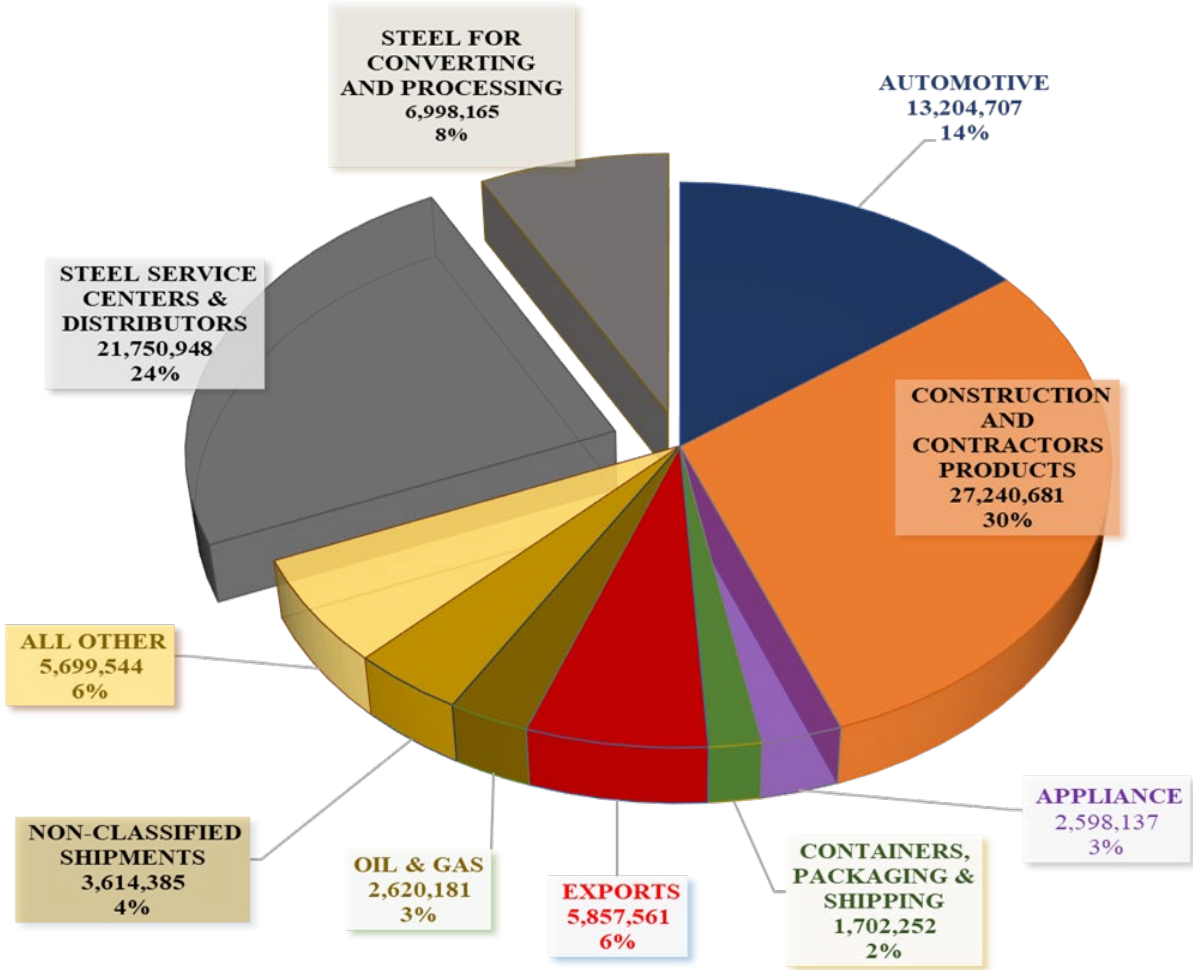
President and CEO, American Iron and Steel Institute

American Iron and Steel Institute

Working on behalf of clean, American steel

# Overview: American Steel Industry

## 2022 Domestic Shipments by End Use Market



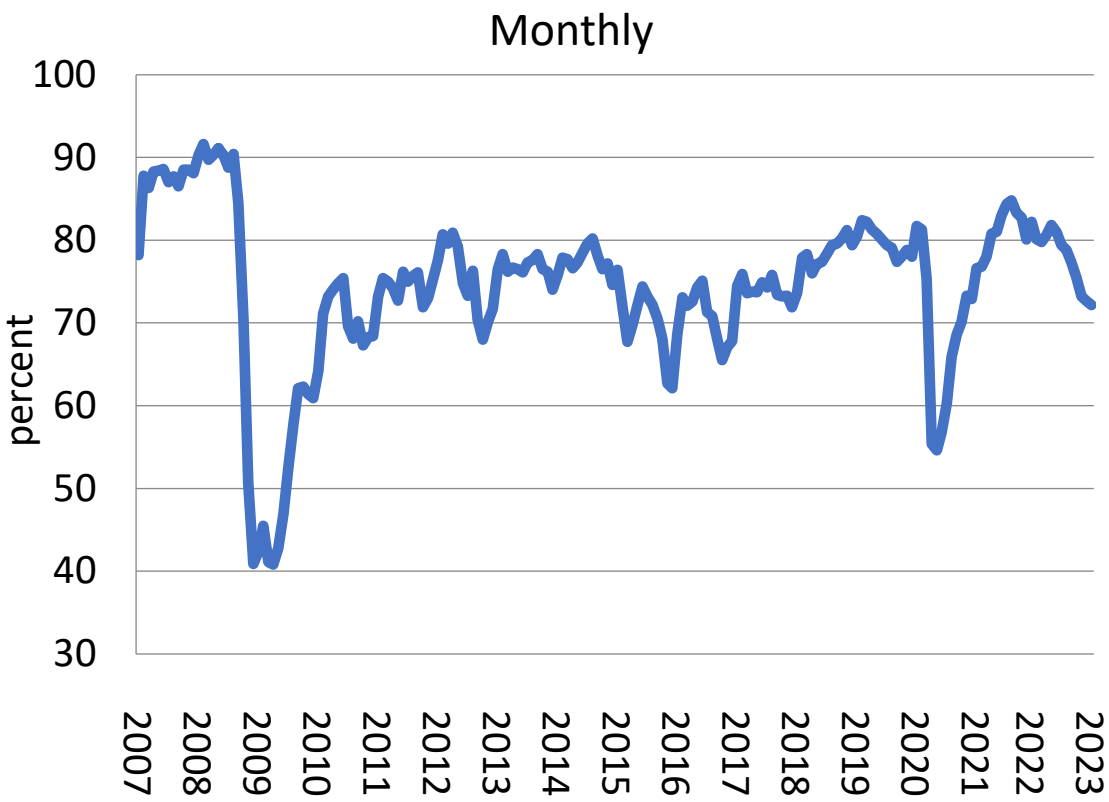

| Steel Demand in 2022 | |
|---|---|
| US Shipments | Finished Imports |
| ~90 million net tons | ~25 million net tons |

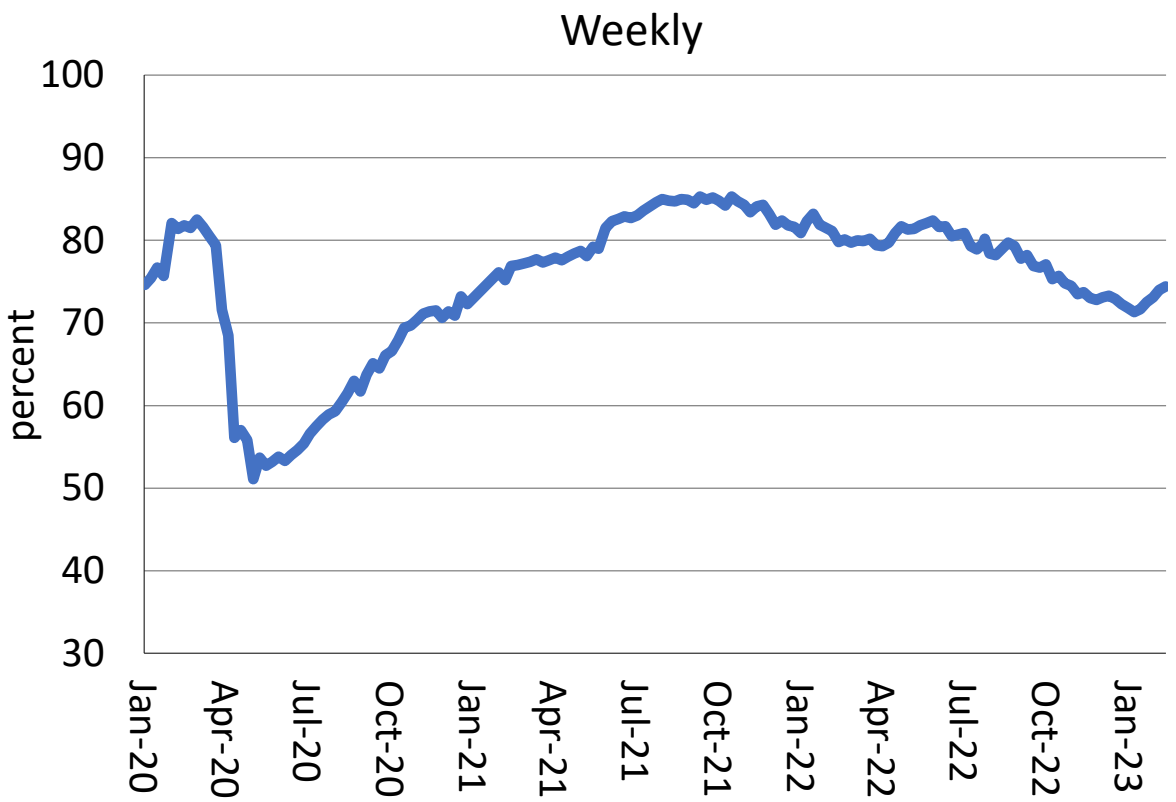
- Lowest carbon intensity of major steel industries in the world
- Essential to the U.S. decarbonization strategy, national and economic security, and critical infrastructure
- Supports nearly two million American jobs

