



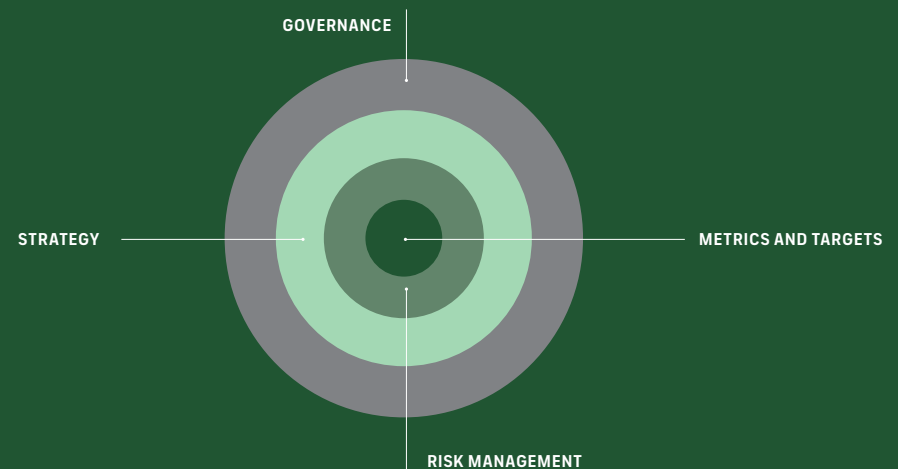
# TCFD

In 2015, The Financial Stability Board (FSB) created the TCFD to support the goals of the Paris Agreement, a voluntary framework for companies and institutional investors to develop effective climate-related financial disclosures through their reporting and disclosures.

Climate change risk is a complex field, and its impacts are inherently difficult to measure. TCFD reporting provides companies and investors with a framework to determine their exposure to climate transition risk and communicate the potential impacts of these risks to their stakeholders.

The TCFD structures its recommendations around four thematic areas that represent core elements of how organizations operate – governance, strategy, risk management, metrics and targets.

While this report represents the first time that Nucor is explicitly addressing the recommendations of the TCFD framework in an integrated manner, it is not the first time that we are considering the individual elements that the TCFD asks companies to consider. These elements, including governance of climate-related issues, risks we face, strategies to address those risks and relevant data points have been part of our strategic and risk management processes and sustainability reporting for some years. Moving forward, we intend to deepen our approach, including formal climate scenario analyses, to better understand the financial implications of the risks we face, and to more fully align with the TCFD recommendations.



## GOVERNANCE

### Board's Role

Nucor's Nominating and Corporate Governance Committee oversees and makes recommendations to the Board regarding corporate sustainability and environmental, social and related governance ("ESG") matters. This includes climate-related risks as well as broader environmental and social risks. Other environmental topics overseen by the Nominating and Corporate Governance Committee include permitting issues, regulatory compliance, water and energy use and associated greenhouse gas emissions. The Nominating and Governance Committee meets at least four times per year and provides reports as needed to the entire Board as it deems necessary.

It is the responsibility of the entire Nucor board to consider the implications of climate change for the business and how these issues align with or otherwise impact Nucor's business strategy.

### Management's Role

Nucor's Executive Vice President of Business Services and General Counsel oversees our environmental affairs as well as our public affairs and government relations departments and works with these departments and others to keep the broader leadership team informed and well-positioned to develop strategies to respond to risks and opportunities including those presented by climate change.

Tactical energy and related greenhouse gas management efforts are undertaken at the business unit and facility levels, where opportunities for capital investments are identified, action plans are developed, and specific investments in equipment or changes to processes are made. Data is collected at the business unit and facility level and consolidated for management and the Board to gain an appropriate overview of the status of climate-change related efforts.



<sup>6</sup> According to annual ranking published by the [Renewable Energy Buyers Association](#).

## STRATEGY

As part of our ongoing efforts to identify climate-related risks and opportunities, we engage key stakeholders across our organization to identify where our efforts are best focused, to return the most benefit to our internal and external stakeholders. This has resulted in our incorporating climate change into our business strategy in multiple areas, including:

- Protecting the long-term resiliency of our physical infrastructure in our steel mill locations to handle the impacts of a changing climate;
- Monitoring and managing our own impacts to reduce our GHG emissions intensity, as doing so can potentially lower costs and reduce the financial impacts of GHG regulating policies and regulations;
- Investing substantial capital to modernize our operations and implementing new energy efficiency and GHG mitigation projects including, the potential for, carbon capture and storage;
- Exploring ways to further reduce the greenhouse gas emissions associated with the raw materials we use to make steel;
- Identifying and pursuing the increasing array of market opportunities related to addressing and preparing for climate change across the built environment, transportation and energy sectors;
- Assessing climate-related risks and opportunities across our entire value chain to avoid negative impacts and ensure alignment with our emissions reduction goals;
- Supporting the transition of the domestic power grid to a more sustainable, lower carbon future. In 2020, Nucor was the 7th largest corporate buyer of renewable energy in the United States<sup>6</sup>;
- Remaining committed to Electric Arc Furnaces in our core steelmaking operations processes so that we are well-positioned to leverage the increased availability of renewable electricity sources; and
- Using data and digitalizing our infrastructure and processes to improve efficiency and connectivity of critical systems.

