

ENVIRONMENTAL PRODUCT DECLARATION

FABRICATED HOLLOW STRUCTURAL SECTIONS

NUCOR CORPORATION



NUCOR®

Nucor Tubular Products (NTP) was created in 2017 when Independence Tube, Southland Tube and Republic Conduit merged under the Nucor brand. Together, these companies bring 85 years of expertise in manufacturing high quality HSS, piling, A53 pipe, and fire protection sprinkler pipe. NTP has eight locations across the United States. Backed by five Nucor sheet mills, NTP is the most dependable pipe and tube producer in the country.

NTP is part of Nucor Corporation, North America's largest recycler, turning approximately 20 million net tons of scrap steel in 2020 into new steel. Nucor uses Electric Arc Furnace (EAF) technology all of its steel recycling facilities. EAFs use post-consumer scrap as its major feedstock, unlike traditional blast furnace steelmaking, which produces more than 70% of the world's steel using mined iron ore and metallurgical coal as feedstock.

Through its use of EAFs, Nucor's steelmaking CO₂ emissions are one-half of the global average on a per ton basis, and Nucor's energy intensity is approximately one-quarter the global average.



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Fabricated Hollow Structural Sections
Designated Steel Construction Products

According to ISO 14025
and ISO 21930:2017

EPD PROGRAM AND PROGRAM OPERATOR NAME, ADDRESS, LOGO, AND WEBSITE	UL Environment 333 Pfingsten Road Northbrook, IL 60611 https://www.ul.com/ https://spot.ul.com
GENERAL PROGRAM INSTRUCTIONS AND VERSION NUMBER	0.1
MANUFACTURER NAME AND ADDRESS	Nucor Corporation, 1915 Rexford Road, Charlotte, North Carolina 28211
DECLARATION NUMBER	4789971302
DECLARED PRODUCT & FUNCTIONAL UNIT OR DECLARED UNIT	Fabricated Steel Hollow Structural Sections, 1 metric ton
REFERENCE PCR AND VERSION NUMBER	Part A: Calculation Rules for the LCA and Requirements Project Report, (IBU/UL Environment, V3.2, 12.12.2018) and Part B: Designated Steel Construction Product EPD Requirements (UL Environment, V2.0, 08.26.2020).
DESCRIPTION OF PRODUCT APPLICATION/USE	Steel Hollow Structural Sections used for structural, piping, and other elements in buildings, bridges, and other structures.
PRODUCT RSL DESCRIPTION (IF APPL.)	N/A
MARKETS OF APPLICABILITY	North America
DATE OF ISSUE	April 2021
PERIOD OF VALIDITY	1 Year
EPD TYPE	Product Specific
EPD SCOPE	Cradle to gate
YEAR(S) OF REPORTED PRIMARY DATA	2019
LCA SOFTWARE & VERSION NUMBER	GaBi v10
LCI DATABASE(S) & VERSION NUMBER	GaBi 2020.2
LCIA METHODOLOGY & VERSION NUMBER	IPCC AR5 + TRACI 2.1

This PCR review was conducted by:	Grant R. Martin
	Grant R. Martin, UL Environment
This declaration was independently verified in accordance with ISO 14025: 2006. <input type="checkbox"/> INTERNAL <input checked="" type="checkbox"/> EXTERNAL	James H. Mellentine
	James Mellentine, Thrive ESG

LIMITATIONS
Exclusions: EPDs do not indicate that any environmental or social performance benchmarks are met, and there may be impacts that they do not encompass. LCAs do not typically address the site-specific environmental impacts of raw material extraction, nor are they meant to assess human health toxicity. EPDs can complement but cannot replace tools and certifications that are designed to address these impacts and/or set performance thresholds – e.g. Type 1 certifications, health assessments and declarations, environmental impact assessments, etc.
Accuracy of Results: EPDs regularly rely on estimations of impacts; the level of accuracy in estimation of effect differs for any particular product line and reported impact.
Comparability: EPDs from different programs may not be comparable. Full conformance with a PCR allows EPD comparability only when all stages of a life cycle have been considered. However, variations and deviations are possible. Example of variations: Different LCA software and background LCI datasets may lead to differences results for upstream or downstream of the life cycle stages declared.





