

**UNITED STEELWORKERS**



# Iron Ore Overview

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**Basic Steel Industry Conference  
Pittsburgh, Pennsylvania  
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# U.S. Iron Ore Changes Since 2018

## Ups and Downs of a Historic 2020 and 2021

- ✧ Consolidation - Cliffs acquires AK Steel and ArcelorMittal USA in 2020. Two largest U.S. integrated steel producers (Cliffs & U.S.S.) now control all U.S. iron ore production.
- ✧ Cliffs HBI plant in Toledo goes online in 2020
- ✧ Ore prices dip in Q1 2020 and COVID idles several mines in 2020
- ✧ Ore production and pricing rebounds in Q3 2020, peaking in mid-2021

## U.S. Iron Ore Capacity

Company	Mine	Total Capacity	2019 Production
Cliffs	Northshore	6.0	5.2
Cliffs	Tilden	8.0	7.7
Cliffs	UTac	5.4	5.3
Cliffs	Minorca	2.8	2.8
Cliffs/USSteel*	Hibbing	8.0	7.5
US Steel	MinnTac	14.3	18.0
US Steel	KeeTac	5.4	
<b>USA Total</b>		<b>49.9</b>	<b>46.5</b>

Note: Capacity and Production in Millions of Long Tonnes (US Steel converted from Short Tons).

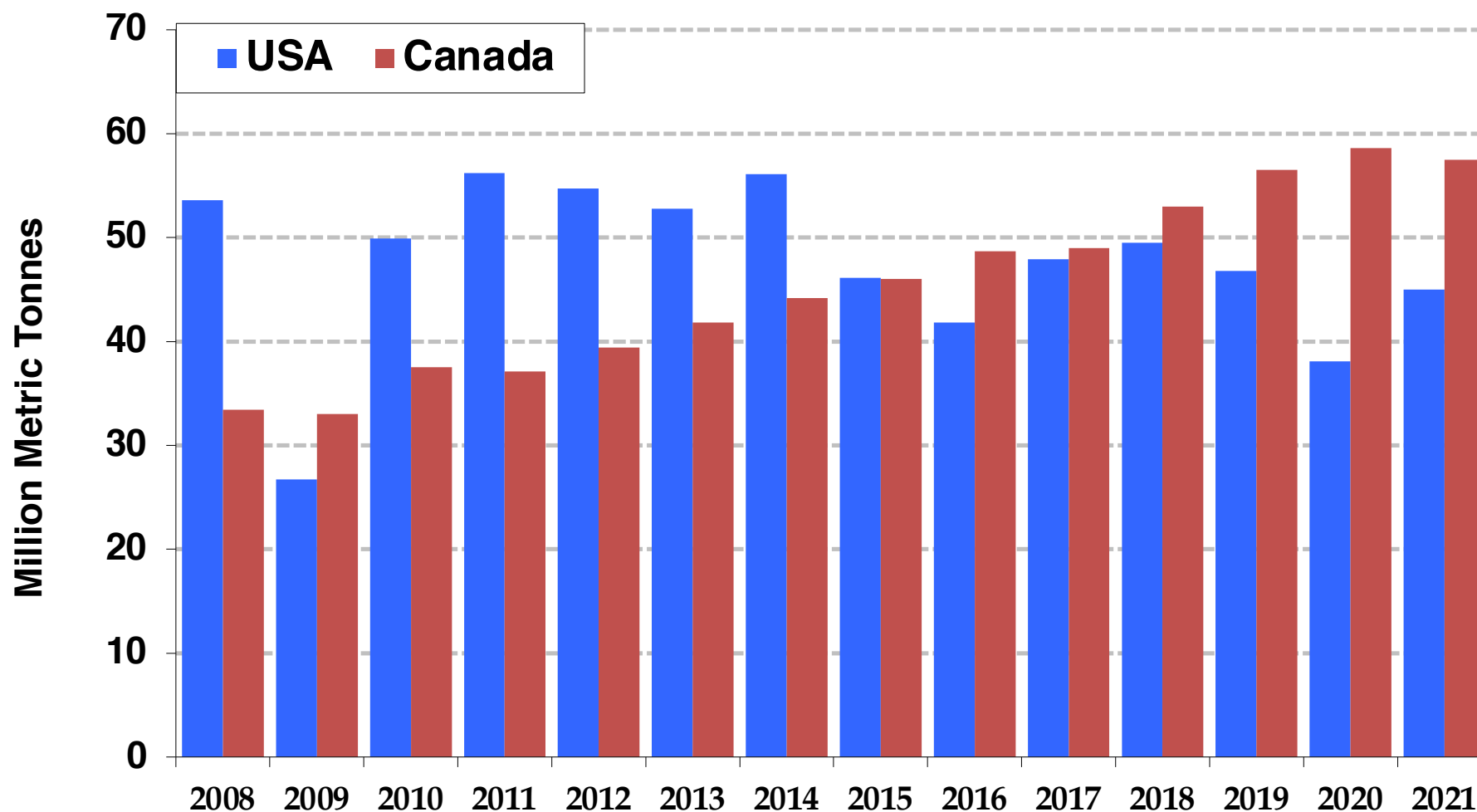
\*Hibbing is owned 85.3% by Cliffs and 14.7% by US Steel.