Source: AISI

# Steel Capacity Utilization is Trending Upward, Following a Period of Decline

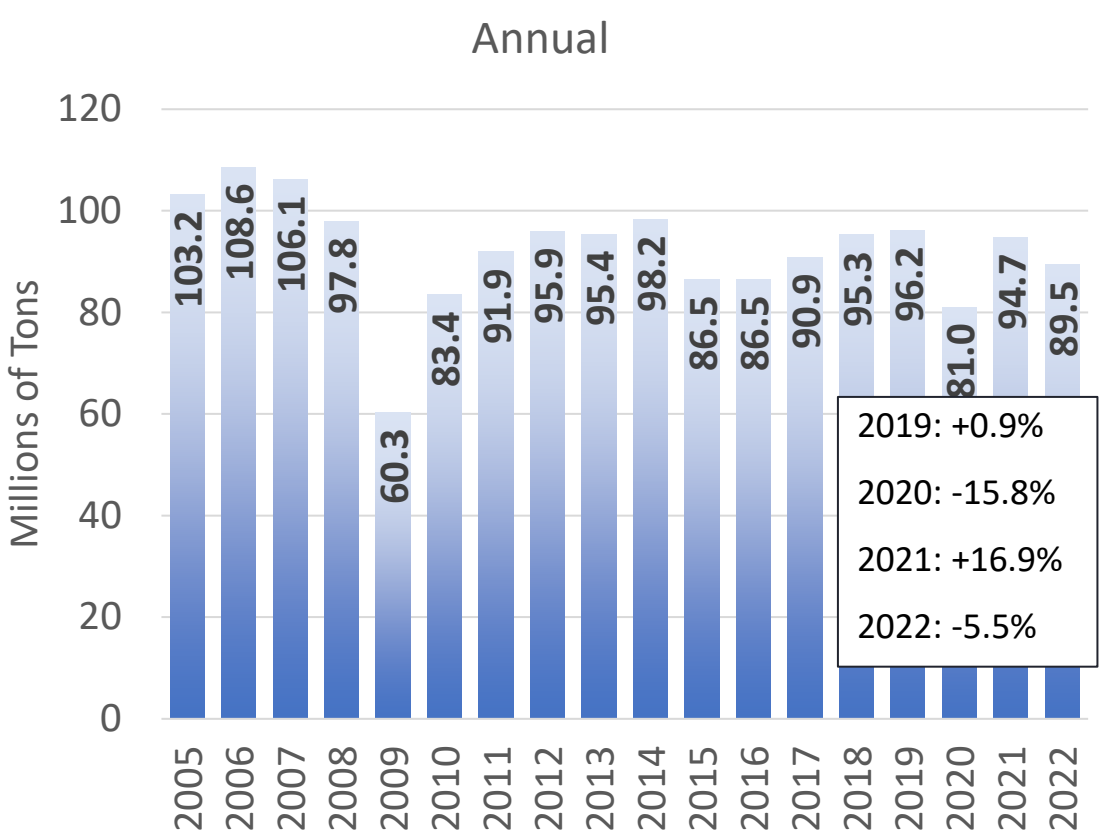
## Raw Steelmaking Capacity Utilization

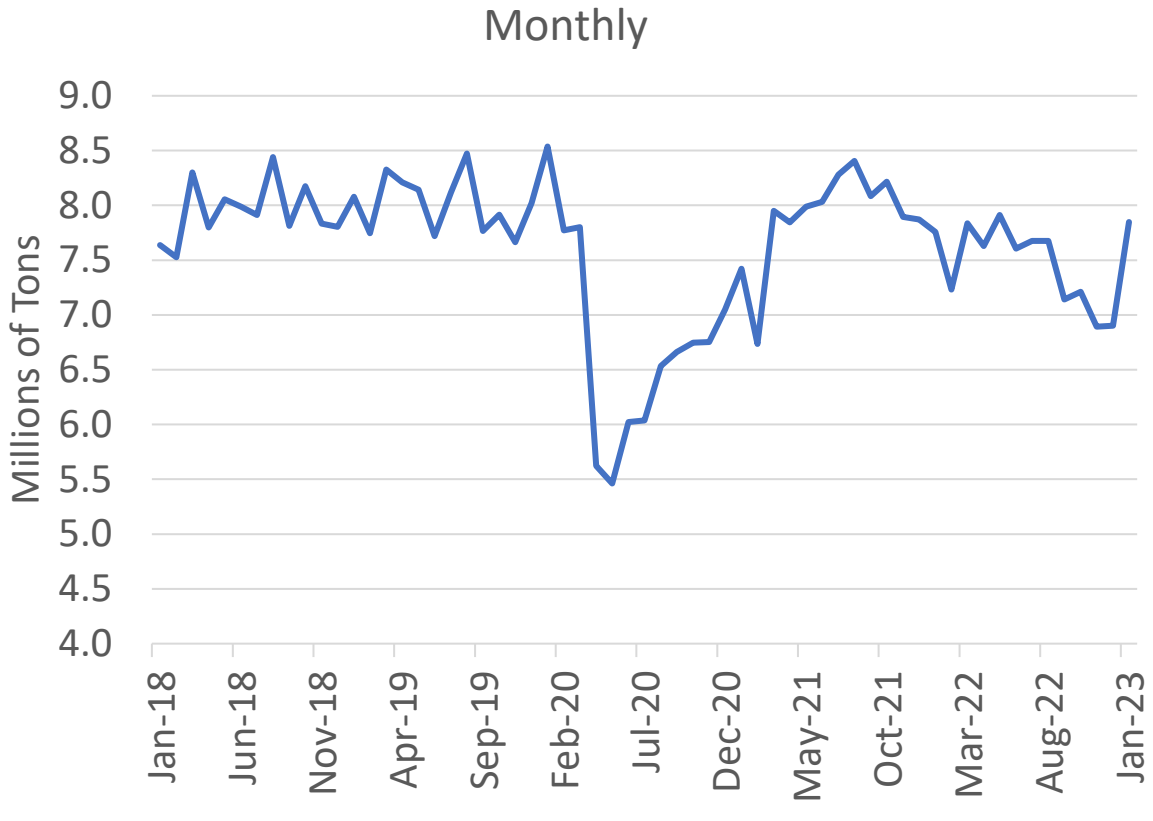


# Steel Mill Shipment Tonnage Declined in 2022 Due to Economic Softness and Growth in Import Share

## Steel Mill Product Shipments



# Steel Industry Investments for Clean Steelmaking

CLEVELAND-CLIFFS INC.

Acquisition of AK Steel
Acquisition of ArcelorMittal USA
Toledo, OH HBI production facility
Silver Bay, MN upgrade
Acquisition of Ferrous Processing and Trading

ArcelorMittal

Calvert, AL EAF
Acquisition voestalpine,
Corpus Christi, TX

NUCOR®

Sedalia, MO EAF
Frostproof, FL EAF
Gallatin, KY expansion
Brandenburg, KY EAF
Mason County, WV EAF (Weirton)
Kingman, AZ EAF
Lexington, NC Micro Mill
Fontana, CA, Galv line
Berkley, SC Galv line
Acquisition of majority interest in CSI

CMC Commercial Metals

Acquisition of Gerdau assets
Durant, OK EAF
Mesa, AZ expansion
Eastern US Micro Mill

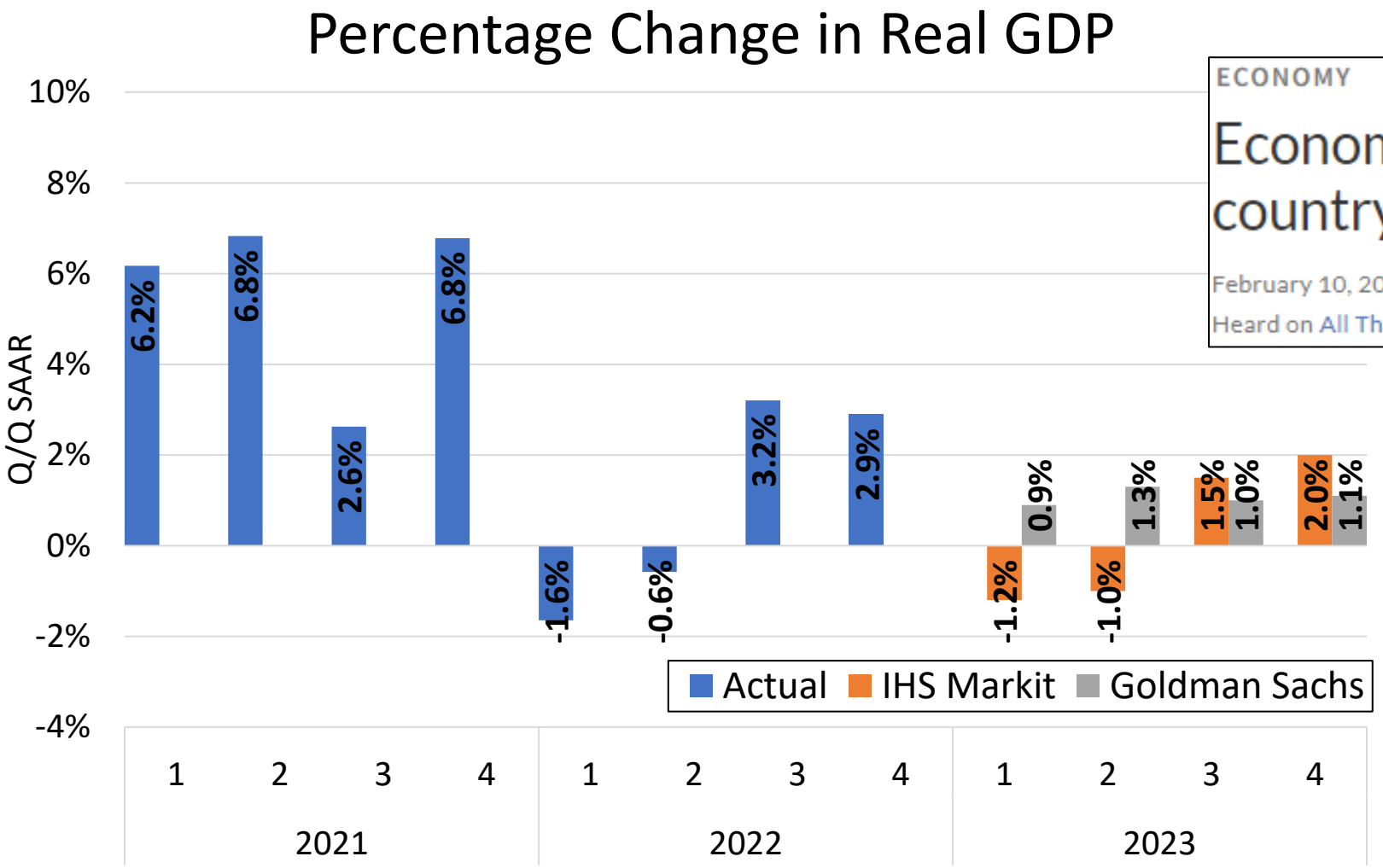
United States Steel

Acquisition of Big River
Big River Osceola, AR expansion
Fairfield, AL EAF
Osceola, AR EAF Plant

Steel Dynamics, Inc.

