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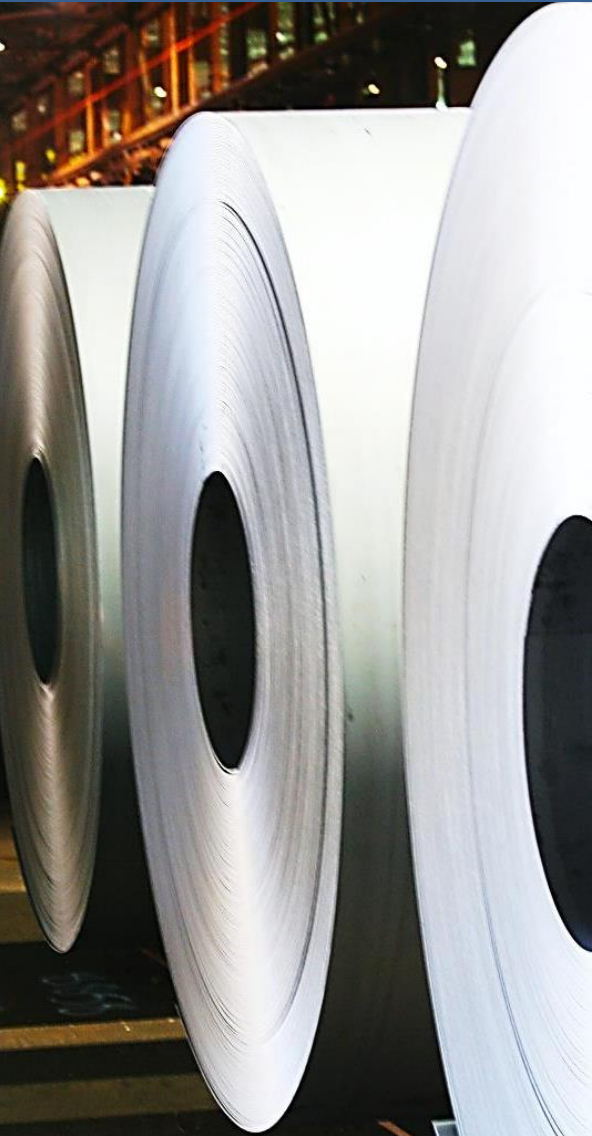
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CEC Working Group Presentation

August 3, 2021

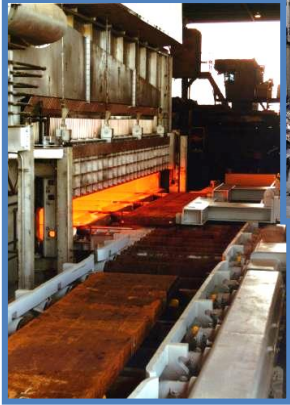


CSI: Strong Company and a Strong Employer



Company	<ul style="list-style-type: none">▪ An American corporation, nearly 37 years in business▪ On site of former Kaiser Steel Co. which operated here for 40 years▪ World-class environmental and safety performance▪ On-site amenities and professional development opportunities
Capacity	<ul style="list-style-type: none">▪ More than 2 million tons per year rolling capacity – largest in the Western U.S.
Products	<ul style="list-style-type: none">▪ Flat rolled steel and electric resistance welded pipe
Customers	<ul style="list-style-type: none">▪ 200+, California and surrounding Western states, construction-based
Site	<ul style="list-style-type: none">▪ 430 acres, with 115 acres “under roof”▪ > \$1 Billion in capital investments since 1992
Workforce	<ul style="list-style-type: none">▪ ~900 employees▪ 50% minorities▪ 11% Veterans▪ CSI has never had a layoff in its history!