# Key Impacts on U.S. Iron Ore Capacity

- ✧ Temporary idle of Northshore announced by Cliffs in Feb 2022
- ✧ Hibbing potential life of mine end in 2025
- ✧ MN DNR revoked Mesabi Metallica's mineral leases in Nashwauk, MN in May 2021, upheld by Ramsey County judge in Jan 2022, appealed in March 2022.
  - ✧ Former Butler mine, closed in 1985.
  - ✧ MN Steel Industries formed in 2003 to build a pellet plant, DRI, and steel mill at the site.
  - ✧ Acquired by Essar in 2008, renamed Mesabi Metallica after bankruptcy in 2017, reacquired by Essar Global in 2019.
  - ✧ Proximity to Hibbing and Keetac has drawn interest from both Cliffs and US Steel.
- ✧ Empire ? (indefinitely idled in 2016)

# USA/Canada Iron Ore Production

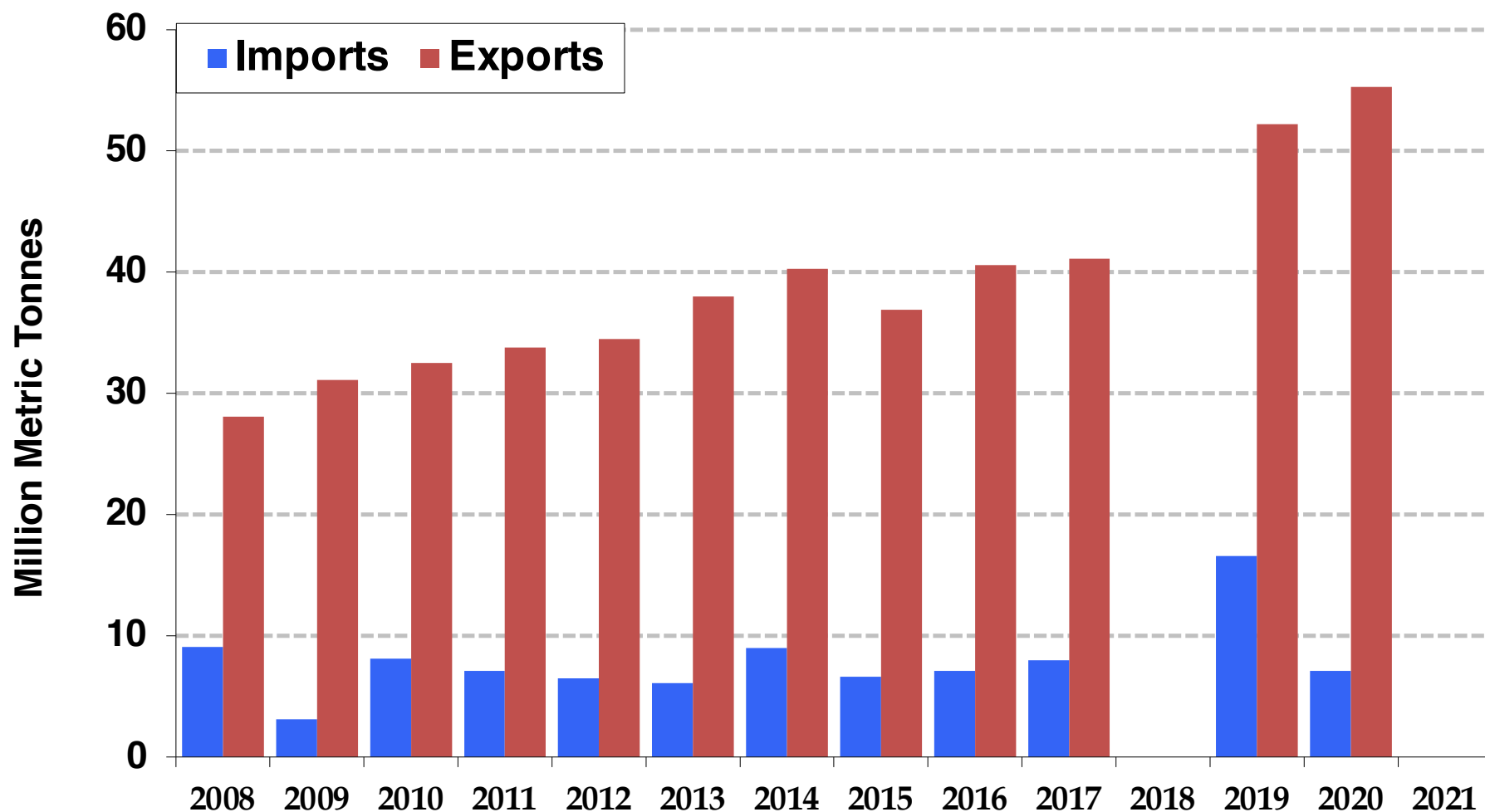
US production dropped with idling of Empire in 2016