1. Product Definition and Information

Description of Organization

This environmental product declaration (EPD) represents hollow structural sections (HSS) produced by Nucor Tubular Products (NTP) in Birmingham AL, Chicago IL, Decatur AL, Marseilles IL, and Trinity AL. The overall recycled content of NTP HSS (% by Total Weight) is 58.2%. As a vertically integrated company, Nucor controls a large and growing part of its supply chain from scrap recycling to raw steelmaking to steel products and distribution. NTP HSS products are made using sheet steel produced by Nucor's Sheet Mill Group. All of the steel produced by Nucor is 100% recyclable at the end of its useful life. In addition to ferrous scrap, Nucor sheet mills also use direct reduced iron (DRI) produced with natural gas as a raw material input to meet more stringent quality requirements for sheet steel products.

The primary feedstock for our recycled steel facilities is largely provided by Nucor's wholly-owned subsidiary, the David J. Joseph Company (DJJ). DJJ operates more than 60 scrap recycling facilities within close proximity to our steel mills, processing approximately 5,000,000 tons of ferrous scrap annually and provide an abundant supply of scrap to our steel mills. Having an abundant and reliable supply of recycled scrap within close proximity not only gives Nucor's steel mills a logistical and economic advantage over their competitors, but also a carbon footprint that is a fraction of the average steel producer.

Product Description

Steel tubes covered under this declaration represent hollow structural sections, mechanical tube, sprinkler pipe, and solar torque tube. These products are used in building, bridge and industrial applications.

Product Specification

HSS products produced by NTP are defined by the following ASTM standards:

- **ASTM A53** | Standard Specification for Pipe
- **ASTM A135** | Standard Specification for Electric-Resistance-Welded Steel Pipe
- **ASTM A252** | Standard Specification for Welded and Seamless Steel Pipe Piles
- **ASTM A500** | Standard Specification for Cold-Formed Welded and Seamless Carbon Steel Structural Tubing in Rounds and Shapes
- **ASTM A513** | Standard Specification for Electric-Resistance-Welded Carbon and Alloy Steel Mechanical Tubing
- **ASTM A795** | Standard Specification for Black and Hot-Dipped Zinc-Coated (Galvanized) Welded and Seamless Steel Pipe for Fire Protection Use
- **ASTM A847** | Standard Specification for Cold-Formed Welded and Seamless High-Strength, Low-Allow Structural Tubing with Improved Atmospheric Corrosion Resistance
- **ASTM A1085** | Standard Specification for Cold-Formed Welded Carbon Steel Hollow Structural Sections (HSS)
- **CSA G40.21** | General Requirements for Rolled or Welded Structural Quality Steel



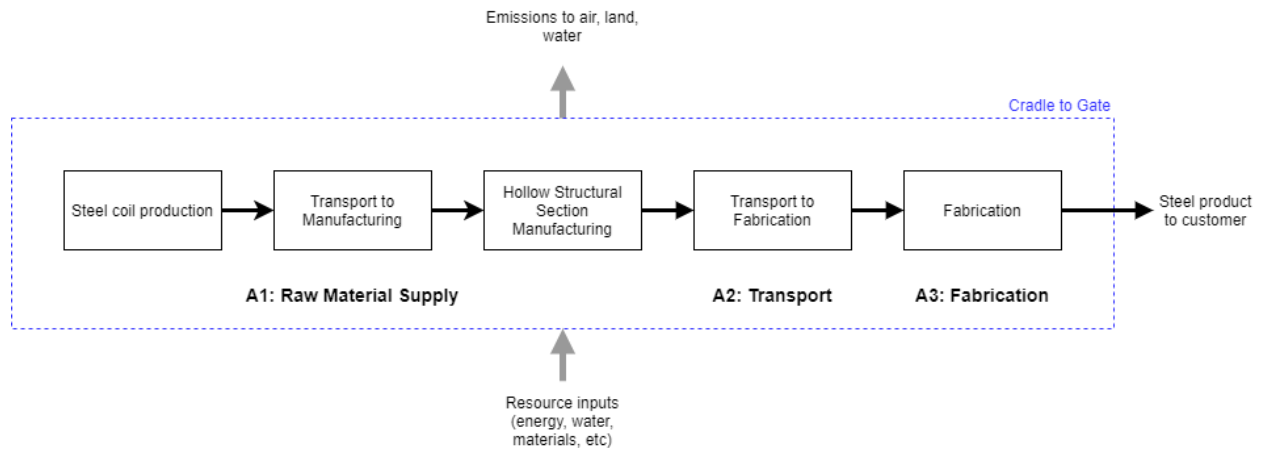
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Flow Diagram



Product Average

The 2020 production data used in this EPD considers HSS produced by NTP during the year. The products are manufactured at 5 locations in the US. Results are weighted according to production totals at all locations based on the 2020 data. Facility-specific global warming potential results are provided in a separate table.