## Impact on our Business, Strategy and Financial Planning

We see a wide range of potential financial outcomes related to climate change that may have implications for profitability and cash flow generation. However, regardless of the situation, our intent is to continue to maintain our conservative capitalization, strong credit rating and ready access to low-cost capital so we remain prepared for any adverse developments and can dynamically reposition our business to respond to any circumstances.

Steel is a versatile material that is essential in any modern economy. In particular, the investments necessary (e.g., renewable energy, electrified transportation) to facilitate the global economy's response to a climate-challenged scenario will require significant amounts of steel. As the leading producer of steel from recycled ferrous scrap we believe we are well-positioned to meet these needs.

To respond to these opportunities, we must plan our own investments carefully considering the long life cycle of steel mills and the scale of the associated infrastructure needed to produce our products. With this in mind, we have made targeted investments in new products and production capabilities that we believe will position us well to respond to climate related risks and opportunities.

For example, Nucor will soon be one of only a few companies in the world capable of supporting the material requirements of the offshore wind market's towers and foundations. The Company also recently announced a tube mill project in Kentucky that will supply galvanized solar torque tube to the nation's expanding solar energy markets. In addition, Nucor is investing to produce 3rd Generation Advanced

High-Strength Steel (AHSS) products that will allow vehicles to meet stricter mileage standards and reduce their life cycle emissions. These facilities represent substantial investment by Nucor, which we believe will generate significant returns as the world continues to adopt new technologies and products to respond to climate change.

We are also encouraged by technological developments over the past several years that have significantly improved the cost competitiveness and reliability of carbon-free clean power generation. As renewable electricity, nuclear energy power generation and power storage technologies continue to improve, we expect that an increasing portion of our electrical load will be supplied from carbon-free resources. We are actively supporting, investing in, and taking concrete steps to help support the transition of the U.S. power grid to a greater reliance on these technologies. As the national grid migrates to lower carbon technology, Nucor will benefit from this transition significantly compared to some of our competitors who rely heavily on fossil fuels like coke and natural gas. We will continue to explore clean power opportunities through VPPAs, "behind-the-meter" solutions, energy storage potential, and through other approaches as we go forward.

In future reporting, we will discuss our assessment of Nucor's resilience in the context of various climate change scenarios.



IDENTIFYING AND MANAGING CLIMATE RISKS

Nucor’s Corporate Controller, Internal Audit, and Legal teams undertake an annual survey of managers across the company to ascertain where our greatest risks lie and to identify emerging risks. This process includes climate-related risks. However, when considering and preparing for climate-related risks we seek to assess risk generally and in an integrated and holistic fashion, so that climate-related risk is not seen as separate and discrete but as part of the overall evolving landscape that may impact the situational readiness of the enterprise.

External third-party experts are retained to evaluate and help us prepare for climate-related physical risks such as flooding, fires and other natural phenomena as well as risks related to social, economic and political changes in a climate challenged world. We regularly engage with shareholders and other constituents to understand their views and concerns so that their perspectives can be given appropriate consideration and responses formulated where appropriate.

Nucor’s Public Affairs department regularly engages with relevant federal and state officials to understand legislative, policy and other climate-related initiatives under consideration to ensure that Nucor’s perspective is heard and to inform them of potential impacts to the company, its financial performance and its stakeholders.

Environmental and Health and Safety teams throughout the company are charged with evaluating and preparing for any operational risks related to climate change. These risks range from flood risks, increased storm intensities or increased potential for heat stress related safety and performance issues among Nucor teammates.

The results of the risk assessment process are consolidated, summarized and reported to the executive management and the Board so that appropriate tactics and strategies can be developed to respond to identified risks and opportunities. In addition to these reports, the Board is regularly consulted formally and informally on material risks, opportunities and appropriate strategic initiatives and tactics.

Relevant findings from these processes are consolidated, prioritized and incorporated into Nucor’s annual 10K report filed with the Securities and Exchange Commission.