Source: World Steel Association Steel Statistical Yearbooks.  
USGS, Statistics Canada

# Canadian Iron Ore Imports/Exports

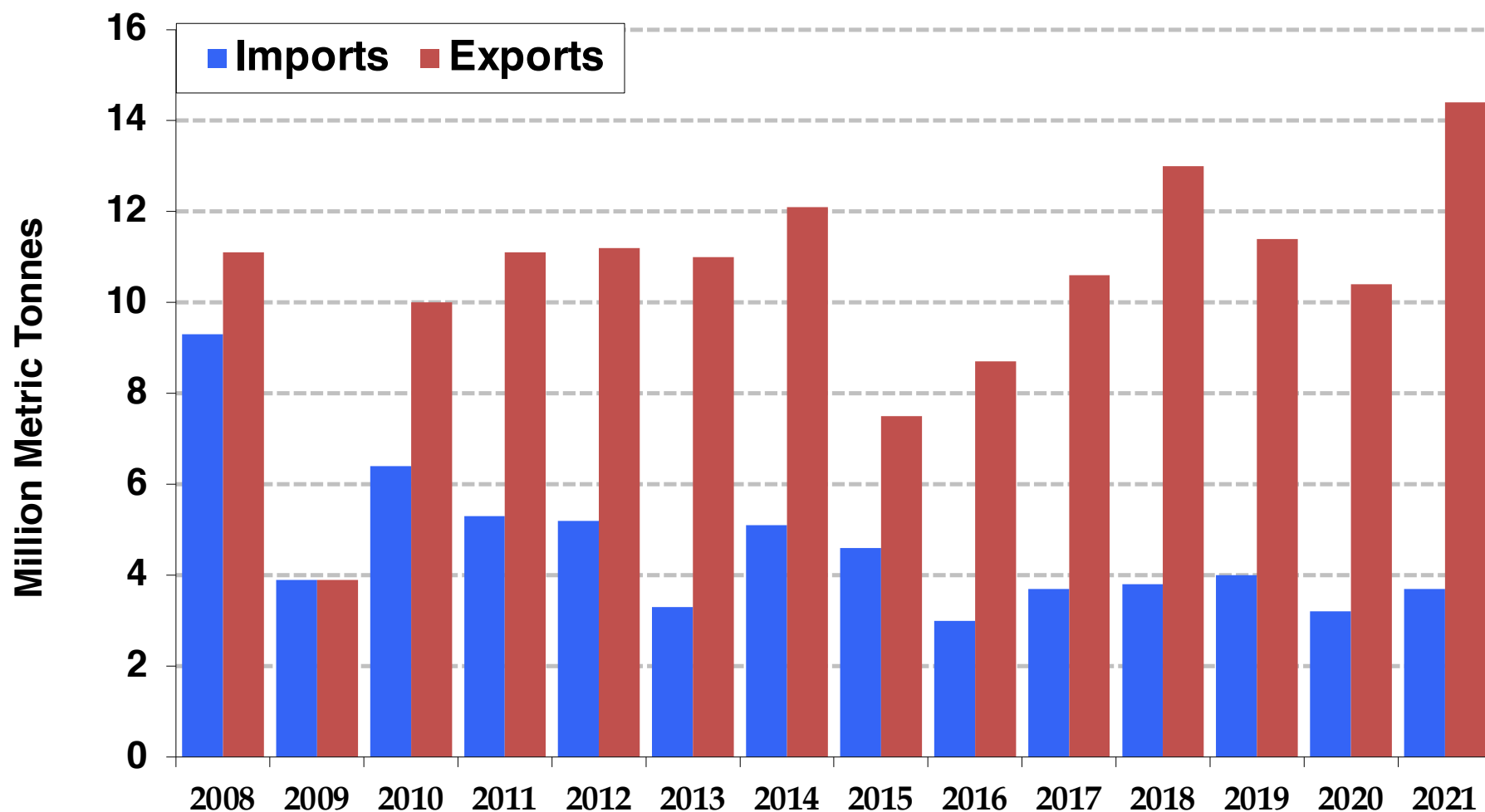
Most imports are pellets from USA, Most exports are concentrate



