



# GHG EMISSIONS REPORTING



# GHG Emissions Reporting

Big River Steel is committed to the vision and mission of the ResponsibleSteel™ initiative. To uphold the global standards, Big River Steel commits to public reporting of its greenhouse gas (GHG) emissions:

## Big River Steel Sitewide Total GHG Emissions Breakdown

	Sitewide Scope 1 – Direct GHG Emissions (MT CO2e)	Sitewide Scope 2 – Imported Electricity GHG Emissions (MT CO2e)	Total Sitewide Scopes 1 and 2 GHG Emissions (MT CO2e)	Crude Steel Production (MT)	Scopes 1 and 2 Sitewide GHG Intensity (MT CO2e/MT steel)
2021 (Baseline)	550,635	485,037	1,035,672	2,531,372	0.41
2022	521,812	392,512	914,324	2,404,190	0.38

### Notes:

1. All GHG emissions presented were calculated in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. This table represents sitewide emissions.
2. Sitewide Scope 1 emissions include stationary source combustion and mobile source combustion.
3. Sitewide Scope 2 emissions include emissions associated with imported electricity and were calculated by Big River Steel's electrical utility in partnership with Big River Steel. There are no Scope 2 emissions associated with imported heat and steam. No RECs are reflected in the 2021 Scope 2 emissions, 21,009 MWh of RECs are included in 2022.
4. The total sitewide GHG emissions is the sum of Sitewide Scope 1 – Direct GHG Emissions and Sitewide Scope 2 – Imported Electricity GHG Emissions.
5. These emissions have received independent verification by a third party, DNV Business Assurance USA, Inc.
6. These emissions meet the standards of ResponsibleSteel requirements 10.3.1 and 10.3.2.

# Big River Steel ResponsibleSteel-Required GHG Emissions Intensity of Crude Steel Emissions Breakdown

Scope	Description	2021 (MT CO2e)	2022 (MT CO2e)
Scope 1	Process-Related Emissions	350,290	327,832
Scope 1	Diesel Combustion Emissions	1,735	637
Scope 1	Natural Gas Combustion Emissions	54,146	45,099
Scope 1	Mobile Source Emissions	641	810
Scope 2	Purchased Electricity Emissions	411,907	333,588
Scope 3	Upstream Materials – Embodied Carbon	2,754,906	2,321,727
Scope 3	Upstream Materials - Transportation	192,062	164,749
Scope 3	Downstream Waste	20,060	18,044
<b>Total</b>		<b>3,785,747</b>	<b>3,212,487</b>

## Notes:

1. Acronyms: CO2e – carbon dioxide equivalent, GHG – greenhouse gas, MT – metric ton
2. Scopes 1 and 2 emissions are calculated in accordance with the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard. Scope 3 emissions are calculated in accordance with Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard and ResponsibleSteel Standard Requirements listed in Criterion 10.4.
3. The boundary of the ResponsibleSteel-required GHG intensity ends at the production of crude steel. Therefore, it does not include any Scopes 1, 2, or 3 emissions produced after the production of crude steel (except for downstream waste, which is included).
4. Scope 1 emissions include process-related emissions, diesel combustion emissions, natural gas combustion emission, and mobile source emissions up until the production of crude steel.
5. Scope 2 emissions include emissions associated with imported electricity up until the production of crude steel. There are no Scope 2 emissions associated with imported heat and steam. No RECs are reflected in the 2021 Scope 2 emissions, 21,009 MWh of RECs are included in 2022.
6. Scope 3 emissions include upstream material emissions in accordance with ResponsibleSteel Standard Requirements listed in Criterion 10.4. These emissions represent raw material extraction, processing, and transportation of all materials delivered to the site for crude steel production. Scope 3 emissions also includes downstream waste emissions from recycling of baghouse dust and landfilling of wastewater treatment filter cakes and municipal solid waste generated at the plant.
7. Scopes 1 and 2 emissions have received independent verification by a third party, DNV Business Assurance USA, Inc. Scope 3 emissions have been internally checked against the ResponsibleSteel standard.

# Big River Steel ResponsibleSteel-Required GHG Emissions Intensity of Crude Steel

	Scopes 1, 2, and 3 Emissions (ResponsibleSteel-Required) (MT CO <sub>2</sub> e)	Crude Steel Production (MT)	ResponsibleSteel-Required GHG Intensity of Crude Steel (MT CO <sub>2</sub> e/MT steel)
2021 (Baseline)	3,785,747	2,531,372	1.50
2022	3,212,487	2,404,190	1.34

**Notes:**

1. Acronyms: CO<sub>2</sub>e – carbon dioxide equivalent, GHG – greenhouse gas, MT – metric ton



# GHG Emissions Reduction Targets

Big River Steel has also committed to the following GHG emissions reduction targets.

## Big River Steel Sitewide Total GHG Emissions Breakdown

### Medium-Term Target for ResponsibleSteel-Required GHG Intensity of Crude Steel

The medium-term target for ResponsibleSteel-required GHG intensity is to reduce GHG intensity by **15% by 2030** compared to a 2021 baseline year. In the original Decarbonization Plan released in 2021, Big River Steel committed to a 5% reduction by 2030. However, Big River Steel has been able to reduce GHG emissions by nearly 11% in just 1 year. An annual milestone of 1.7% reduction will continue to be monitored.

Medium-Term Target for ResponsibleSteel-Required GHG Intensity of Crude Steel		
2021 Baseline (MT CO2e/MT crude steel)	2022 Performance (MT CO2e/MT crude steel)	2030 Target (MT CO2e/MT crude steel)
1.50	1.34	1.28

1. Acronyms: CO2e – carbon dioxide equivalent, GHG – greenhouse gas, MT – metric ton

### Medium-Term Target for Imported Electricity GHG Intensity

The Medium-Term Target for Imported Electricity GHG Intensity is to reduce GHG emissions intensity associated with imported electricity by **25% by 2030** compared to a 2021 baseline year. In the original Decarbonization Plan released in 2021, Big River Steel committed to a 12% reduction by 2030. However, Big River Steel has been able to reduce GHG emissions by 15% in just 1 year. An annual milestone of 4% reduction will be monitored.

Medium-Term Target for Imported Electricity GHG Intensity		
2021 Baseline (MT CO2e/MT crude steel)	2022 Performance (MT CO2e/MT crude steel)	2030 Target <sup>1</sup> (MT CO2e/MT crude steel)
0.19	0.16	0.14

1. The 2030 target for imported electricity net GHG intensity will be achieved through increased reliance on carbon-free electricity and purchasing of renewable energy credits (RECs).

2. Acronyms: CO2e – carbon dioxide equivalent, GHG – greenhouse gas, MT – metric ton