Application

HSS products are rolled into a variety of shapes and sizes for use in various construction applications. HSS is used for structural, piping, and other elements in buildings, bridges, and other structures.





Technical Requirements

Technical data for the studied product can be found in the table below.

Table 1. Technical data for steel product

NAME	VALUE	UNIT
Density	7,800	kg/m ³
Melting point	1425-1450	°C
Electrical conductivity at 20°C	NA	% of IAC ⁸
Thermal conductivity	NA	W/(m-K)
Coefficient of thermal expansion	NA	m/m-°C
Modulus of elasticity	200,000	N/mm ²
Shear modulus	NA	N/mm ²
Specific heat capacity	NA	J/kg-°C
Hardness, Brinell Number	80-100	HB
Yield strength	250-550	N/mm ²
Ultimate tensile strength	410-655	N/mm ²
Breaking elongation	13-20	%
Chemical composition	Varies by ASTM Specification/Grade % by mass	

Properties of Declared Product as Delivered

HSS can be fabricated (i.e., cut or otherwise modified) by a fabricator or shipped directly to a job site or end user.

Material Composition

HSS are manufactured entirely from carbon steel; sometimes with a small amount of paint applied. They do not contain any materials or substances for which there exists a route to exposure that leads to humans or flora/fauna in the environment being exposed to said materials or substances at levels exceeding safe health thresholds. The products do not contain any hazardous substances according to the Resource Conservation and Recovery Act (RCRA), Subtitle 3. The products do not release dangerous substances to the environment, including indoor air emissions, gamma or ionizing radiation, or chemicals released to air or leached to water and soil.

Manufacturing

NTP manufactures HSS from hot-rolled coil, the major input; some with a small amount of paint applied as a coating. Some process materials are needed, such as lubricants, welding gases and electrodes, and carbide blades for cutting. Energy is also needed to roll-form the steel into tubes and weld coil edges together. Metal scrap generated during manufacturing is recycled externally.

Fabrication results are taken from the American Institute of Steel Construction (AISC) industry average EPD (AISC, 2021).



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Transportation

Transportation to the customer or construction site is outside the scope of this EPD.

Product Installation

Installation is outside the scope of this EPD.

Use

Product use is outside the scope of this EPD.

Reuse, Recycling, and Energy Recovery

Product reuse, recycling, and incineration for energy recovery is outside the scope of this EPD.

Disposal

Product disposal is outside the scope of this EPD.





2. LCA Calculation Rules

Declared Unit

The declared unit is 1 metric ton of fabricated steel product. An alternative declared unit of 1 short ton is also presented.

System Boundary

Per the PCR, this cradle-to-gate analysis provides information on the Product Stage of the steel product life cycle, including modules A1, A2, and A3.

PRODUCT STAGE			CONSTRUCTION PROCESS STAGE		USE STAGE							END OF LIFE STAGE				BENEFITS AND LOADS BEYOND THE SYSTEM BOUNDARY
Raw material supply	Transport	Manufacturing	Transport from gate to site	Assembly/Install	Use	Maintenance	Repair	Replacement	Refurbishment	Building Operational Energy Use During Product Use	Building Operational Water Use During Product Use	Deconstruction	Transport	Waste processing	Disposal	Reuse, Recovery, Recycling Potential
A1	A2	A3	A4	A5	B1	B2	B3	B4	B5	B6	B7	C1	C2	C3	C4	D
X	X	X	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND	MND

Cut-off Rules

No cut-off criteria are defined for this study. The system boundary was defined based on relevance to the goals of the study. In cases where no matching life cycle inventories are available to represent a flow, proxy data have been applied based on conservative assumptions regarding environmental impacts.