Source: World Steel Association Steel Statistical Yearbooks.  
Natural Resources Canada

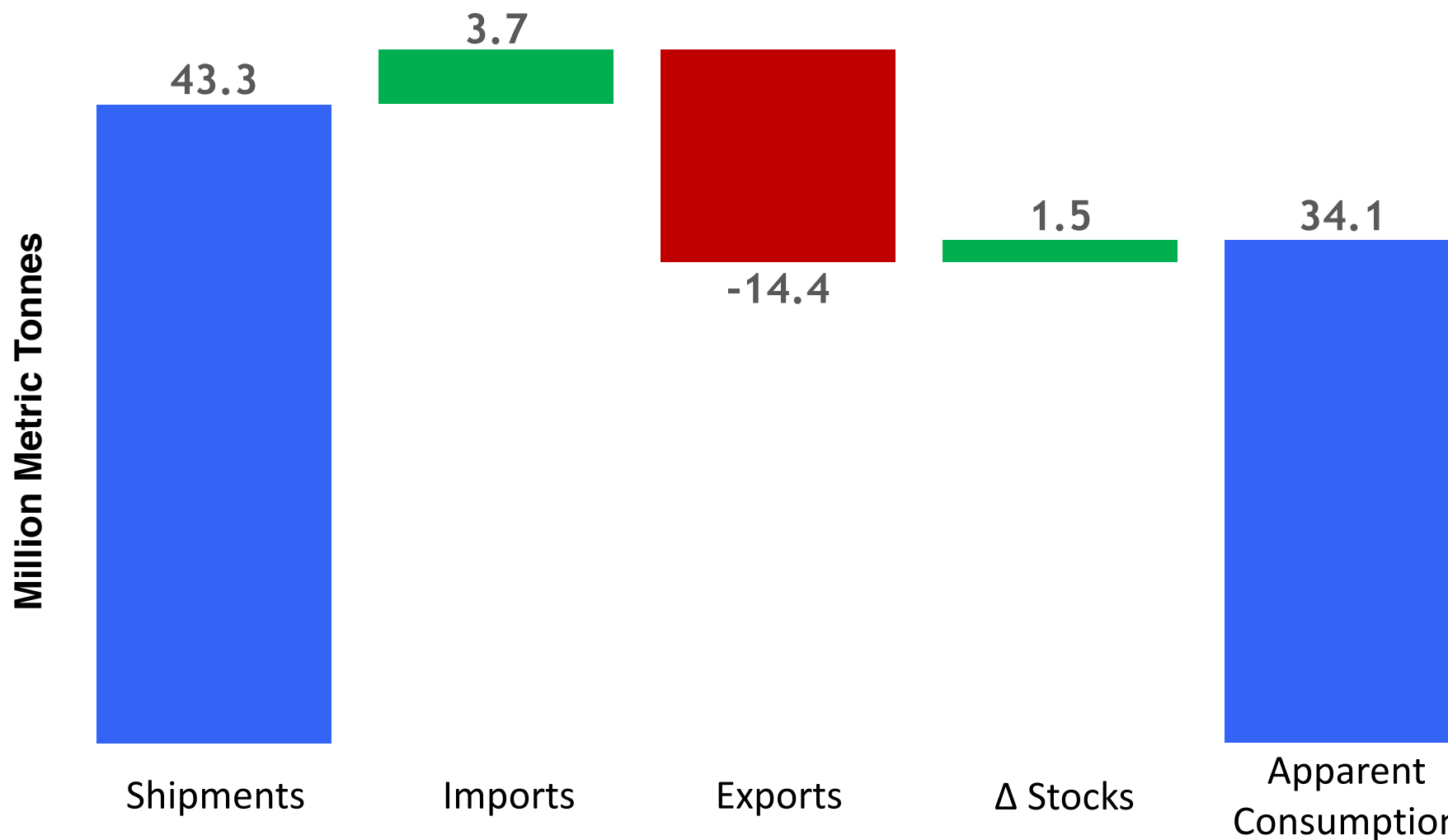
# USA Iron Ore Imports/Exports

Most exports are pellets to Canada, Most imports from Brazil



Source: USGS