EXAMPLES OF RISK TYPES FOR NUCOR	
Physical Risks	Transitional Risks
Hurricanes and other storms: Amplification of significant storm activity over the long term	Technology: Keeping pace with demand for low-carbon technologies
Infrastructure Risks: Failures in regional infrastructure critical to our success (e.g., river barging, regional electricity transmission grids)	Social, customer and financial preference: Expectations for low-carbon products and operations
Floods: Coastal and inland flooding	Carbon and energy cost and reliability: Increased cost of energy and carbon to our operations, customers, and suppliers
Extreme heat and cold, droughts and other unusual weather events	Changes to tax, trade and other regulatory frameworks implemented to address climate change and/or reduce CO <sub>2</sub> emissions could affect pricing and availability of raw materials, demand for our products, intensify competition from imported steel and steel products, or our relative cost competitiveness.

For more information on risks faced by Nucor, see our [2020 10-K Filing](#).



## METRICS AND TARGETS:

Nucor's primary business is the manufacture of steel and steel products. Carbon is an essential element in steel and there is no known way to produce steel or a functionally equivalent material at scale without emitting CO<sub>2</sub> as a by-product. However, we do believe that we can produce steel in ways that result in less CO<sub>2</sub> and other greenhouse gases being emitted.

Nucor employs Electric Arc Furnace (EAF) technology exclusively to make its products. This technology is currently the best available technology to produce a wide range of steels while emitting the least amount of greenhouse gases. Many of our peers who rely entirely or primarily on blast furnace-based steelmaking are actively working to transition their asset base to EAF technology.

### Primary Sources of our Greenhouse Gas Emissions

Nucor's steel mills account for more than 80% of our total emissions. The vast majority of our Scope 1 greenhouse gas emissions result from the fuels used to generate heat that is applied to iron-containing raw materials (e.g., scrap metal, iron ore) and other alloying ingredients in our steelmaking process. This heat is generated using natural gas and small amounts of carbon. While we do not believe that there are currently any cost effective, technologically feasible alternatives to these processes, we have established multi-disciplinary sustainable technology team to actively investigate such alternatives on an ongoing basis.

The primary energy source used in our EAF-based steelmaking is electricity. As the largest EAF-based steelmaker in the world, Nucor consumes a significant amount of electrical energy. Our Scope 2 greenhouse gas emissions are the result of the generation of this electricity. We believe that as much as 40% of the electricity we use today is renewably generated or from other non-fossil fuel sources. Because we have the option to utilize renewably generated electricity in more of our facilities, we believe we can reduce our Scope 2 emissions intensity significantly.

As the U.S. grid integrates more renewable generation capacity over time, we expect that our Scope 2 emissions intensity will decrease. By signing virtual power purchase agreements (VPPAs), we are directly supporting the development of significant new renewable power generating assets, and helping to facilitate this transition.

Nucor's Scope 3 emissions inventory primarily results from our steel mills' consumption of iron bearing raw materials supplied by external parties (pig iron) or by our Raw Materials segment (direct reduced iron or DRI). We are actively exploring ways to reduce the CO<sub>2</sub> intensity of these raw materials for Nucor and believe that we can demonstrate progress in this area in the short and medium term.

To see our most recent greenhouse gas emissions inventory data, please see our 2020 ESG Report.

## Goals to Reduce GHG Emissions Intensity

We are actively working to further reduce all our greenhouse gas emissions. In 2021, we announced comprehensive greenhouse gas (GHG) emissions reduction strategies that will lower the GHG emissions intensity of our steel mills to 77% less than today's global average.

We committed to a 35% combined reduction in the Scope 1 and Scope 2 GHG emissions intensity of our steel mills by 2030 against a 2015 baseline, the year the Paris Climate Agreement was adopted. We are also committed to disclosing and reducing Scope 3 emissions from our steel mills related to the processing of carbon bearing raw materials. Scope 3 emissions from these materials are one of our largest impacts.

We expect to execute against these goals by increasing our overall energy efficiency, increased use of renewable energy, exploring the use of Carbon Capture and Storage technologies at select operations and exploring relevant emerging technologies in iron reduction, steelmaking and energy storage.

## Other Metrics

Other metrics that we are evaluating/monitoring as potential indicators of climate related risks and opportunities include:

- Heat-related health and safety statistics
- Supply chain and workforce disruptions/lost due to flooding/fire/power or gas supply disruption
- Market size, growth outlook statistics for steel usage in the renewable energy industry
- Projected steel needs of the electric vehicle industry
- Projected changes in steel demand due to the broader economy's transition to lower carbon intensity and enhanced infrastructure resilience over time