Sinton, TX EAF
Columbus, MS upgrade

# Debate Among Economists on Potential for Recession




ECONOMY

## Economists face off about where the country is headed this year

February 10, 2023 · 5:09 PM ET

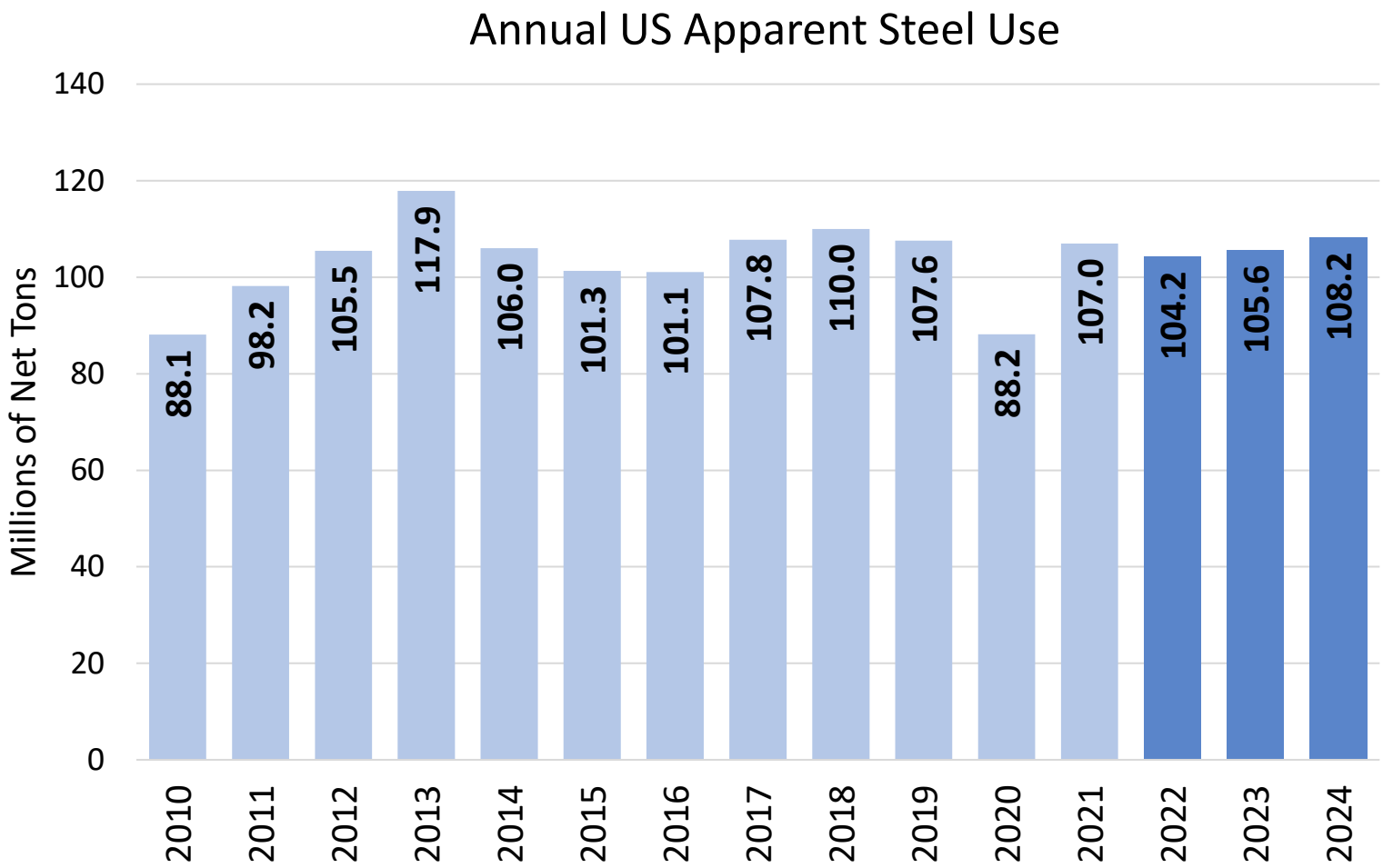
Heard on All Things Considered

npr



Sources: Bureau of Economic Analysis, Goldman Sachs, NPR

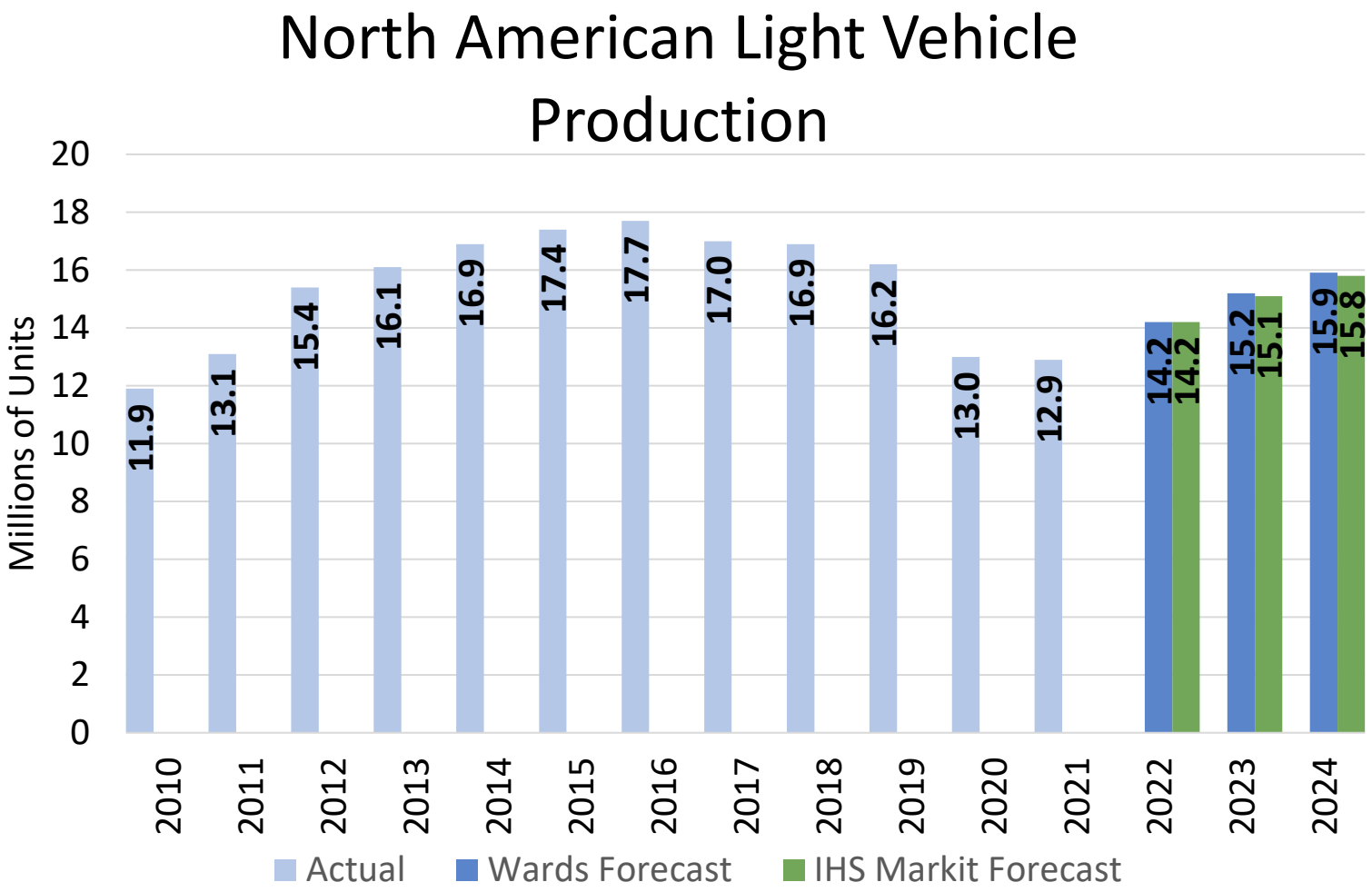
# Apparent Steel Use is Expected to Increase




## Apparent Steel Use

- 2022: -2.6%
- 2023(f): +1.3%
- 2024(f): +2.4%

# North American Light Vehicle Production to Grow

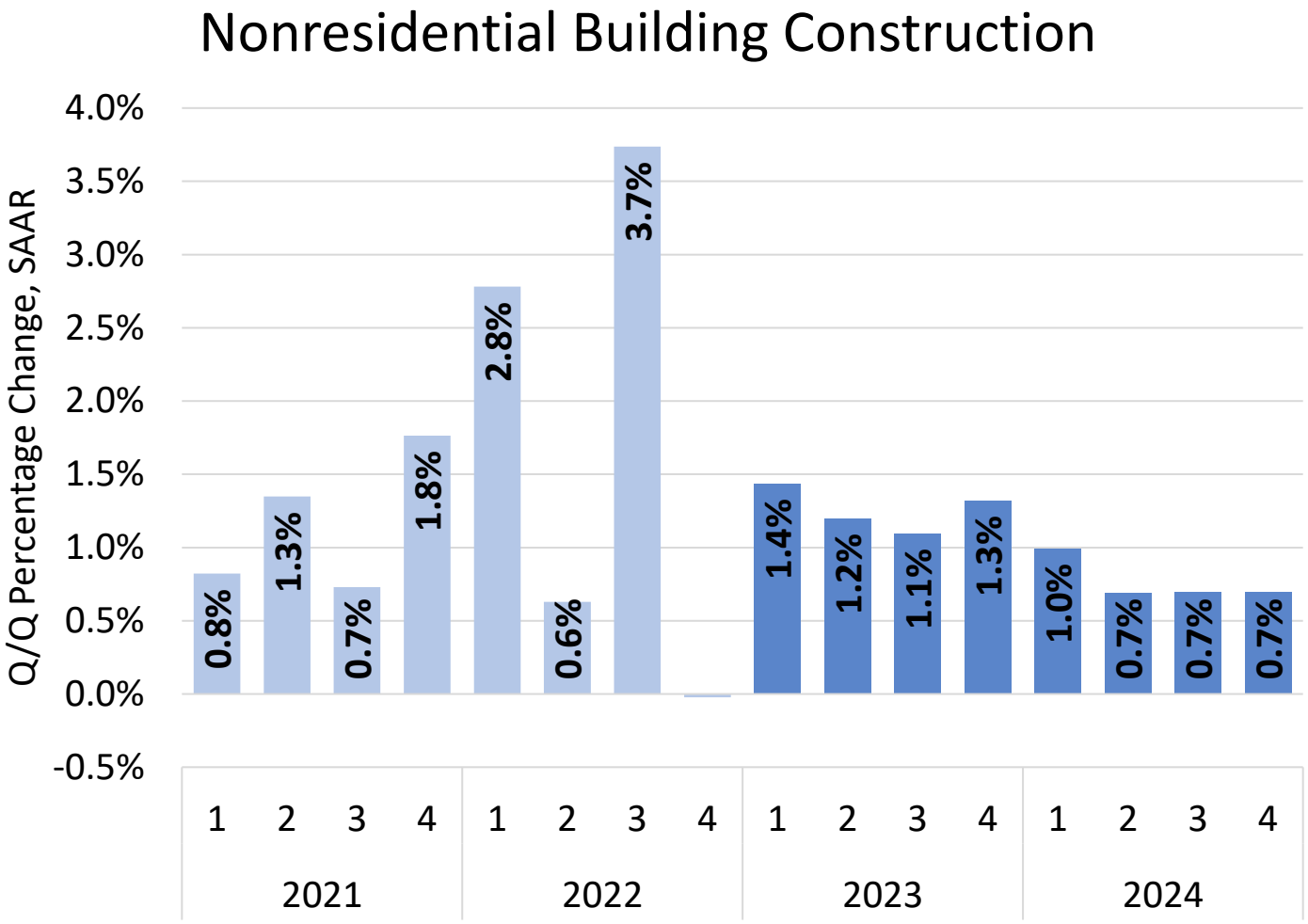



| Year | Actual | Wards Forecast | IHS Markit Forecast |
|---|---|---|---|
| 2021 | -0.8% | | |
| 2022(e) | 10.1% | | |
| 2023(f) | | 7.0% | 6.3% |
| 2024(f) | | 4.7% | 4.6% |