Data Sources

The LCA model was created using the GaBi Software system for life cycle engineering, version 10, developed by Sphera (Sphera, 2021). Background life cycle inventory data for raw materials and processes were obtained from the GaBi 2021 databases. Primary manufacturing data were provided by NTP.

Data Quality

A variety of tests and checks were performed by the LCA practitioner throughout the project to ensure high quality of the completed LCA. Checks included an extensive review of project-specific LCA models as well as the background data used.



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Geographical Coverage

Primary data represents production in the United States at the following NTP facilities:

- Nucor Tubular Products, Inc. – Birmingham (AL)
- Nucor Tubular Products, Inc. – Chicago (IL)
- Nucor Tubular Products, Inc. – Decatur (AL)
- Nucor Tubular Products, Inc. – Marseilles (IL)
- Nucor Tubular Products, Inc. – Trinity (AL)

Regionally specific datasets, where available, were used to represent each manufacturing location's energy consumption. Proxy datasets were used as needed for raw material inputs to address lack of data for a specific material or for a specific geographical region. These proxy datasets were chosen for their technological representativeness of the actual materials.

Period under Review

Primary data collected represents production during the 2020 calendar year. This analysis is intended to represent production in 2020.

Allocation

No multi-output allocation was required in the foreground system of the study. Allocation of background data (energy and materials) taken from the GaBi 2021 databases is documented online at <http://www.gabi-software.com/america/support/gabi/>

Estimates and Assumptions

The underlying study was conducted in accordance with the PCR. While this EPD has been developed by industry experts to best represent the product system, real life environmental impacts of HSS products may extend beyond those defined in this document.

All of the raw materials and energy inputs have been modeled using processes and flows that closely follow actual production data on raw materials and processes. All of the reported material and energy flows have been accounted for.

Mill-specific data was used to represent steel coil purchases for the HSS manufacturing process. Sourcing locations were provided by NTP. Datasets used to represent these sourcing locations were taken from an industry study conducted by the American Iron and Steel Institute (AISI).

Transportation distances were provided for almost all data, where transportation data was missing, 500 miles via truck were assumed.



3. LCA Results

North American life cycle impact assessment (LCIA) results are declared using TRACI 2.1 methodology, with the exception of GWP which uses the IPCC AR5 methodology. LCIA results are relative expressions and do not predict actual impacts, the exceeding of thresholds, safety margins or risks.

Fabrication requires 1.08 metric tons of HSS per 1 metric ton of fabricated product (AISC, 2021). A1 includes production of all 1.08 metric tons of HSS.

Table 2. LCIA results, per 1 metric ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
GWP 100	kg CO ₂ eq.	1.57E+03	4.46E+01	9.67E+01	1.71E+03
ODP	kg CFC 11 eq.	1.61E-09	8.67E-14	1.62E-09	3.23E-09
AP	kg SO ₂ eq.	3.42E+00	1.83E-01	1.52E-01	3.75E+00
EP	kg N eq.	1.63E-01	1.64E-02	1.23E-02	1.92E-01
SFP	kg O ₃ eq.	5.62E+01	4.44E+00	2.23E+00	6.29E+01
ADP _{fossil}	MJ surplus	1.01E+03	7.16E+01	1.04E+02	1.18E+03

Table 3. LCIA results, per 1 short ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
GWP 100	kg CO ₂ eq.	1.42E+03	4.05E+01	8.77E+01	1.55E+03
ODP	kg CFC 11 eq.	1.46E-09	7.87E-14	1.47E-09	2.93E-09
AP	kg SO ₂ eq.	3.10E+00	1.66E-01	1.38E-01	3.40E+00
EP	kg N eq.	1.48E-01	1.49E-02	1.12E-02	1.74E-01
SFP	kg O ₃ eq.	5.10E+01	4.02E+00	2.02E+00	5.70E+01
ADP _{fossil}	MJ surplus	9.14E+02	6.50E+01	9.40E+01	1.07E+03