CSI Has Invested >\$1 Billion since 1992



- #4 HSM Reheat Furnace
\$28 million
- Five Stand Cold Reduction
Mill \$64 million



#2 Galvanizing Line
\$73 million



#5 HSM Reheat Furnace
\$70 million

1994

1997

1998

1999

2001

2009

2013/14

Continuous Pickle
Line \$68 million

Coil Handling System &
Cooling Pond \$14 million

Hydrogen Annealing
\$14 million

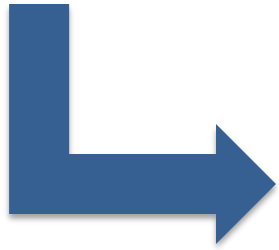
#2 Pipe Mill
\$150 million



CSI's Slab-Based Business Model



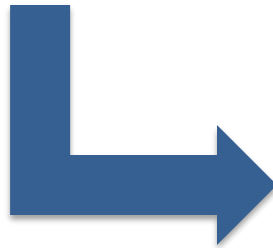
Slabs (Imported; minimal domestic)



Converted to:



Hot Rolled Coil
Pickled & Oiled Coil
Galvanized Coil
Cold Rolled
Annealed Coil

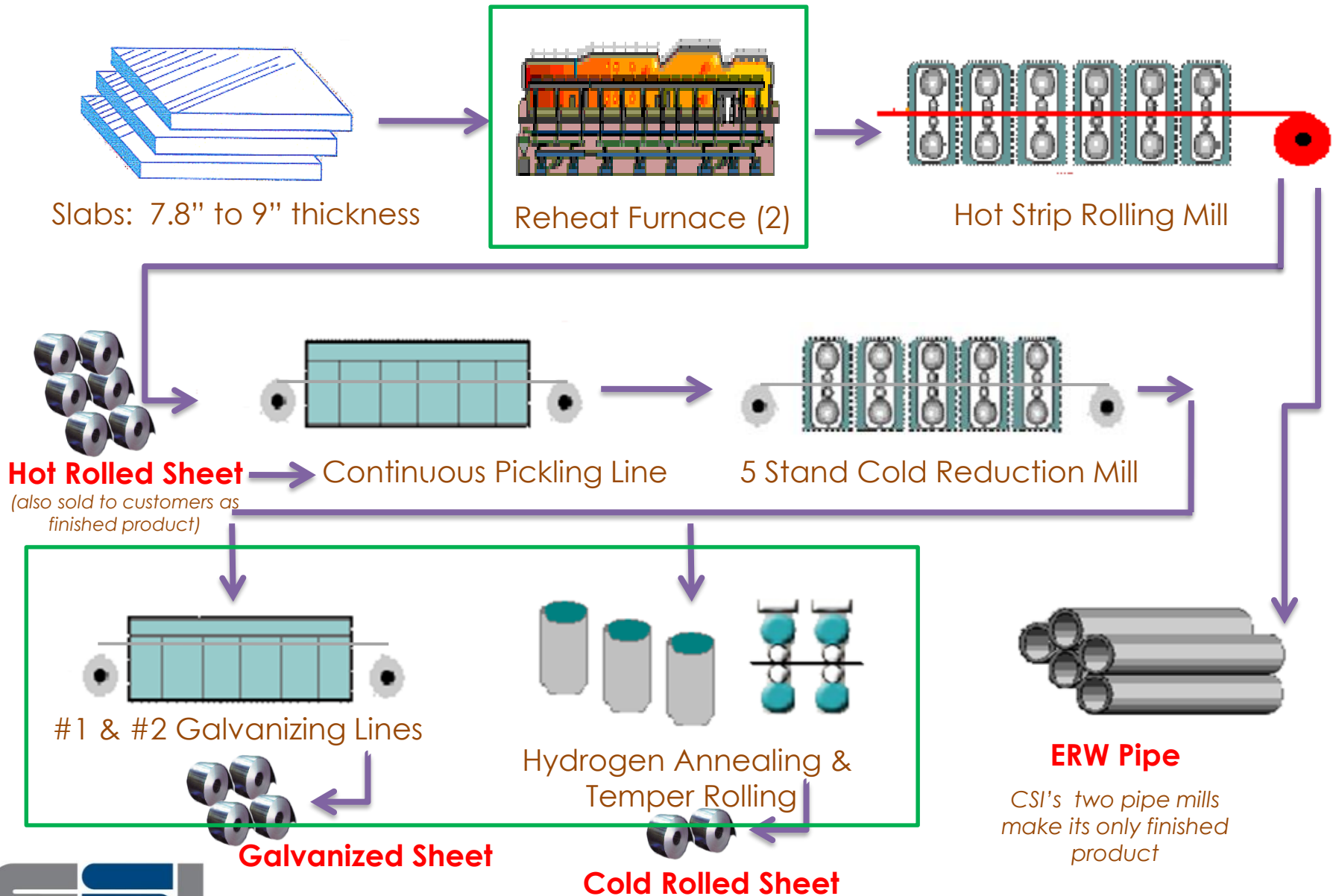


Hot Rolled coil
formed into...



