GREENWAY STEEL

Sustainable Supply Chains in Metals and Manufacturing Result from Transparency

The Challenge:

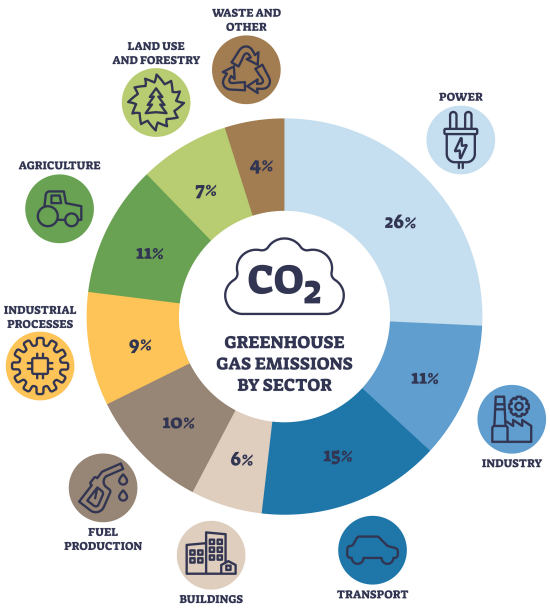
Increasingly end users find it necessary to understand their value chain carbon footprint. The reasons for this are varied and include regulatory requirements to decarbonize supply chains associated with carbon liability. They include the desire to meet consumer demand for sustainable products. They can include financial stakeholders wanting disclosure around climate related risks.

Greenhouse gas (GHG) emissions accounting follows the principles of the GHG Protocol. Think of these as the GAAP for financial world of accounting. Included in GHG Protocols are procedures for what are called indirect, scope 3 emissions. In the United States, exceptions to climate risk disclosure requirements proposed by the SEC are often focused on scope 3 emissions. There are fifteen categories. They can be a challenge to determine however only certain categories are responsible for the majority of value chain emissions.

When your customer requests from you a global steel and aluminum parts supply chain footprint, where should you start?

MAIN TAKE AWAY

Driven by regulations, and financial stakeholders, understanding and addressing supply chain carbon footprints, particularly challenging Scope 3 emissions, is crucial, but can be simplified with systematic approaches, established protocols, and tools like Greenway Steel's Greenway Calculator.



Case Study:

This is what the National Materials Company had needed to address for a valuable automotive customer of theirs. Complicating the challenge was the global nature of the established steel and aluminum parts supply chain.

National Materials Company (NMC) and the National Material Steel Group, established in 1964, is now identified as a leader in steel processing and supply-chain management. Servicing the needs of the steel industry and prominent industrial and consumer product manufacturers, NMC is a company that leads the way through efficiency, innovation, and performance.

NMC and Greenway Steel partnered up to tackle the initial challenge in an expedient and efficient manner. And for the second year, building on their previous efforts together, they further improved on the efficiency of this process.

Understanding and determining a full value chain carbon footprint within the metals and manufacturing supply chain, or, the GHG emissions associated with a specific supply chain, does not need to be complicated. It does need to be approached in a systematic way using established protocols and common sense. Software based tools, such as Greenway Steel's Greenway Calculator, can help ensure accuracy and efficiency.

Starting with direct emissions, one can determine the emissions intensity associated with a specific processing route. In other words, x amount of metals is processed through a facility that consumes x amount of energy over the course of a year.

That provides us with the energy intensity of the metals having been processed. Energy intensity translates directly to emissions intensity. Standard emissions factors associated with the energy being used are used to calculate direct emissions.

When calculating emissions intensity, or those emissions that result from processing of the metals product, we are considering the intensity on a unit basis associated with volume and not revenue. In the metals industry, volume unit basis is typically preferable to a financial unit basis as commodity prices can be volatile.

After we understand the direct emissions, the scope 1&2 emissions associated with processing the metals, we move on to indirect emissions, or scope 3 emissions. A good dose of common sense is best applied here. Or, more specifically, we can refer to what would be considered material to the results. The majority of emissions associated with a metals parts supply chain will be those emissions associated with the production of the base metals being used. These are called embedded emissions or embedded carbon. Next will be logistics associated with transporting the product from producer to processing and then to end user.

Consider scope 3 emissions and the fifteen categories associated with these. These emissions are in part why the U.S. Chamber of Commerce and the National Association of Manufacturers take exception to regulations or laws that require disclosure of climate related risk. And rightfully so given that some of these can 1) be complicated while at same time 2) not have meaningful impact or even 3) not be easily addressed. A lot of work and effort can be put forth to identify and measure these emissions and they will not have material impact on results nor be efficient, or even possible, to address.

Importance of Transparency:

However, identifying the metals being purchased, from what producer and their process, the logistics in delivering them, and further processing enroute - this transparency is where the value to account for and reduce supply chain emissions comes from.

Working together in a holistic manner, identifying all components of the supply chain, and then identifying what levers provide best opportunity for improved efficiencies will ultimately result in the quickest path to a sustainable, decarbonized, supply chain.

NMC's expert experience defining and managing the components of a complex global supply chain provide the starting point for carbon footprint calculation. This further supports end users wanting to meet future decarbonization and sustainability targets. Having the baseline data is necessary. That is only possible when providing transparency of the base metals production and supply, all associated logistics, and further processing steps before reaching the end use manufacturer. This transparency also provides confidence in the accuracy of the data. Working with Greenway Steel, an expert in carbon accounting for metals supply and manufacturing industries, while providing efficient tools and experience, is a valued component of supply chain transparency.

Randy Charles, a trained metallurgist, having been in the steel industry for over thirty years, brings experience in production, new technology and commercial responsibilities when helping industry peers to understand the transformational developments of global carbon neutral initiatives.
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