Table 4. Resource use results, per 1 metric ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
RPR _E	MJ LHV	1.09E+03	6.24E+01	2.16E+02	1.37E+03
RPR _M	MJ LHV	-	-	-	-
NRPR _E	MJ LHV	1.88E+04	6.91E+02	1.47E+03	2.10E+04
NRPR _M	MJ LHV	6.25E-02	-	1.26E+01	1.27E+01
SM	kg	7.15E+02	-	7.52E-01	7.16E+02
RSF	MJ LHV	-	-	-	-
NRSF	MJ LHV	-	-	-	-
RE	MJ LHV	-	-	-	-
FW	m ³	5.33E+00	1.81E-01	6.82E-01	6.19E+00





Table 5. Resource use results, per 1 short ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
RPR _E	MJ LHV	9.91E+02	5.66E+01	1.96E+02	1.24E+03
RPR _M	MJ LHV	-	-	-	-
NRPR _E	MJ LHV	1.71E+04	6.27E+02	1.33E+03	1.90E+04
NRPR _M	MJ LHV	5.67E-02	-	1.14E+01	1.15E+01
SM	kg	6.49E+02	-	6.82E-01	6.50E+02
RSF	MJ LHV	-	-	-	-
NRSF	MJ LHV	-	-	-	-
RE	MJ LHV	-	-	-	-
FW	m ³	4.84E+00	1.64E-01	6.19E-01	5.62E+00

Table 6. Output flows and waste categories results, per 1 metric ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
HWD	kg	8.21E-02	-	3.32E-01	4.14E-01
NHWD	kg	-	-	9.66E+00	9.66E+00
HLRW	kg	1.00E-03	3.16E-05	1.18E-04	1.15E-03
ILLRW	kg	8.39E-01	2.64E-02	9.85E-02	9.64E-01
CRU	kg	-	-	-	-
MR	kg	4.67E+01	-	7.71E+01	1.24E+02
MER	kg	-	-	-	-
EE	MJ LHV	-	-	-	-

Table 7. Output flows and waste categories results, per 1 short ton

PARAMETER	UNIT	A1	A2	A3	TOTAL
HWD	kg	7.45E-02	-	3.01E-01	3.76E-01
NHWD	kg	-	-	-	-
HLRW	kg	9.10E-04	2.87E-05	1.07E-04	1.05E-03
ILLRW	kg	7.61E-01	2.40E-02	8.93E-02	8.75E-01
CRU	kg	-	-	-	-
MR	kg	4.24E+01	-	6.99E+01	1.12E+02
MER	kg	-	-	-	-
EE	MJ LHV	-	-	-	-

To align with the PCR, “product specific EPDs which include averaging shall report the range of results for all IPCC AR5 and TRACI indicators for products included in the average.” Fabrication represents the US average; therefore, it does not change between sites.





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Table 8. LCIA results, variation per 1 metric ton

PARAMETER	UNIT	A1 (MIN)	A1 (MAX)	A2	A3	TOTAL (MIN)	TOTAL (MAX)
GWP 100	kg CO ₂ eq.	1.26E+03	1.72E+03	4.46E+01	9.67E+01	1.40E+03	1.86E+03
ODP	kg CFC 11 eq.	1.34E-09	2.49E-09	8.67E-14	1.62E-09	2.96E-09	4.11E-09
AP	kg SO ₂ eq.	2.83E+00	3.76E+00	1.83E-01	1.52E-01	3.16E+00	4.10E+00
EP	kg N eq.	1.36E-01	1.79E-01	1.64E-02	1.23E-02	1.65E-01	2.08E-01
SFP	kg O ₃ eq.	4.46E+01	6.15E+01	4.44E+00	2.23E+00	5.13E+01	6.81E+01
ADP _{fossil}	MJ surplus	7.90E+02	1.27E+03	7.16E+01	1.04E+02	9.66E+02	1.45E+03

Table 9. LCIA results, variation per 1 short ton

PARAMETER	UNIT	A1 (MIN)	A1 (MAX)	A2	A3	TOTAL (MIN)	TOTAL (MAX)
GWP 100	kg CO ₂ eq.	1.14E+03	1.56E+03	4.05E+01	8.77E+01	1.27E+03	1.69E+03
ODP	kg CFC 11 eq.	1.22E-09	2.26E-09	7.87E-14	1.47E-09	2.68E-09	3.73E-09
AP	kg SO ₂ eq.	2.57E+00	3.41E+00	1.66E-01	1.38E-01	2.87E+00	3.72E+00
EP	kg N eq.	1.24E-01	1.63E-01	1.49E-02	1.12E-02	1.50E-01	1.89E-01
SFP	kg O ₃ eq.	4.05E+01	5.58E+01	4.02E+00	2.02E+00	4.65E+01	6.18E+01
ADP _{fossil}	MJ surplus	7.17E+02	1.15E+03	6.50E+01	9.40E+01	8.76E+02	1.31E+03

4. LCA Interpretation

Figure 1 presents the relative contribution of the A1, A2, and A3 modules to the total.