Sources: Wards Intelligence, IHS Markit

# Nonresidential Building Construction Forecast to Grow

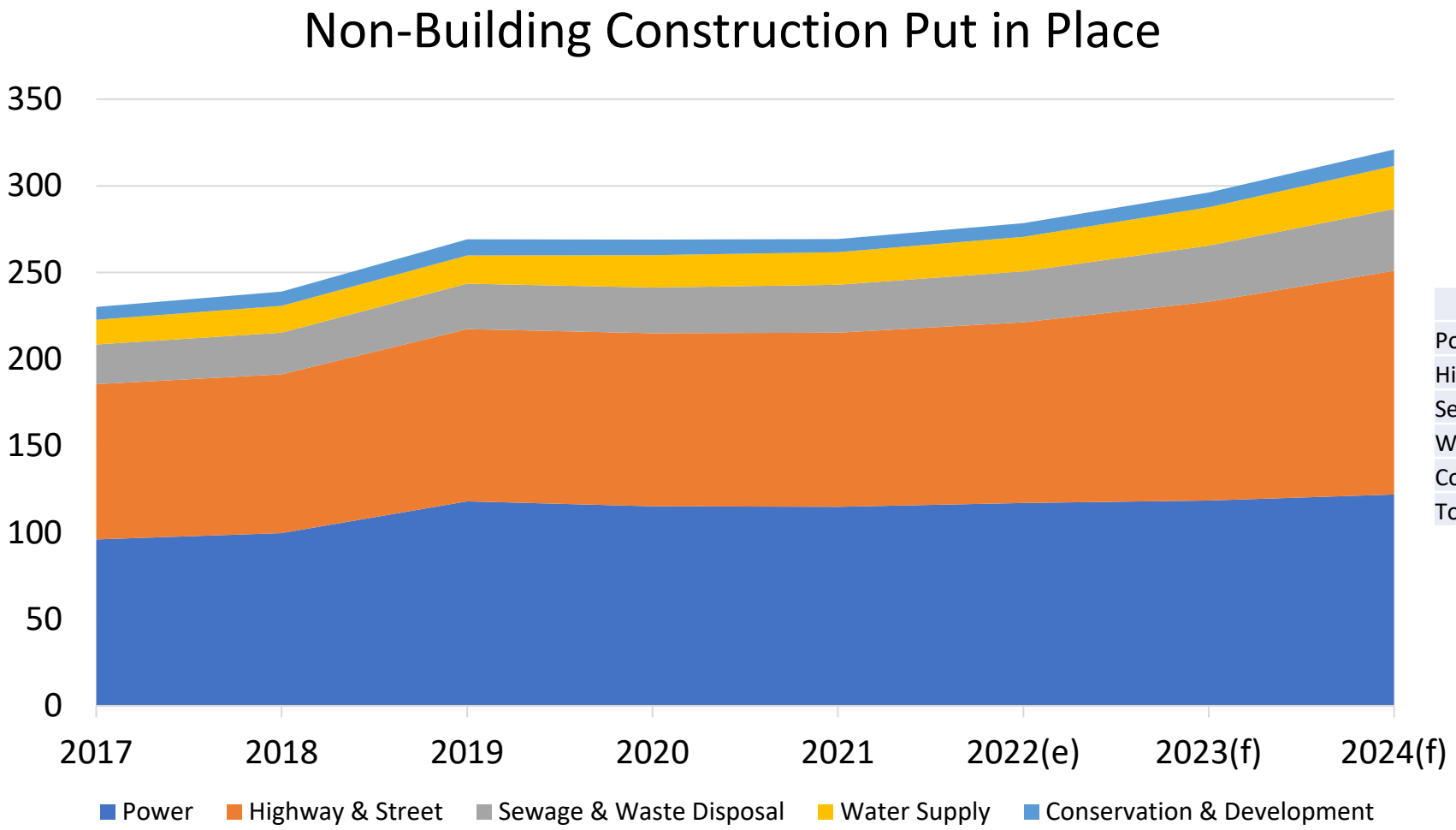



| Growth in Nonresidential Building Construction | | | |
|---|---|---|---|
| | 2022(e) | 2023(f) | 2024(f) |
| Lodging | -11% | 8% | -3% |
| Office | 1% | 2% | -6% |
| Commercial | 8% | 2% | -10% |
| Healthcare | 3% | 5% | 0% |
| Education | -1% | 3% | 3% |
| Religious | -9% | -4% | -2% |
| Public Safety | -12% | 0% | 5% |
| Amusement and Recreation | 1% | 5% | 3% |
| Transportation | -2% | 7% | 14% |
| Communication | 1% | 7% | 10% |
| Manufacturing | 15% | 10% | -9% |



Sources: FMI, US Census Bureau, IHS Markit, Bureau of Economic Analysis

# Non-Building Construction Expected to Grow



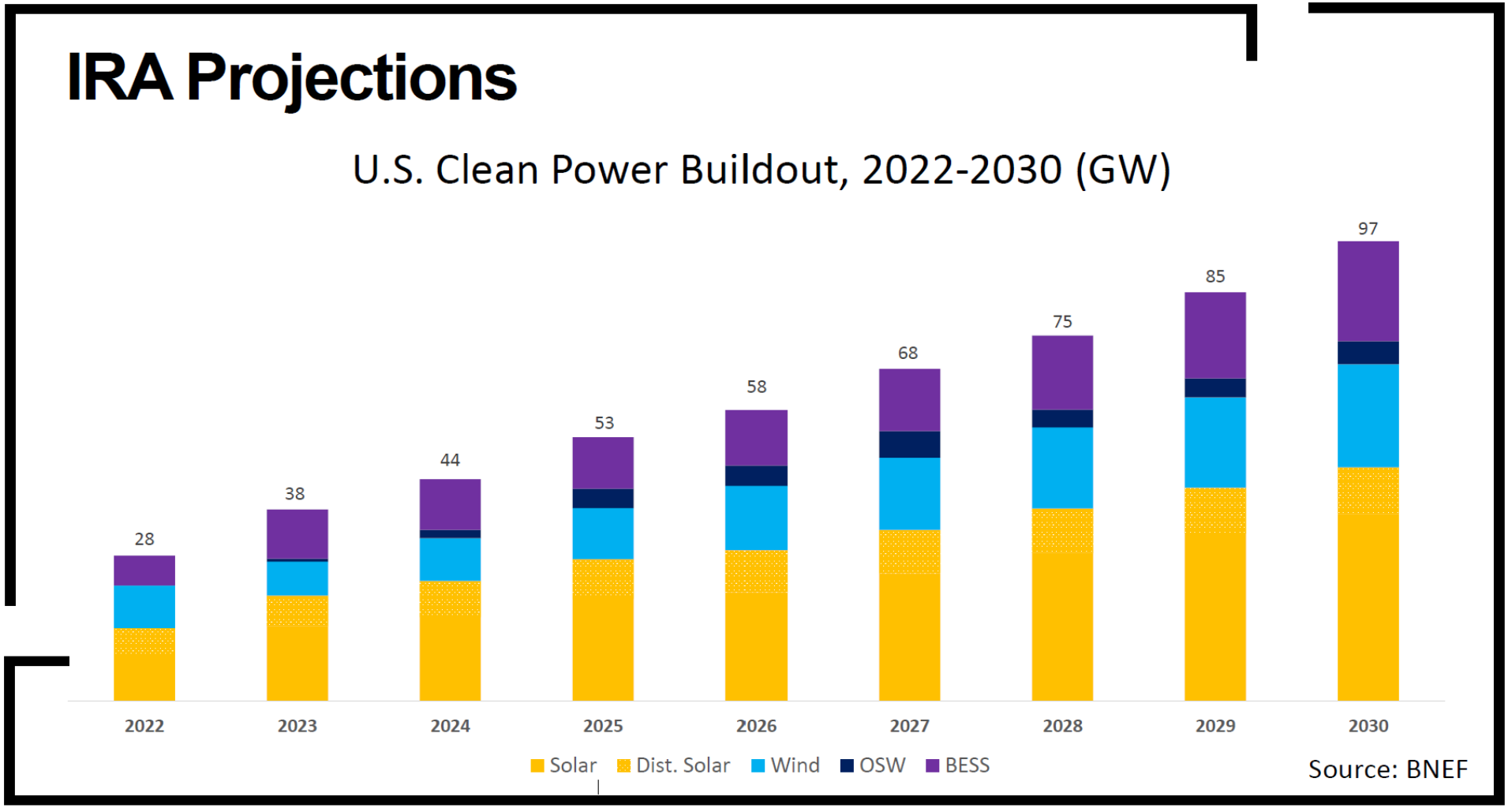

| | 2022(e) | 2023(f) | 2024(f) |
|---|---|---|---|
| Power | 1.9% | 1.2% | 2.9% |
| Highway & Street | 3.8% | 10.1% | 12.6% |
| Sewage & Waste Disposal | 6.8% | 9.7% | 10.4% |
| Water Supply | 5.2% | 10.9% | 12.3% |
| Conservation & Development | 2.7% | 10.1% | 11.1% |
| Total | 3.4% | 6.3% | 8.3% |



Sources: FMI, US Census Bureau, IHS Markit, Bureau of Economic Analysis

# Inflation Reduction Act (IRA) Fueling Clean Energy

## IRA Projections



# IRA Tax Provisions of Interest to the Steel Industry

### Production Tax Credit (PTC)

$27.50/MWh for Wind, solar, biomass, geothermal, hydropower electricity

### Investment Tax Credit (ITC)

30% of costs for wind, solar, biogas, storage projects

### Bonus Credits for PTC/ITC

Using domestic **iron/steel content**

Location in “energy communities”: low-income or fossil fuel reliant areas

### Common Features to PTC/ITC

Construction must start before Jan. 1, 2024

Phase-out begins in 2032

Projects must meet prevailing wage and apprenticeship requirements

Replaced with PTC & ITC in 2025, for projects w GHG rates below zero

### Other Tax Provisions

New nuclear power production credit

New clean hydrogen production credit

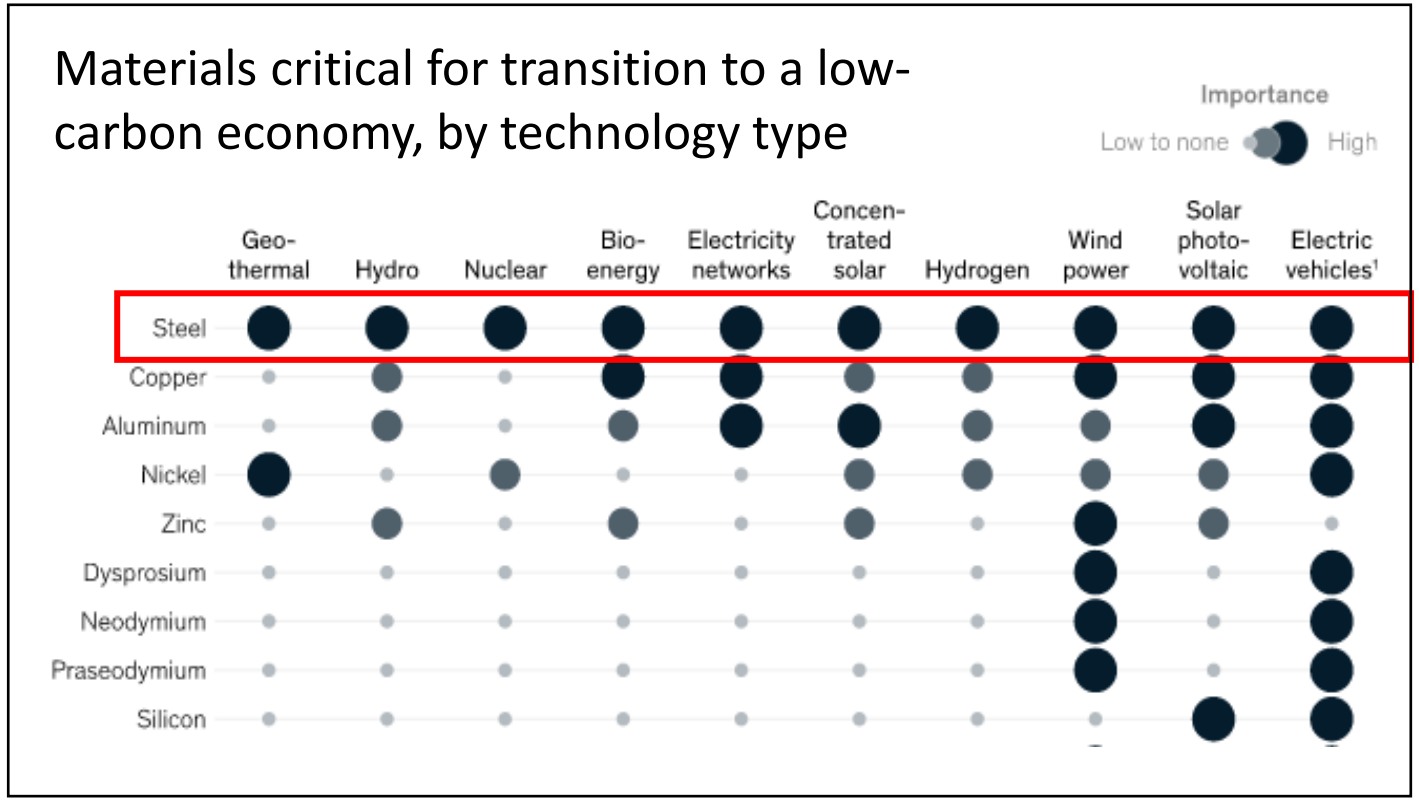
Enhanced 45Q carbon capture, utilization, and storage credit