# USA Iron Ore Apparent Consumption: 2021



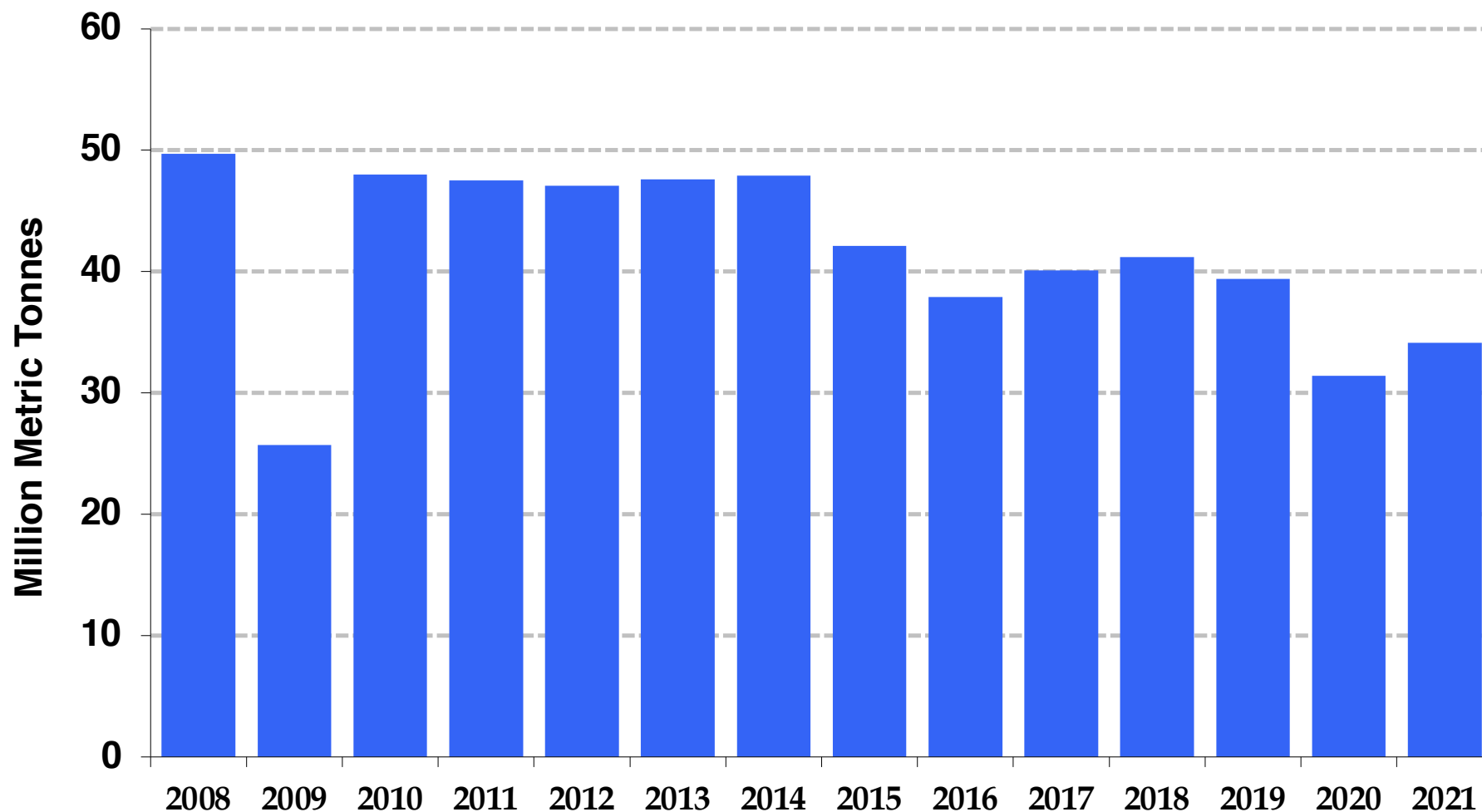
Source: USGS





# USA Iron Ore Apparent Consumption

Rising Exports Mask Lower Apparent Consumption



Source: USGS



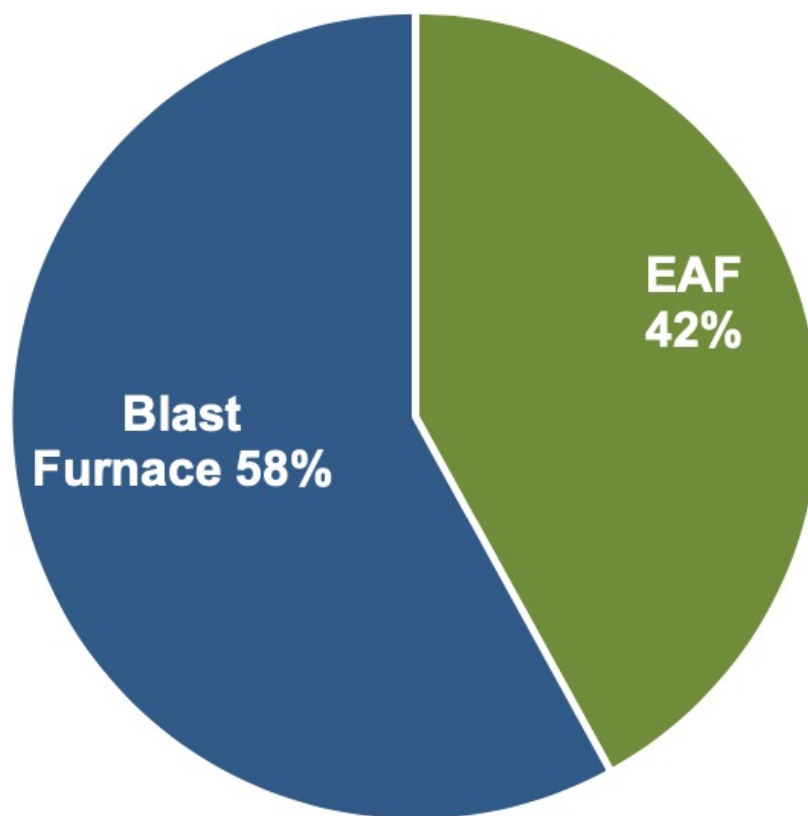
## Future of U.S. Ore Demand?