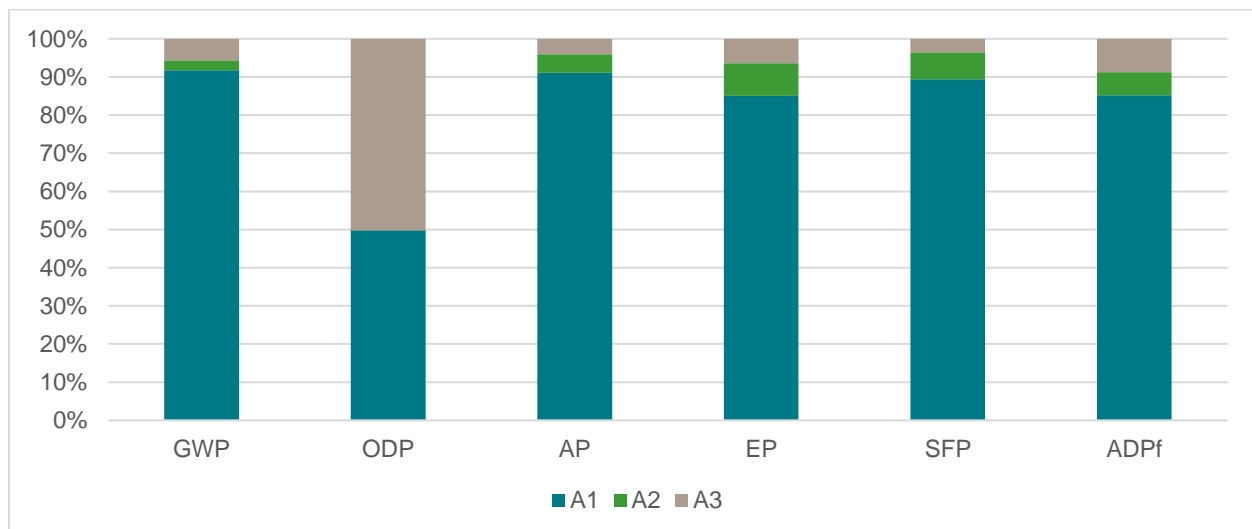


Figure 1: Relative contribution by life cycle stage for 1 metric ton of fabricated HSS





The vast majority of potential environmental impacts is driven by the upstream burdens of steelmaking, therefore A1 is the dominant contributor across LCIA indicators. ODP is also driven by use of electricity in fabrication, due to the background datasets used for electricity generation.

To better understand sources of potential environmental impacts in NTP’s HSS manufacturing process, Figure 2 presents relative results for HSS manufacturing (A1 only). Potential environmental impacts for HSS manufacturing are dominated by upstream burdens of steelmaking.