Expanded 48C advanced manufacturing credit

New credit for production of wind and solar energy components

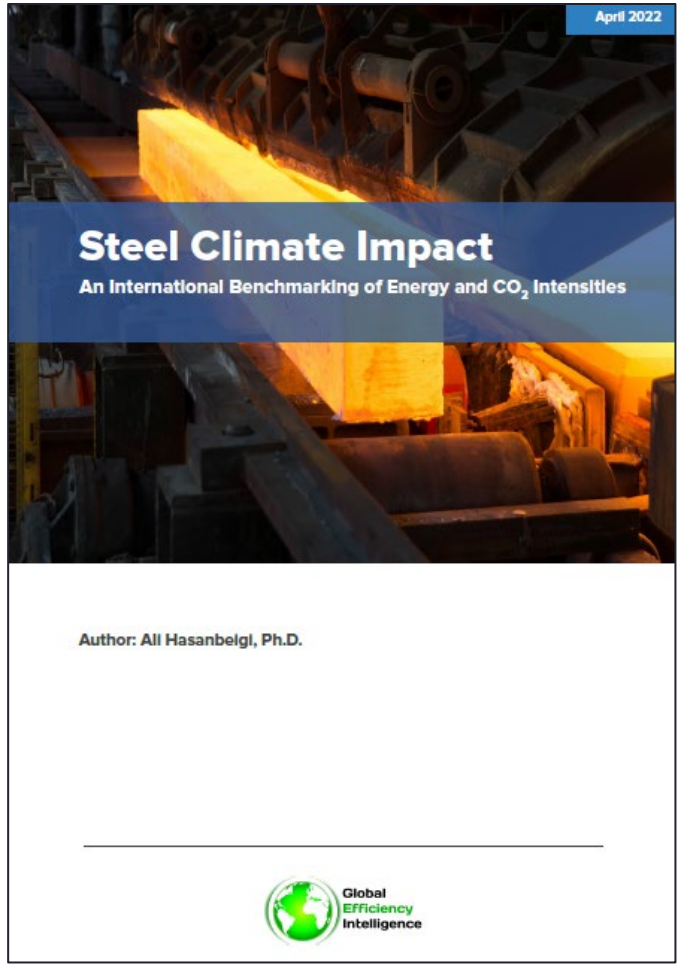
# Steel is Vital to Sustainable Energy Technologies

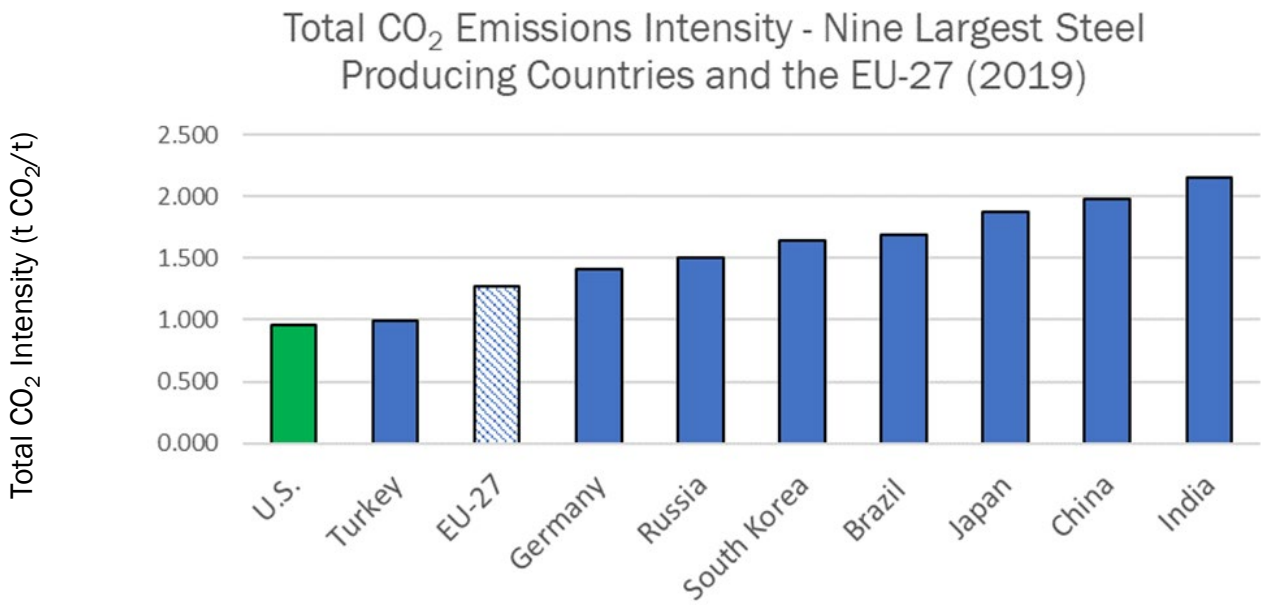
- Steel the only material critical to all low-carbon technologies
- Renewable energy, carbon capture, electricity grid, hydrogen, electric vehicle and public transit systems are all steel intensive




https://www.mckinsey.com/industries/metals-and-mining/our-insights/the-raw-materials-challenge-how-the-metals-and-mining-sector-will-be-at-the-core-of-enabling-the-energy-transition

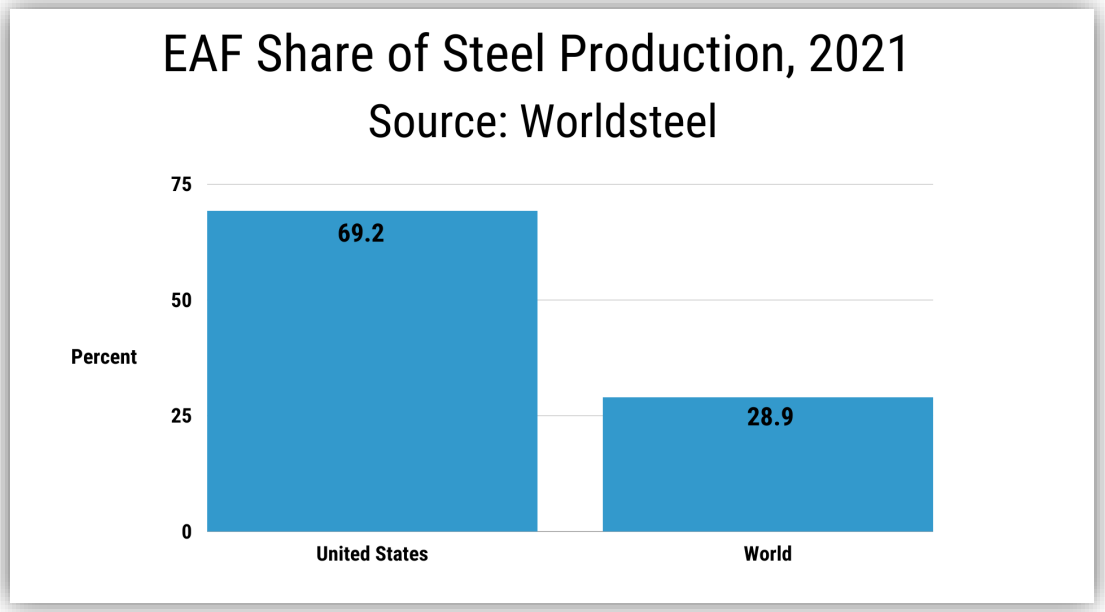
# American Steel is the Lowest Emitting in the World

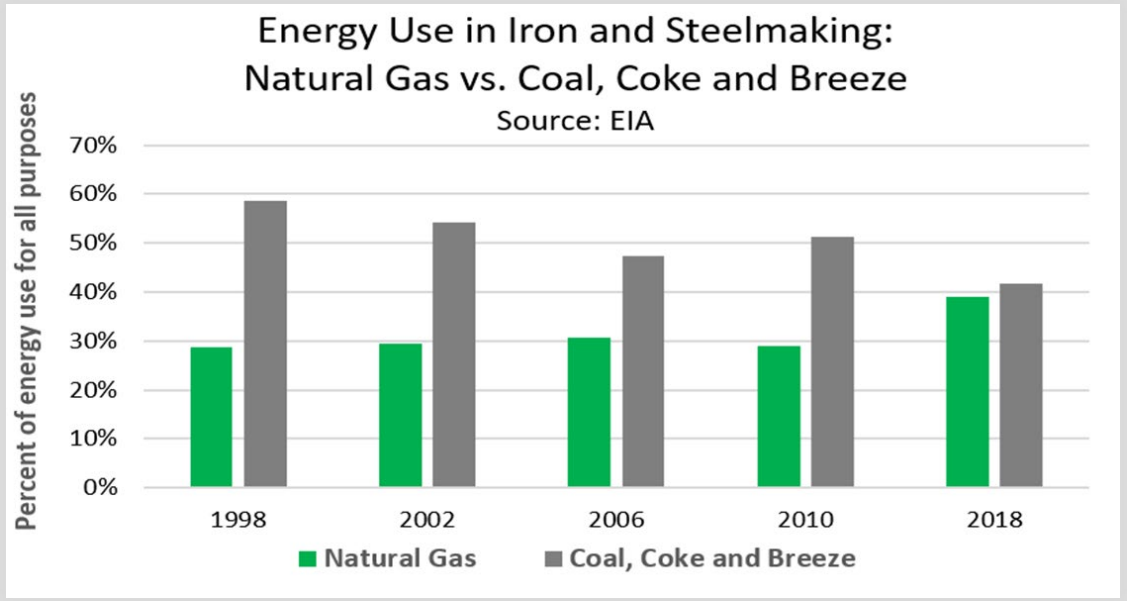



*Adapted from: Hasanbeigi, "Steel Climate Impact: An International Benchmarking of Energy and $CO_2$ Intensities", Global Efficiency Intelligence, 2022.*