- ✧ Growth of EAFs reducing Blast Furnace production
  - Lower pellet use.
  - Higher demand for scrap, pig iron, DRI/HBI.
  - Cliffs purchased FTP scrap processor in Nov 2021.
- ✧ Price and availability of prime scrap increasing demand for DRI/HBI
- ✧ Where will DRI/HBI be produced and where will the ore come from?
- ✧ Cliffs estimates HBI/DRI market in Midwest to be 3.5 million tonnes. New HBI plant in Toledo has 1.9 million tonne capacity.

# USA Flat-Rolled Steel Production

EAF share of production continues to grow.

## 2021

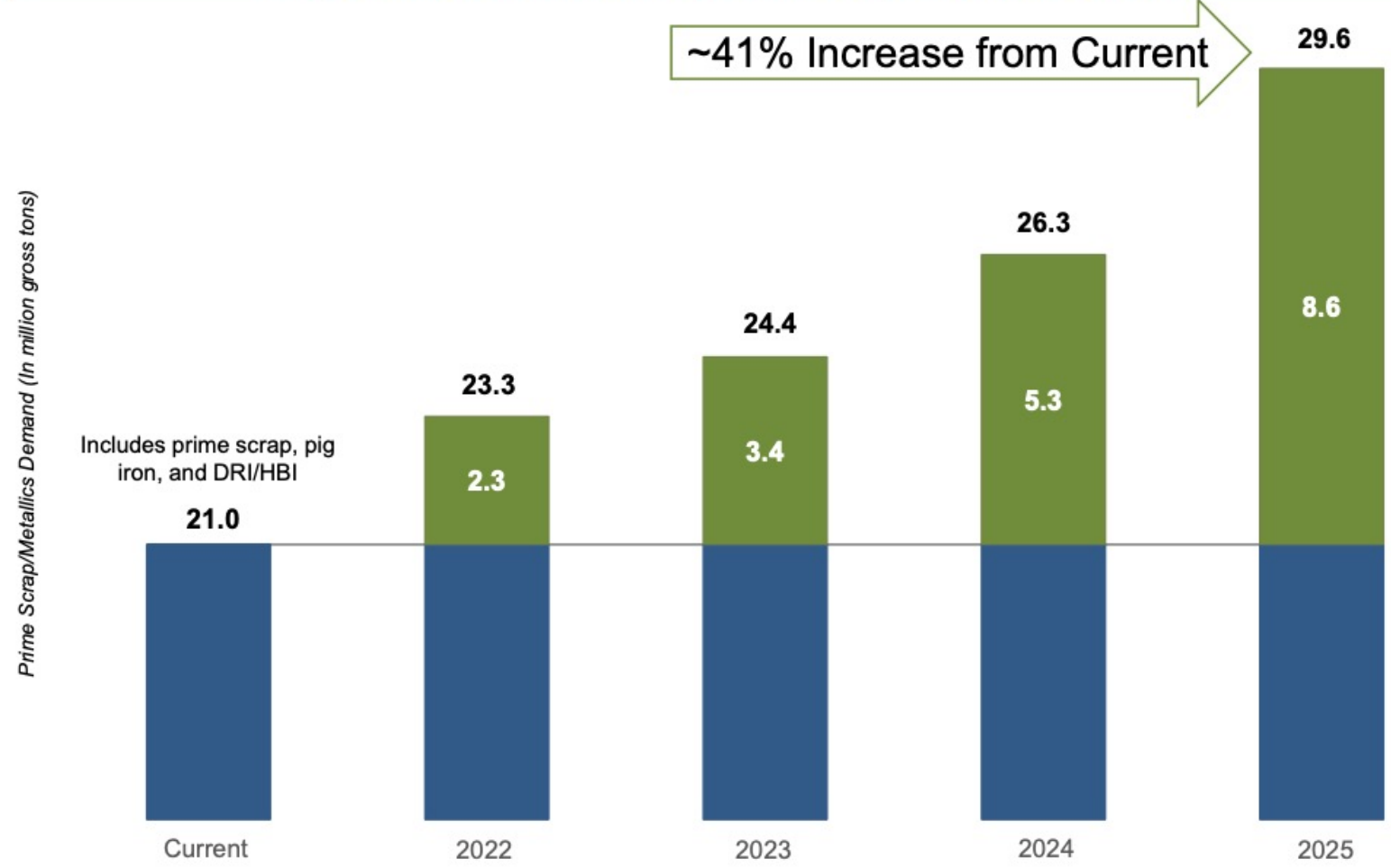


Source: Cliffs / Worldsteel

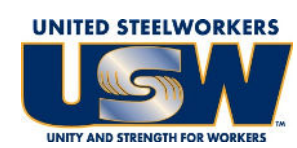
# Projected Growth in Scrap/DRI/HBI Demand

PRIME/METALLICS DEMAND WILL GROW >40% OVER THE NEXT 4 YEARS

## Projected North America Net Prime Scrap / Metallics Demand

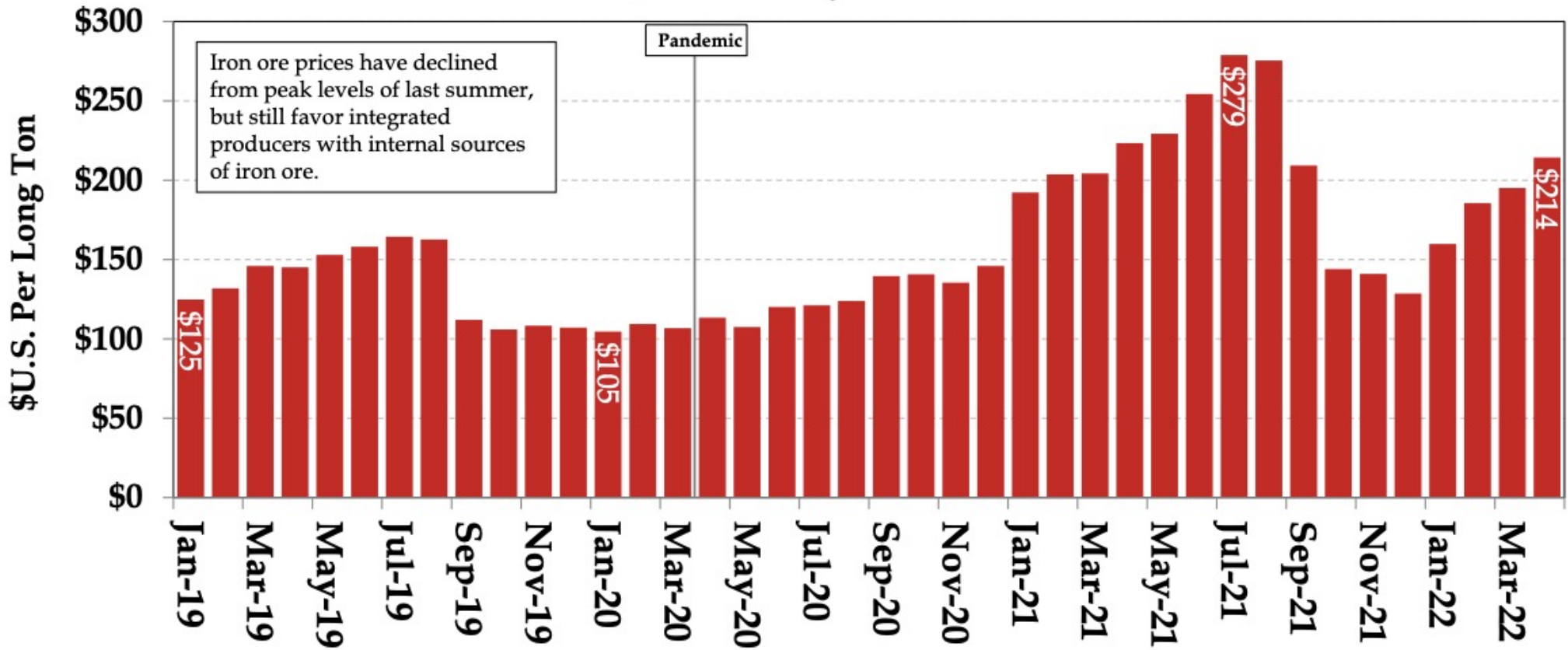


Source: Cliffs, Feb 2022 Investor Presentation



# Iron Ore Price

Pellets, Brazil export f.o.b.



## Why Did Ore Prices Jump in 2021?

- ✧ Disruption in global supply chain due to COVID.
- ✧ Huge jump in consumer demand for durable goods.