Electric Resistance
Welded Pipe

“Slab Converter” Rolling Process at CSI

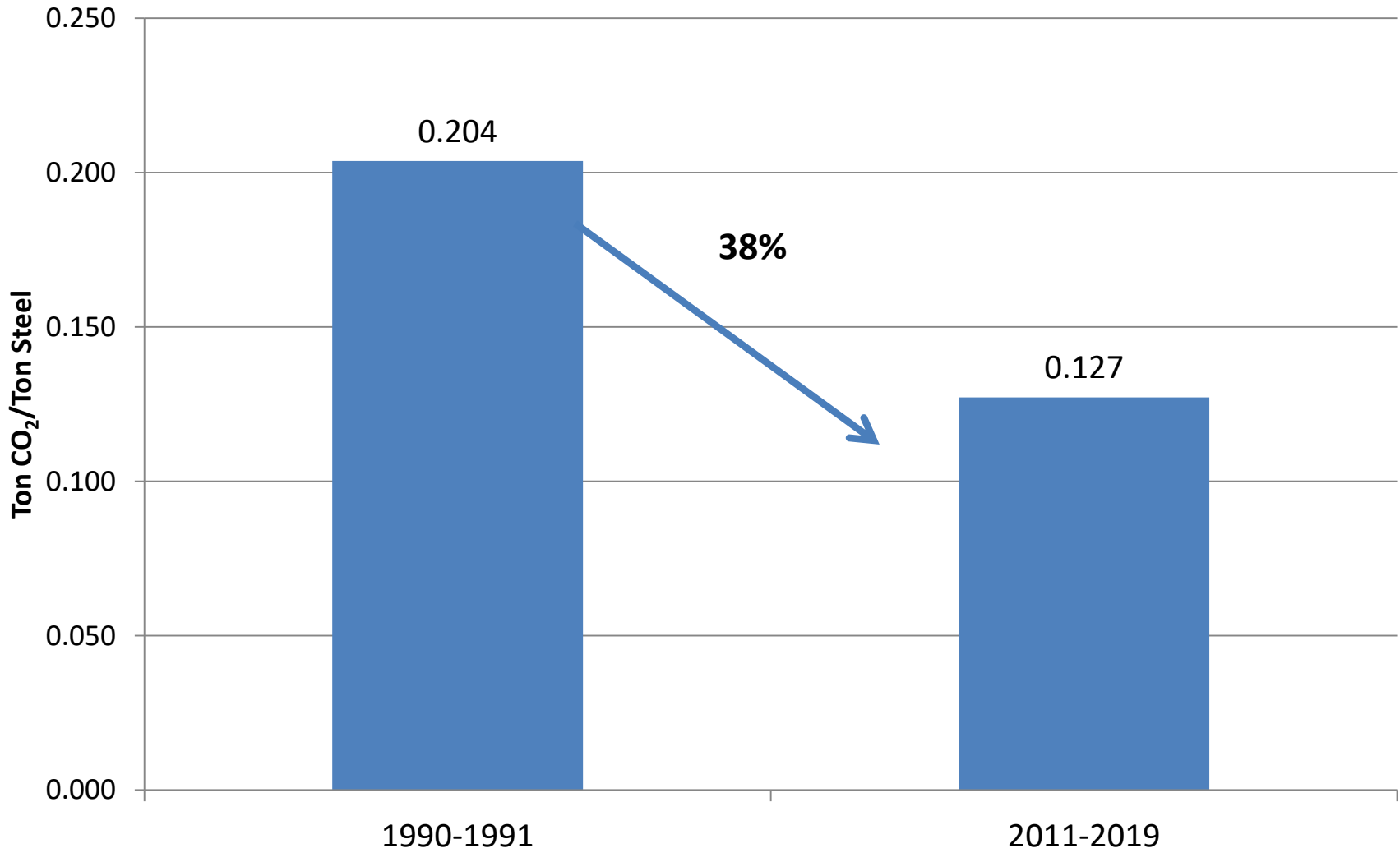


Heating of Slabs – High Intensity Heating

- Slab Dimensions
 - On average, each slab weighs 25 tons
 - 9” thick x up to 74” wide x up to 432” length
 - 350-400 slabs / day are heated to ~2300°F