# The Sustainability of American-Made Steel




STEEL®

# Continuing Efforts To Enhance Steel's Sustainability

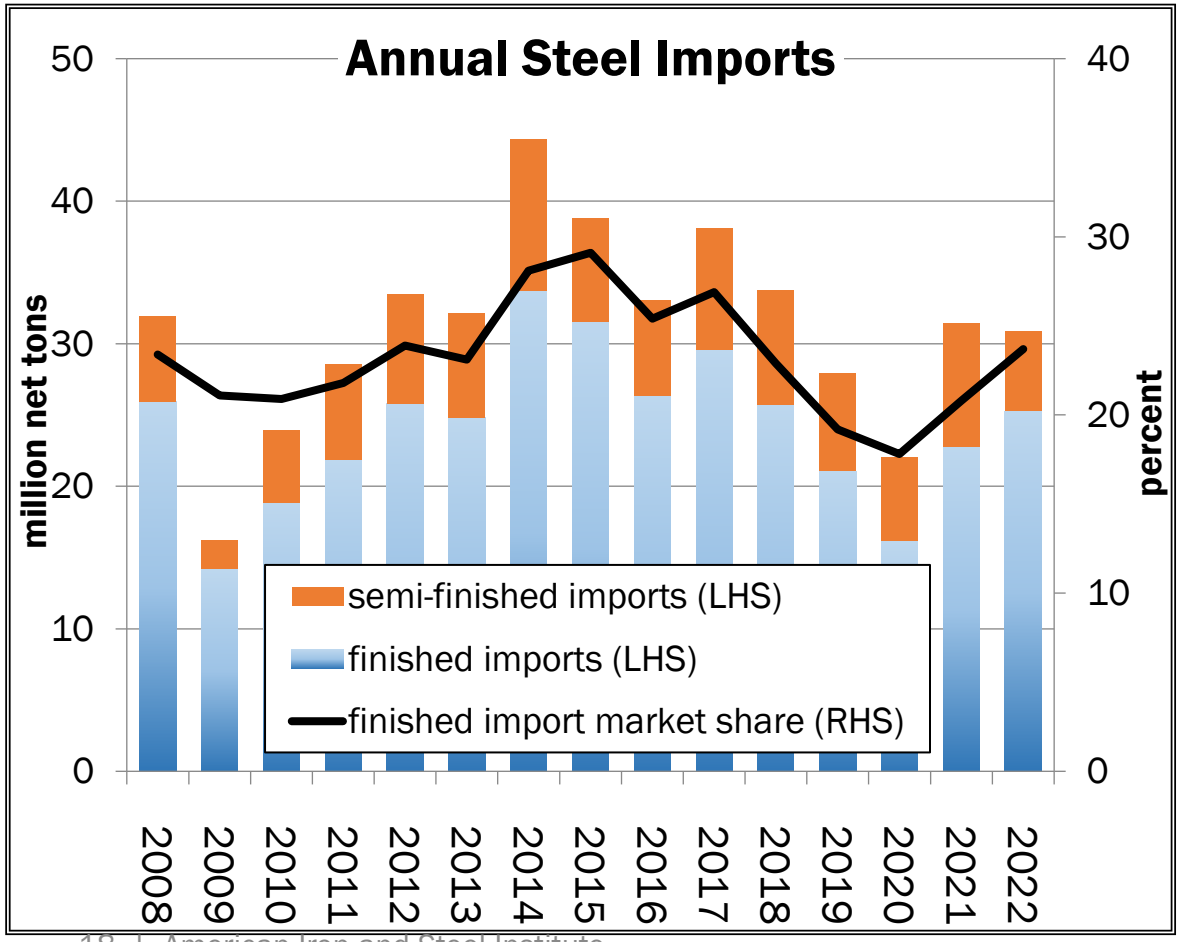
Work is also underway on projects to further enhance the sustainability of domestic steelmaking:

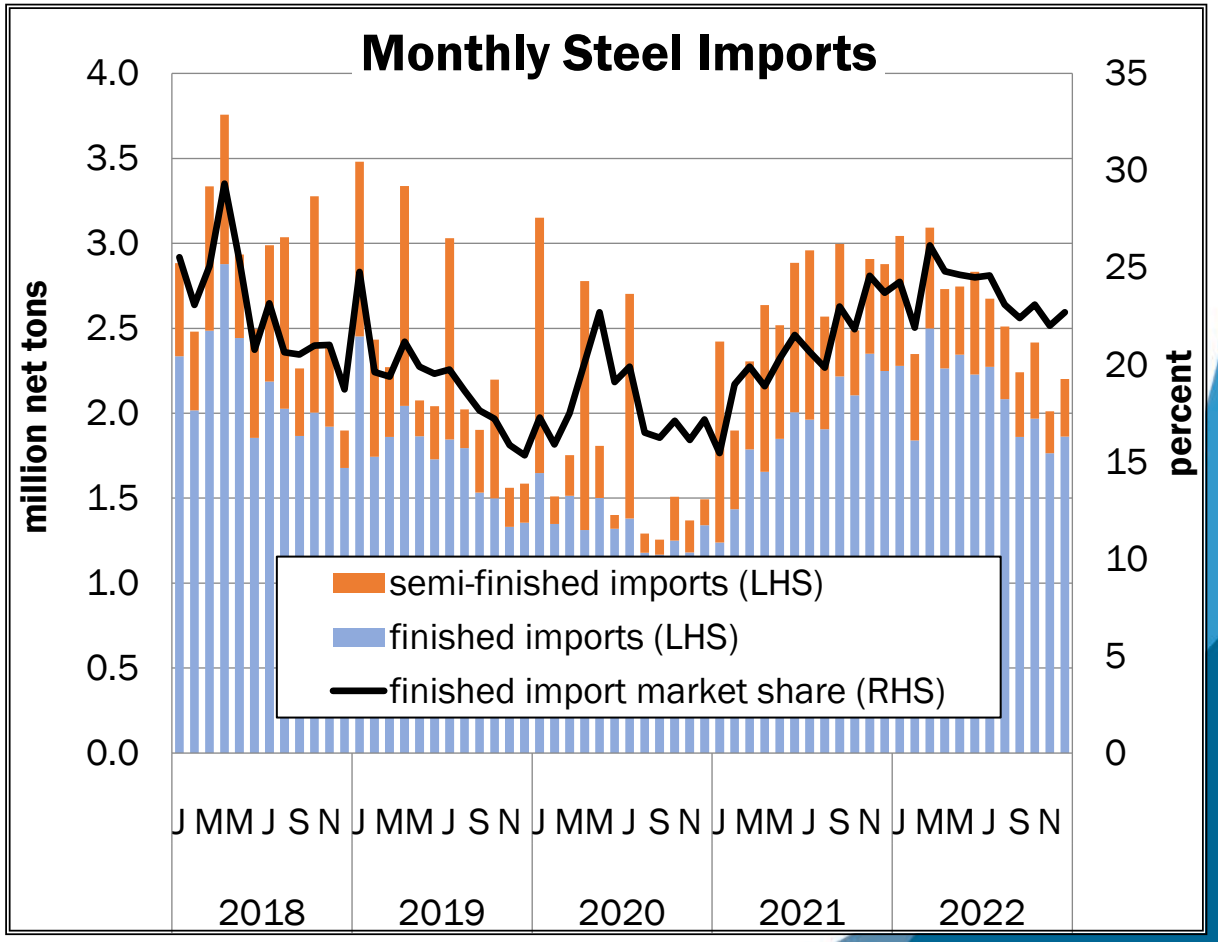
- Advancements in the use of Direct Reduced Iron (DRI) and Hot Briquetted Iron (HBI) in place of coal-based pig iron in both integrated and EAF steelmaking
- Using renewable energy-based hydrogen as a reduction agent in DRI/HBI production
- Capturing and using/storing $CO_2$
- Increasing use of renewable energy in steel industry facilities