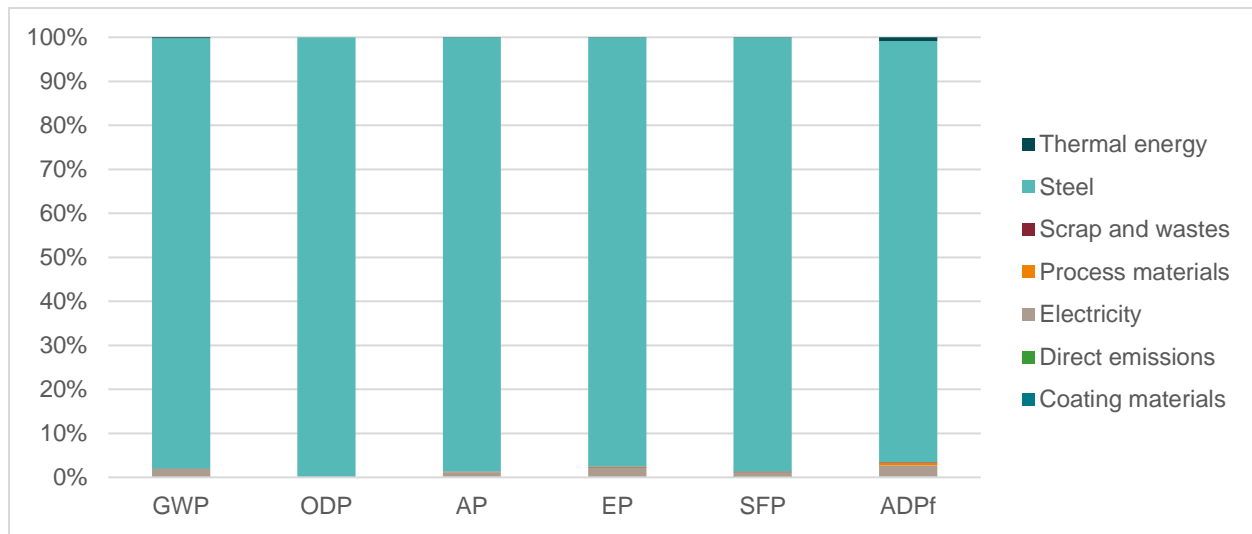


Figure 2: Relative contribution of manufacturing components for 1 metric ton of unfabricated HSS

Facility-Specific GWP100 Results

NTP’s HSS product is manufactured at 5 different facilities. The results presented in the LCA Results section above represent a production-weighted average of these facilities. To understand how the GWP may vary between sites, facility-specific GWP100 results are presented below, per metric ton and per short ton.

Table 10: Facility-specific GWP100 results, per 1 metric ton fabricated product and 1 metric ton unfabricated product

GWP [KG CO2 EQ.]	A1	A2	A3	TOTAL	CRADLE-TO-GATE, UNFABRICATED
Birmingham, AL	1.66E+03	4.46E+01	9.67E+01	1.81E+03	1.54E+03
Chicago, IL	1.26E+03	4.46E+01	9.67E+01	1.40E+03	1.17E+03
Decatur, AL	1.72E+03	4.46E+01	9.67E+01	1.86E+03	1.59E+03
Marseilles, IL	1.46E+03	4.46E+01	9.67E+01	1.60E+03	1.35E+03
Trinity, AL	1.71E+03	4.46E+01	9.67E+01	1.86E+03	1.59E+03





Table 11: Facility-specific GWP100 results, per 1 short ton fabricated product and 1 short ton unfabricated product

GWP [KG CO2 EQ.]	A1	A2	A3	TOTAL	CRADLE-TO-GATE, UNFABRICATED
Birmingham, AL	1.51E+03	4.05E+01	8.77E+01	1.64E+03	1.40E+03
Chicago, IL	1.14E+03	4.05E+01	8.77E+01	1.27E+03	1.06E+03
Decatur, AL	1.56E+03	4.05E+01	8.77E+01	1.69E+03	1.44E+03
Marseilles, IL	1.32E+03	4.05E+01	8.77E+01	1.45E+03	1.22E+03
Trinity, AL	1.55E+03	4.05E+01	8.77E+01	1.68E+03	1.44E+03

5. Additional Environmental Information

Environment and Health During Manufacturing

Refer to the Nucor Sheet Tube SDS¹ for additional environmental and health protection during the product manufacturing process. Be sure to follow all recommended handling and product manufacturing guidance.

Environmental Activities and Certifications

ISO 14001: Nucor Tubular Products (NTP) facilities operate aggressive and sustainable environmental programs that incorporate the concept of individual employee, as well as management responsibility for environmental performance. All of NTP’s operations are ISO 14001 certified. Achieving ISO 14001 certification means that each plant has put an environmental management system in place with measurable targets and objectives, such as minimizing electricity use and implementing recycling programs. Many of our facilities have incorporated energy efficiency targets to reduce both cost and environmental impacts into their environmental management systems. These environmental management systems help facilitate compliance with our environmental commitment, which is every Nucor teammate’s responsibility. Nucor’s environmental program maintains a high level of ongoing training, commitment, outreach and visibility.