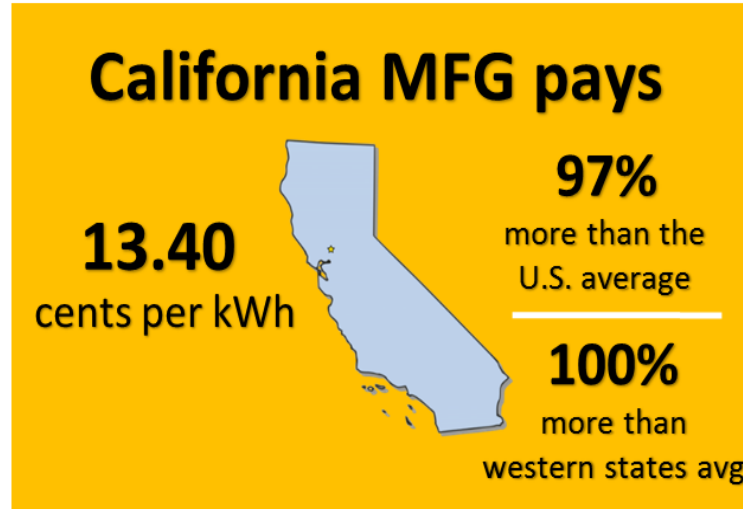


Carbon Intensity: CO₂ per Ton of Steel Produced



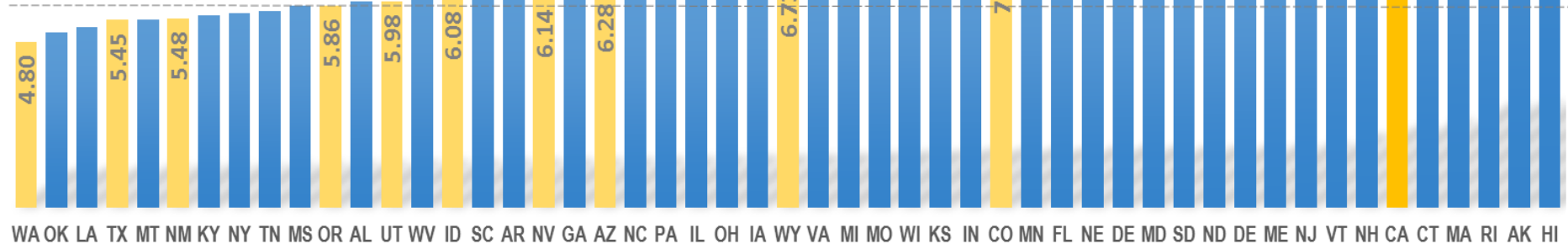
California manufacturers pay 97% higher electricity rates than the U.S. average