# Steel Imports Have Increased Sharply Since 2020

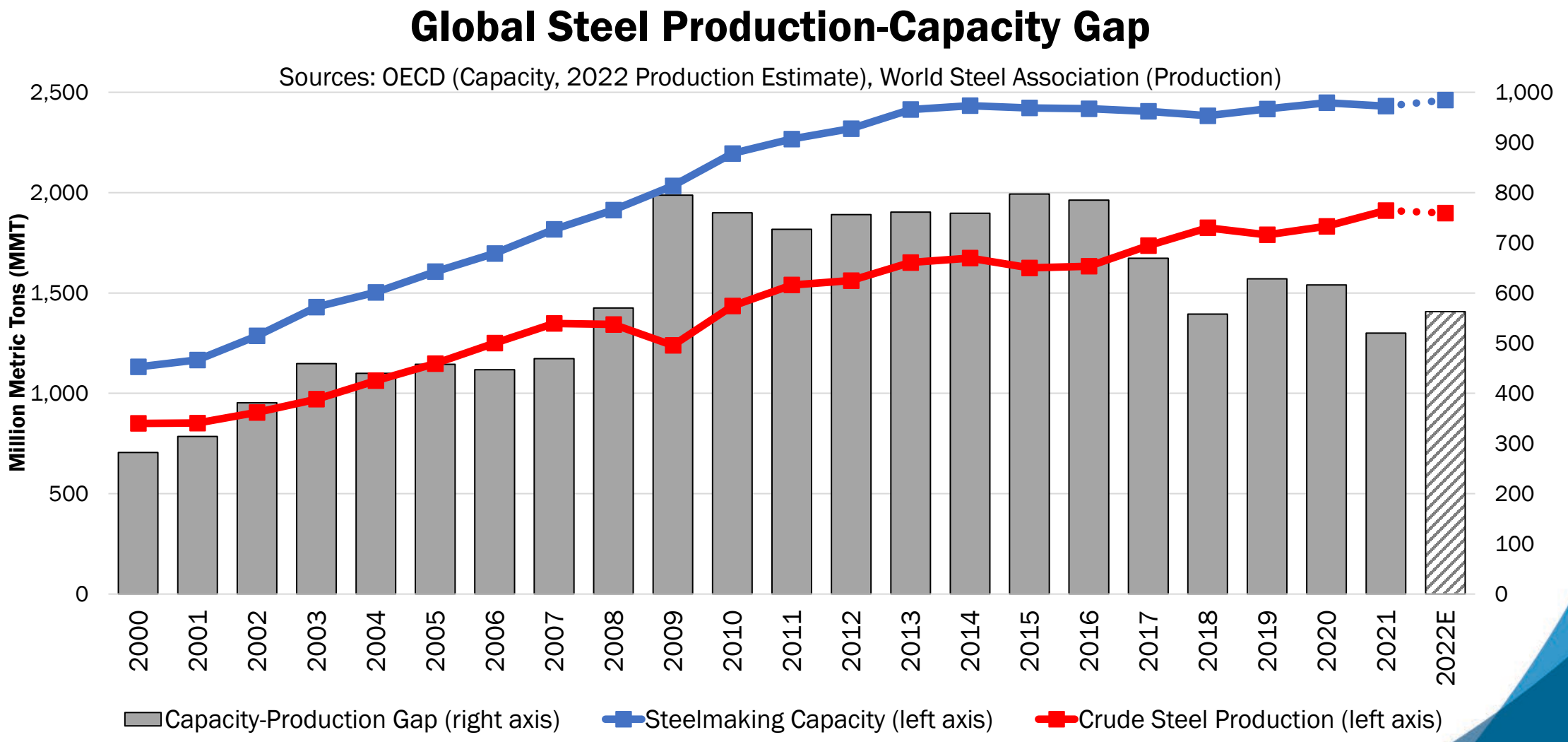
## Steel Imports

Source: US Census Bureau, AISI

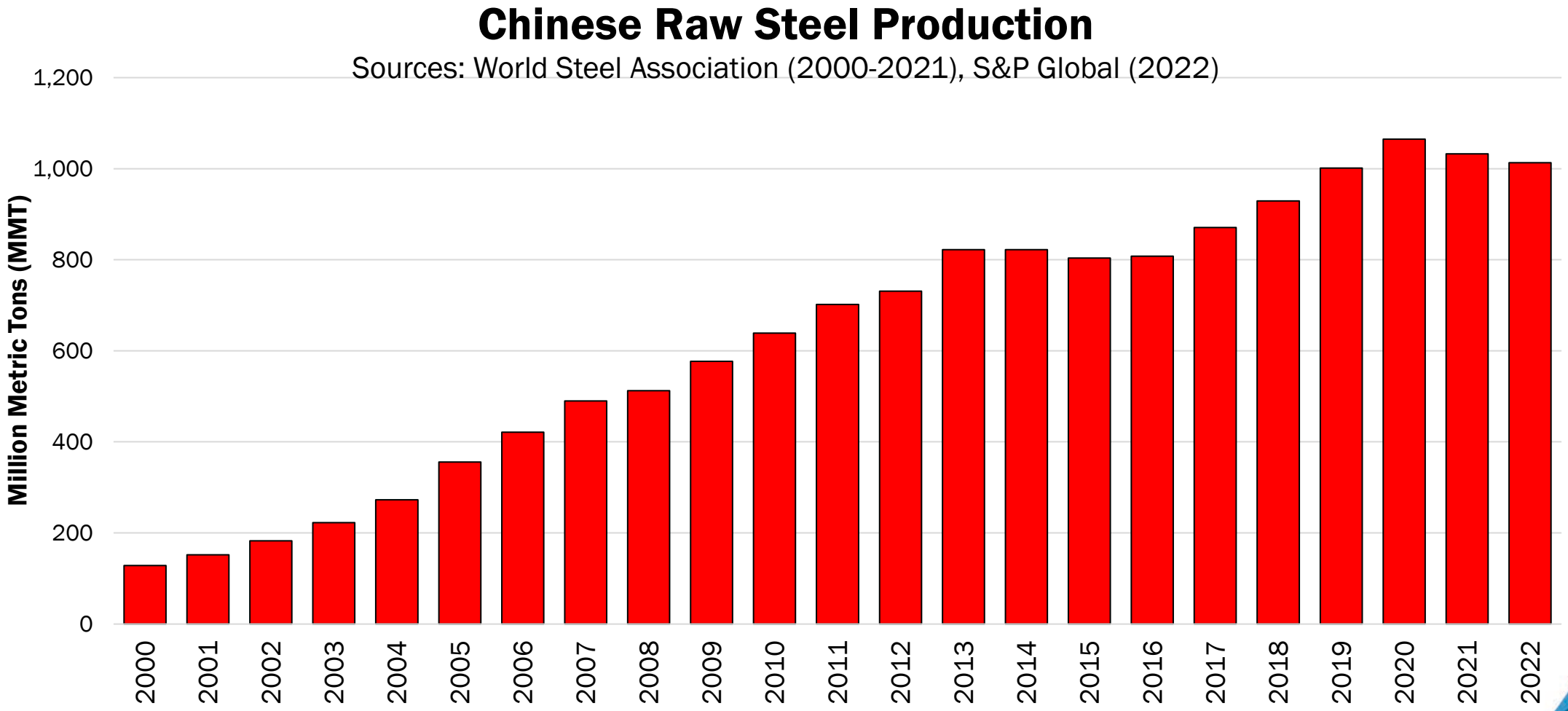


# Global Steel Overcapacity Remains Significant

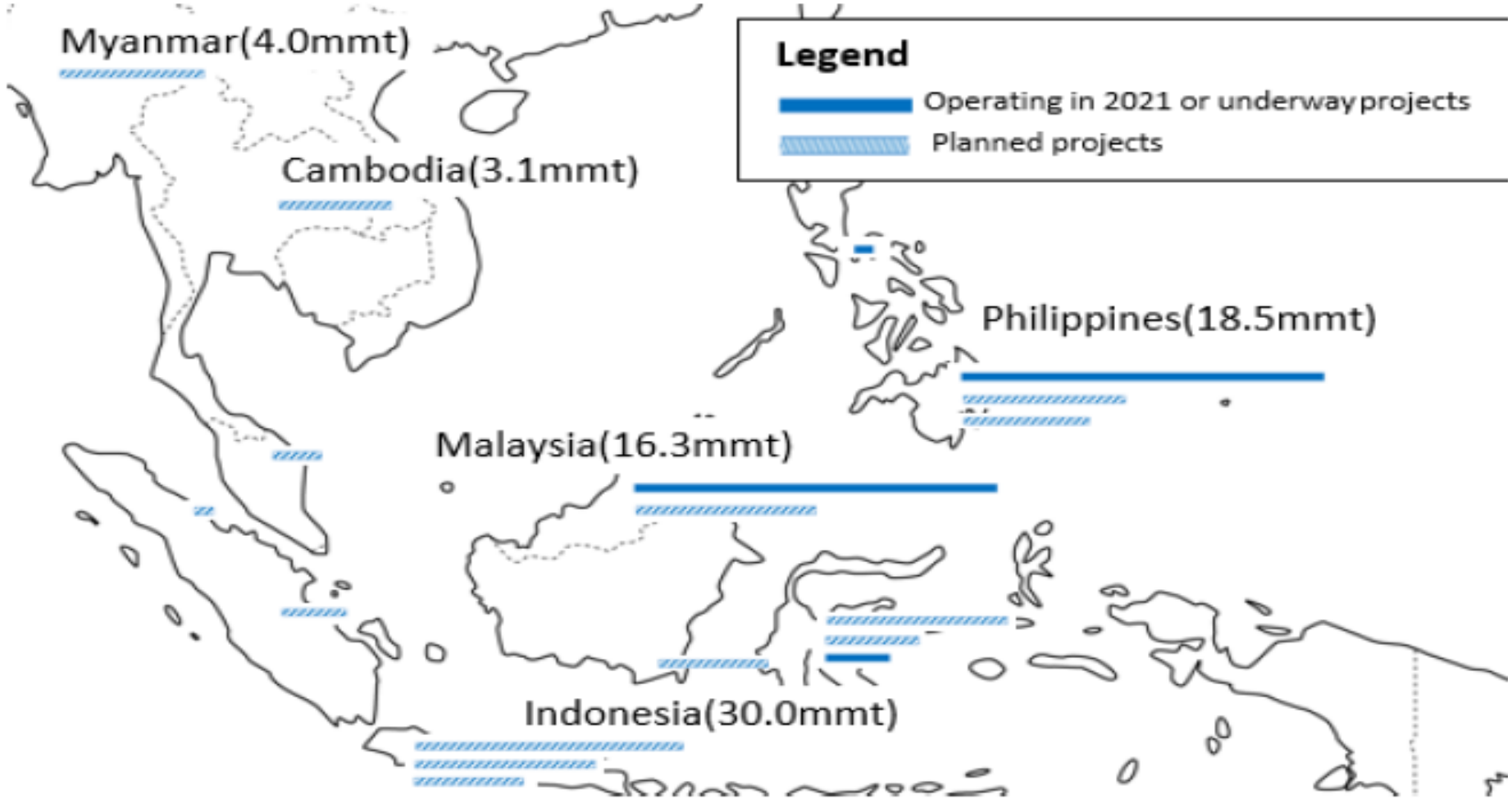


# Chinese Steel Production Exceeded One Billion Metric Tons in 2022 for the Fourth Year in a Row



# Chinese Steelmakers Rapidly Expanding Capacity in ASEAN Region

Chinese steel companies are building 70 million metric tons of capacity beyond its borders



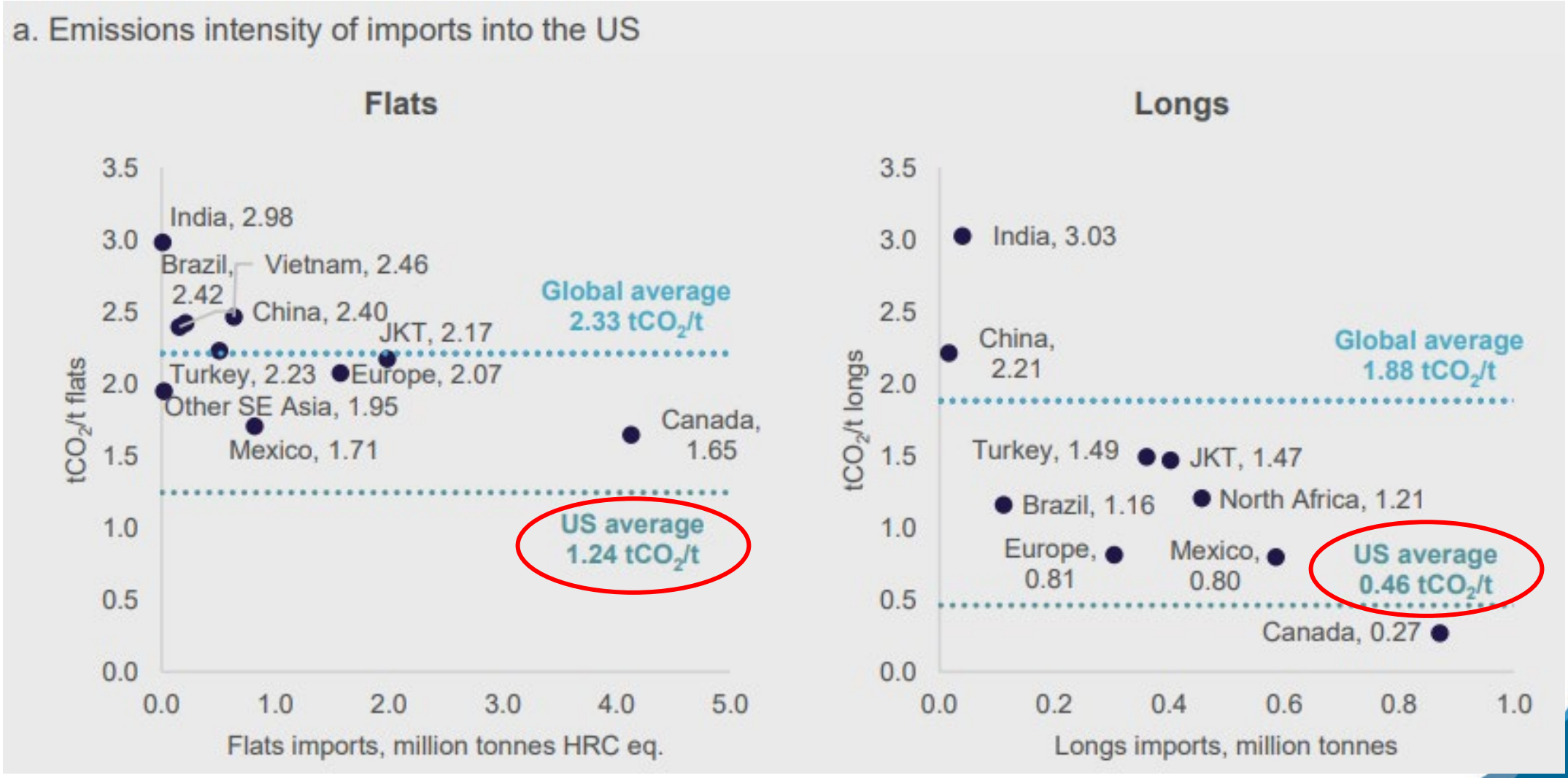

*Source:* OECD for data and free map (https://www.freemap.jp/) for white map

# Global Arrangement on Sustainable Steel

- Global Arrangement negotiations part of EU Section 232 TRQ deal
  - Oct. 31, 2023, deadline set for negotiations
  - EU TRQ also set to expire as of Dec. 31, 2023
- Discussions with the EU on two tracks
  - Non-market excess capacity
  - Carbon emissions intensity trade measures

- USTR presented concept paper on a proposed design of the Global Arrangement to the EU late last year

