

The price of going green

MAIN TAKEAWAYS

A premium will be charged for green steel.

That premium is dependent on how “green” that steel needs to be.

Customers will determine premium, or how green, depending on the options provided them.



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So much goes into the discussion of what is green steel and what will be the premium but first, think about bicycles as an example. For \$5,000, you can buy a high quality, performance-orientated, road bike and race with it if that was your intent. However, meet the \$13,050 Cannondale SuperSix (Shown left).

Beauty of a bike for sure. What do you get for the extra \$8,000? The best of everything, yes. Does it have more than twice the performance capability? No, of course not. But it is a great example of how the last, incremental gains in a product or performance potentially comes with an exponentially increasing price tag.

WHAT DOES THIS HAVE TO DO WITH GREEN STEEL? WELL, HOW GREEN DO YOU WANT TO BE? OR MORE SPECIFICALLY, HOW GREEN DOES YOUR CUSTOMER WANT THE STEEL TO BE?

When we talk about how green, what exactly do we mean? Green steel is green steel, right? No, it is not. For example, the Global Steel Climate Council has proposed a [standard for green steel](#) using a curve, representing a glide path over time, that suggests that their members’ steel today and for years to come, is already green. Point being, is you can buy steel today, and if that is the level of green you need, then no premium is associated. That may very well suffice for the [Federal Government’s Buy Clean initiative](#) (looks like there will be standards for both EAF and integrated).

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**THE \$13,050
CANNONDALE
SUPERSIX**

HOW DOES THIS RELATE TO THE BIKE EXAMPLE?



You can buy green steel today under one definition of green at little to no premium. Or you can get the best of the best in terms of green and yes, that will be the \$13,050 bike. Just a guess, but it's not hard to imagine that the offtake agreements we are seeing put in place with the innovative new mills fully decarbonizing the process and supply chain have premiums that increase rapidly over a kinda sorta green, or a it's good enough green.

There is still embedded CO_{2e} in the product and it will likely represent most of your supply chain emissions footprint.

Another definition of green steel may be considered using Kloeckner's innovative description of green steel at "Prime" or "Pro" level as part of their [branded Nexigen product line](#). Not many producers are at the Pro level today. Maybe a few more are at Prime level depending on how the green is defined. Given that this product may not be as readily available, and is defined by lower levels of embedded carbon in the product than that generally available every day, you can expect having to pay a premium.

There is an example of General Motors being Nucor's [first customer of their Econiq](#) net-zero steel. Net zero must be the most green, right? That's debatable given that it was only scope 1&2 emissions that were offset. And given the wide variation in offset prices in a voluntary market, the actual cost, and any relation to premium charged, for this level of green can vary greatly. Just the same, clearly increased cost is associated with offsetting the product attributes, and it will be reflected in a premium.


H2GreenSteel and HYBRIT have unique prospects for what may be considered good examples of being the most green of steel production. They look to be identifying emissions fully throughout the value chain in an effort to decarbonize. That means not just scopes 1&2 emissions but also, scope 3. If the intent for buying green includes not just the production of the steel, but the mining and refining of raw materials and alloying metals, production of electrodes, transportation of

all products up and downstream, and so much more, then, as you can imagine, the cost is substantially higher for this version of green. And of course, it will be reflected in the premium paid.

The other variable, is green achieved via offsetting or actual decarbonized processes for production? The costs for achieving decarbonized process will likely exceed the cost of offsetting. That depends of course on the quality of offset purchased and retired. Higher quality offsets are valued higher in the voluntary market and for good reason.

So, all things considered:

1. what is your customer's expectation for being green?
2. what mills, in what markets, have it available?
3. and do they use offsets or have they eliminated actual direct emissions in their process through investments in new technology?

Much is still to play out in the years ahead when it comes to defining green steel and how much of a premium will be afforded the various products representing green. Know your carbon footprint, understand emissions associated with existing supply chain, and craft strategies directly with your customers. 



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