Industrial rates by state - 2019



United States avg. = 6.81 cents per kWh

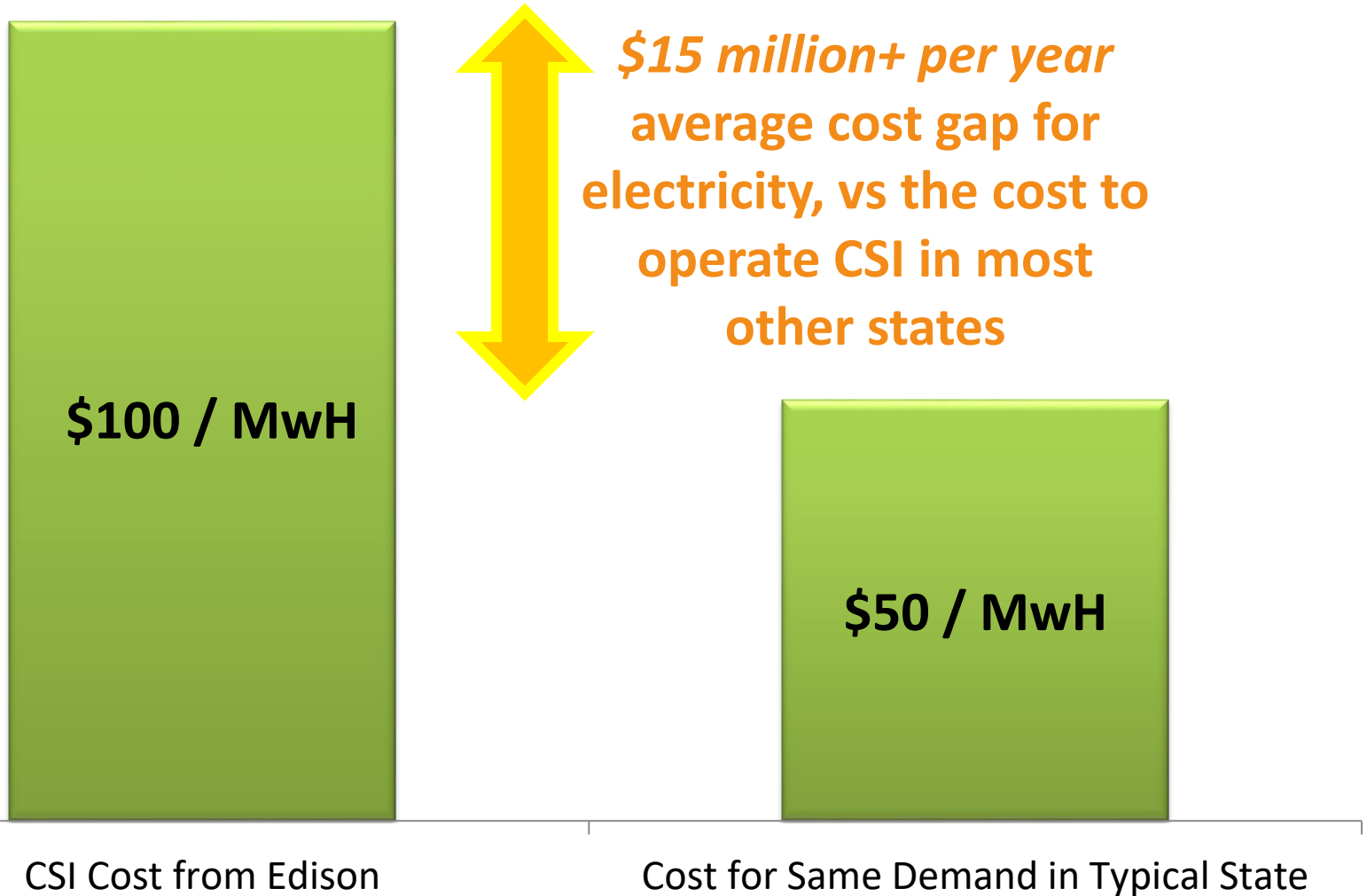
Western states avg. = 6.69 cents per kWh



Source: U.S. Energy Information Administration, latest annual rate report released October 2020



CSI “Energy Cost Premium” to be in California



EPA GHG Study – Iron and Steel

- [EPA Study released in September 2012](#)¹
- CSI employs 9 of the 11 recommendations made for hot rolling GHG reduction
- The 9 adopted strategies include: temperature and process control, recuperative burners, insulation, walking beams, and waste heat recovery
- 2 recommendations are currently not feasible within CSI's hot rolling process
 - “Hot charging” slab
 - Oxy-fuel vs. natural gas

¹<https://www.epa.gov/sites/production/files/2015-12/documents/ironsteel.pdf>

CSI Internal Study – Electrification of Reheat Furnaces

- As part of work conducted with CARB staff, third-party study was conducted related to investigating the technology & cost of full electrification of the process to eliminate the use of natural gas
- Full electrification would increase the cost of production heating by 600%
- Full electrification would increase GHG emissions by 27%

Annual Production Rate (Steel Tons)	Annual GHG Emissions (Tons CO2e)		
	Natural Gas	Electric Induction Based on CEC 15 Year GHG TOU Emission Metric for Industrial Sector	Electric Induction Based on CEC 30 Year GHG TOU Emission Metric for Industrial Sector
1,458,074	130,119	165,487	157,991

CSI – Future Plans

- Continue to explore technology improvements to burner technology
 - Reheat furnaces
 - Galvanizing line furnaces
 - Boiler sources
- Evaluation of alternate fuels
 - Natural gas from renewable sources
 - Hydrogen
 - Oxy-fuels
- Electrification of Transportation Fleet