Waste and Water Recycling: NTP facilities are either Small Quantity or Very Small Quantity hazardous waste generators. Most of the waste generated by the plants are recycled (scrap metal) or reused. By recycling this material, Nucor is not only acting in a sustainable, responsible manner but is also substantially limiting its potential for future liability under both CERCLA and RCRA.

Because Nucor long ago implemented environmental practices that have resulted in the responsible disposal of waste materials, Nucor is also not presently considered a major contributor to any major cleanups under CERCLA for which Nucor has been named a potentially responsible party.

Nucor also recognizes that water is a critical natural resource and is essential to our business and the communities in which we operate. Water used in process is either recirculated (closed loop) for cooling or continuously recirculated in the mill process. Currently there are no NTP divisions located in a High or Extremely High Water Stress Area.

In addition to its routine compliance costs, Nucor budgets over \$10 million in capital spending related to

¹ <https://assets.ctfassets.net/aaax1cfbwhqog/68VugQFwutxA0bGdXm3YX0/1c8a4a564295a115e2c0029088fab73/SDS-Tube.pdf>



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environmental improvement projects every year.

Safety: Nucor's top priority is to become the safest steel company in the world. This is accomplished through the empowerment of each and every teammate to hold one another accountable to work safely. In 2020, Nucor had its best safety performance in company history. Since the acquisition of the Tube Group, NTP locations have earned the Nucor President's Safety Award, which is an IIR and DART rate 2/3 below the national average for comparable facilities. At NTP, nothing is more important than our teammates returning home safely to their families after each and every shift.

Clean Energy Investments: As America's cleanest and most efficient steel company, Nucor is extending beyond its fence line to lower its carbon footprint by investing in the development of new clean wind and solar power generation capacity. Nucor is currently supporting the development of more than 350MW, of new clean energy infrastructure, making us the 7th largest corporate buyer of renewable energy in America. Since November 2019, Nucor has entered two Virtual Power Purchase Agreements, which will enable the construction of 250MW of new solar energy and 100MW of new wind energy in Texas. Together, these two projects are equal to the electricity usage of nearly 70,000 Texas homes, and have the potential to supply renewable power to the regional electric grid 24-hours a day.

Environmental Training: In 2015, Nucor established Nucor Environmental University (NEU), an online training platform for Nucor teammates with environmental responsibilities and others looking to expand their involvement with the environmental team. From the beginning, Nucor designed this program to help teammates develop a thorough and meaningful understanding of environmental compliance.

NEU has had over 1,000 active users since its inception in 2015, and Nucor teammates have completed nearly 10,000 environmental training courses, passed over 6,600 training exams, and helped develop dozens of courses. Because of NEU, Nucor's teammates are better prepared to meet the demands of environmental compliance and achieve Nucor's goal of being a sustainable organization.



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6. References

- AISC. (2021). *Environmental Product Declaration: Fabricated Hot-Rolled Structural Sections*. UL Environment. Retrieved from <https://www.aisc.org/globalassets/why-steel/epd-aisc-hr-sections-2021.pdf>
- CEN. (2019). *EN 15804: 2019-04 Sustainability of construction works. Environmental product declarations. Core rules for the product category of construction products*.
- ISO. (2006). *ISO 14040/Amd.1:2020: Environmental management – Life cycle assessment – Principles and framework*. Geneva: International Organization for Standardization.
- ISO. (2006). *ISO 14044:2006/Amd.1:2017/Amd.2:2020 Environmental management – Life cycle assessment – Requirements and guidelines*. Geneva: International Organization for Standardization.
- ISO. (2011). *ISO 14025: Environmental labels and declarations - Type III environmental declarations - principles and procedures*.
- ISO. (2017). *ISO 21930 Sustainability in building construction - Environmental declaration of building products*.
- Sphera. (2021). *GaBi LCA Database Documentation*. Retrieved from Sphera Solutions, Inc.: <http://www.gabi-software.com/america/support/gabi/>
- UL Environment. (2018). *Product Category Rules for Building-Related Products and Services - Part A: Life Cycle Assessment Calculation Rules and Report Requirements, v3.2*.
- UL Environment. (2020). *General Program Instructions, v2.5*.
- UL Environment. (2020). *Part B: Designated Steel Construction Product EPD Requirements, v2.0*.
- UL Environment. (2020). *Program Operator Rules v 2.5*.

7. Contact Information

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