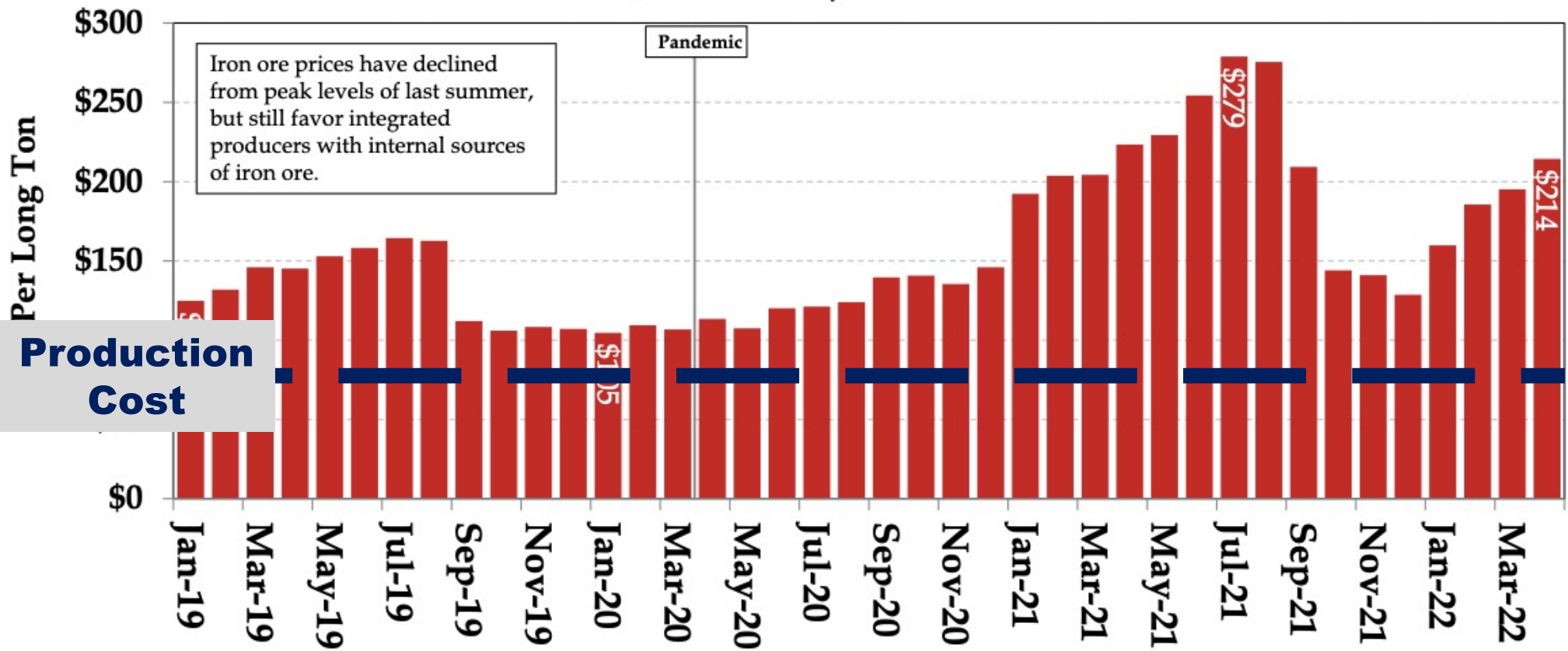
## Will Ore Prices Continue to Remain High?

- ✧ Continued upward pressure from supply chain constraints and consumer demand.
- ✧ US infrastructure spending will create more demand.
- ✧ Projections include lower pricing in 2022 and 2023, but still higher than previous 10 years.

# Importance of Vertical Integration

## Iron Ore Price

Pellets, Brazil export f.o.b.



## Impact of Vertical Integration

- ✧ Cost savings - production of domestic pellets at \$75-\$80 per ton vs. buying imported pellets at \$200-\$250
- ✧ Higher profits - selling/exporting excess pellets at \$200-\$250 per ton vs. \$75-\$80 production cost. Profitable even at significantly lower pricing.
- ✧ Neither Cliffs nor US Steel break out separate iron ore financials. “Arms length transaction” shows huge profitability for ore, but small margins for steelmaking - as it would be if they had to buy it from an outside supplier in the past 2 years.



## Summary

- ✧ USA pellet consumption continues to slide as EAFs continue to take market share and use of DRI/HBI continue to grow.
- ✧ Vertical integration of integrated producers, Cliffs and US Steel, reduces volatility and supports margins. Fluctuations in world ore pricing have less of an impact on domestic cost.
- ✧ Without sufficient domestic supply of iron ore, replacement by imports is price prohibitive long term and would accelerate shift to EAF and steel imports.