# The U.S. Leads on Low-Carbon Intensity Steel





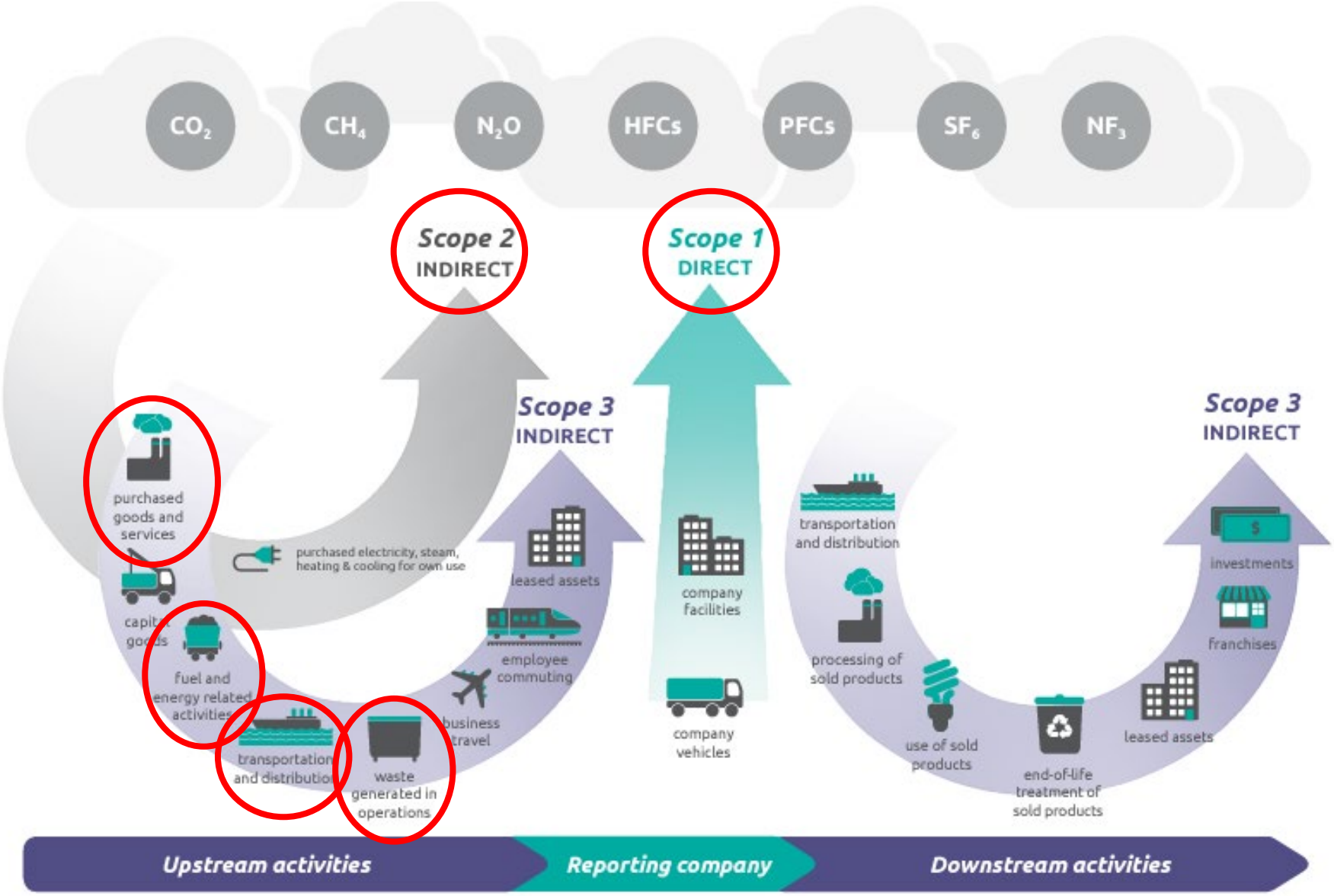

Source: CRU, Opportunities for US-EU steel trade agreement (Dec. 2022).
Note: emissions intensities exclude re-rolling capacity.

# Carbon Tariffs Incentivize Global Decarbonization

- Account for the degree to which foreign steel emissions intensity exceeds those of comparable U.S. products
- Level the playing field between cleaner American production and higher emitting foreign steel
- Remove the perverse incentive to import dirtier, dumped steel

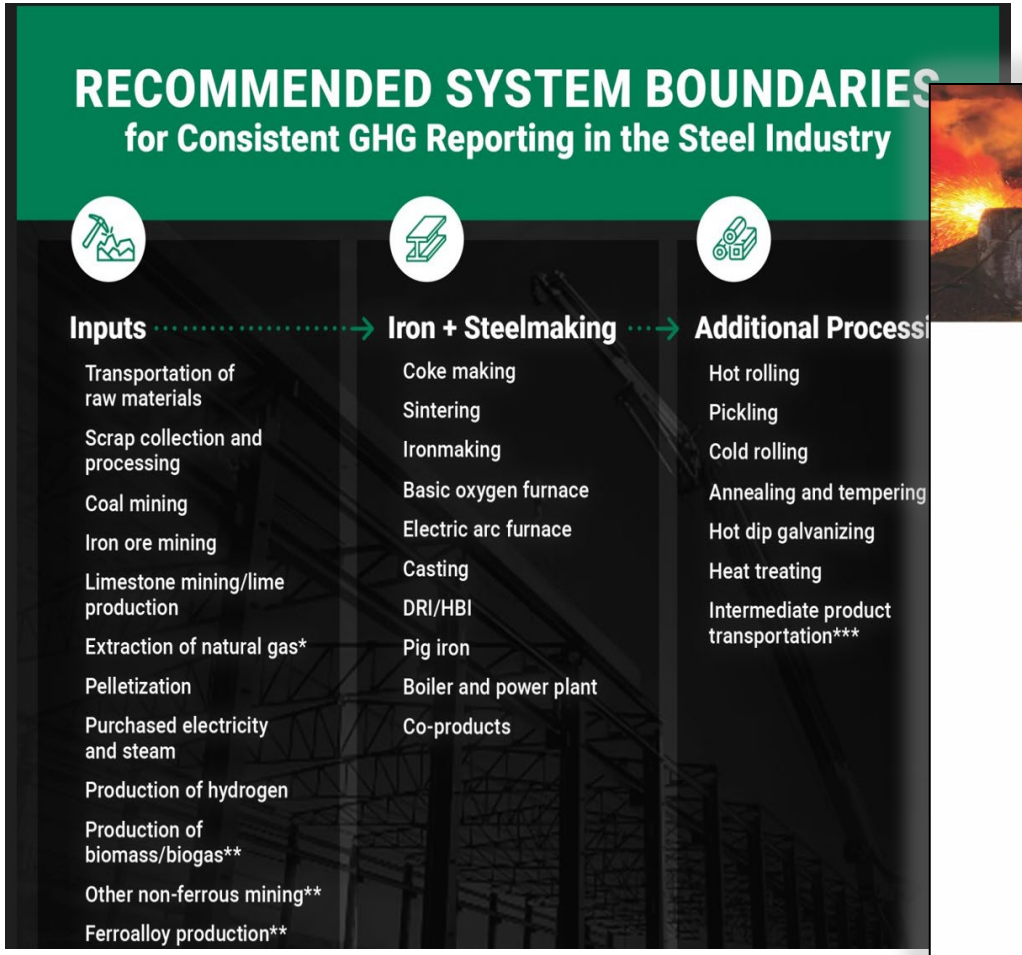
- Create incentive for foreign steel producers to match U.S. industry progress on making cleaner steel today
- Can be done without imposing a domestic carbon price/tax

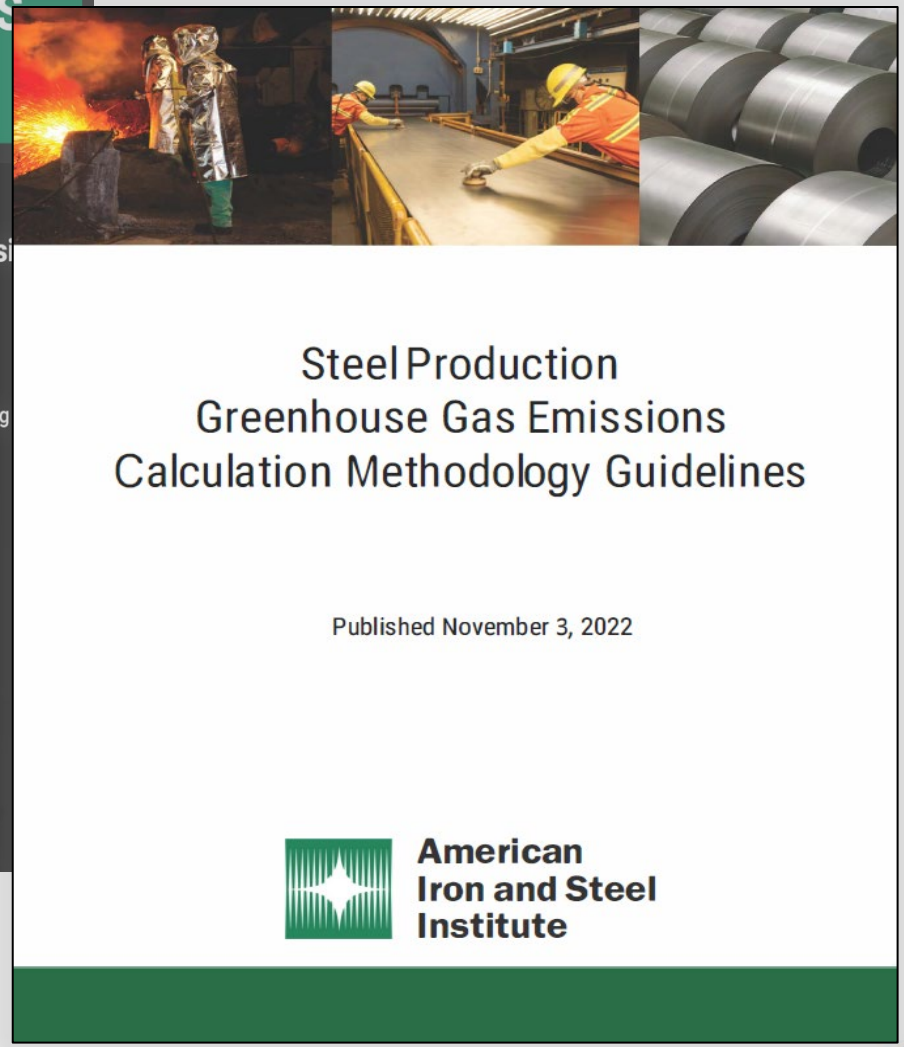
# Tariffs Should Cover Scope 1, 2, and 3 GHG Emissions




https://ghgprotocol.org/scope-3-technical-calculation-guidance

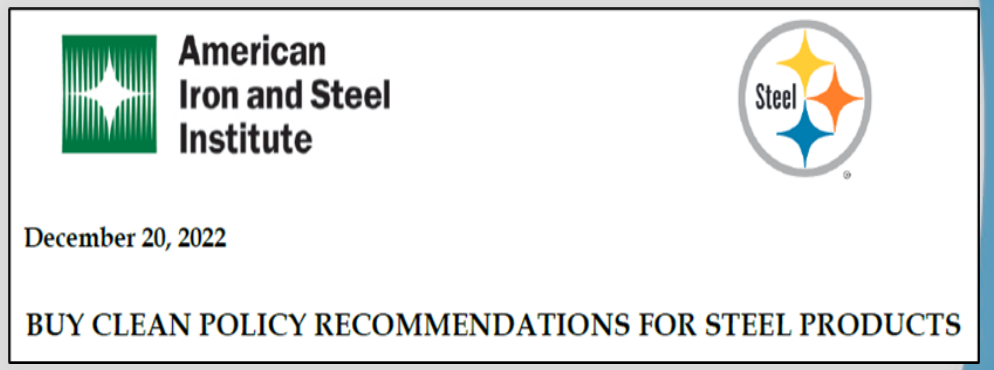
# AISI GHG Methodology Guidelines



# “Buy Clean” Policies Taking Shape

- Federal interagency task force developing policies for public procurement of low embodied GHG building materials
- AISI *Buy Clean Policy Recommendations for Steel Products* to provide program guidance
- EPA and GSA taking steps to establish definitions and standards for products with "substantially lower GHG emissions"
    - Establishes preferential procurement framework using company-specific Environmental Product Declarations



# Thank You / For More Information

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