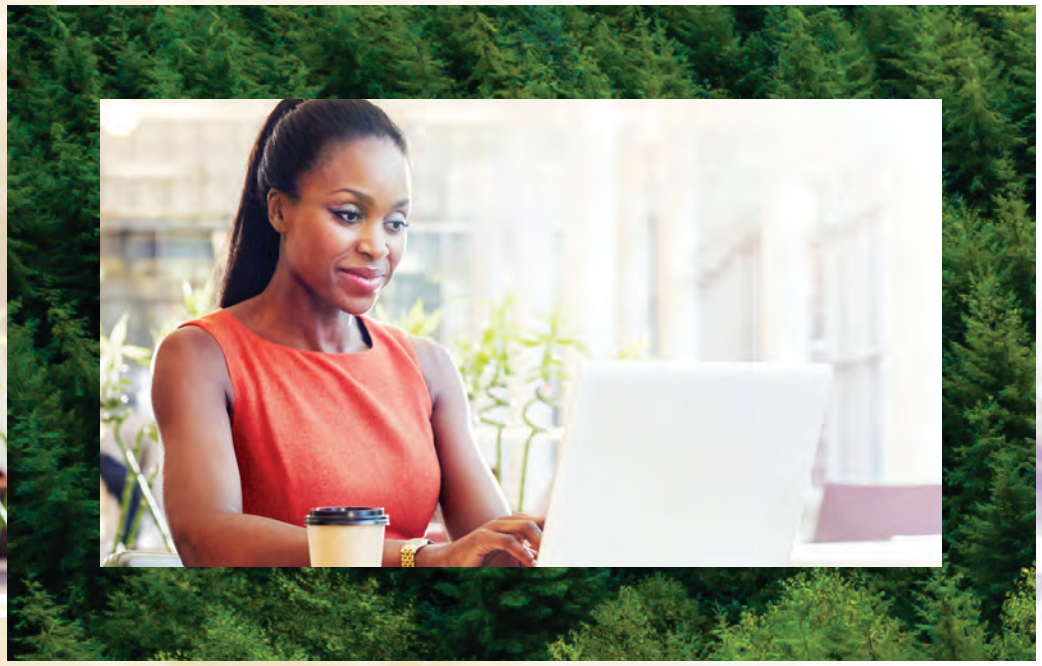

THE GROWTH OF THE SUSTAINABILITY STAKEHOLDER:

How Making Your Business Greener Can Benefit the Boardroom and Your Bottom Line

SHELL
LUBRICANT
SOLUTIONS

HOW MAKING YOUR BUSINESS GREENER CAN BENEFIT THE BOARDROOM AND YOUR BOTTOM LINE

By Gavin Warner, *General Manager Sustainability - Global Commercial at Shell*

With millions around the world marching to raise awareness of climate change, 2019 certainly paved the way for a decade that would require greater societal consciousness from global industry, the metals sector included. Add an unforeseen global health crisis into the mix and suddenly there is little time – and less excuse – to delay action when it comes to environmental, social and governance (ESG) issues. And with an increasing number of investors and stakeholders alike now using ESG criteria to evaluate company performance, all eyes are on the metals industry, with their next few steps potentially defining the next few decades.

Traditionally, companies operating within the metals industry have focused on perfecting one simple equation: the highest volumes possible at the lowest production cost available. While this calculation still remains critical, growing pressure from key stakeholders – whether shareholders, workers, local communities, consumers or government and regulators – has ensured that producers cannot overlook the environmental repercussions of their actions. In fact, recent studies show approximately 14 per cent of companies' potential value is at risk if they are unable to decrease their environmental impact, in the steel industry alone [1].

This is particularly true when it comes to their water usage. Large quantities of both fresh and seawater are used in the production process of metals such as steel, predominantly for cleaning and cooling purposes. Due to the importance of metals throughout a range of manufacturing lines, there is a clear responsibility on the part of metals companies to optimise water usage so as not to further contribute to a global trend of resource exploitation. To put this into perspective, steel and iron materials contribute almost 35-40 per cent of the total water consumption of manufacturing a Volkswagen Golf, demonstrating just how interconnected and interdependent industries really are [2].

Water usage in metals also hits closer to home, with wastewater discharge often risking contamination of the local aquatic environment if it is not effectively treated, an outcome that can be avoided by implementing stricter controls and being more aware of the products in use – and their effects – throughout the process. In fact, by utilising a high-quality oil with a longer oil life, the amount of waste-oil disposal – and the costs associated with it – can be dramatically reduced. Although, sustainability isn't achieved just at the point of purchase. Rather, a holistic outlook is needed, from the choice of oil and effective training of staff, right through to C-suite buy-in of efficiency directives.

Perhaps an even more pressing environmental concern, however, is the current carbon footprint of the metals industry. Due to the prevalence of metals such as steel and iron across wide swathes of society, the decarbonisation challenge faced by the industry is quite literally vast. Globally, steel alone is responsible for between seven and nine per cent of all direct fossil fuel emissions, while each tonne produced releases, on average, 1.85 tonnes of carbon dioxide [3]. With sustainability becoming an increasingly important procurement consideration for renewable contractors, these figures have begun to cast a larger shadow over companies' balance sheets.

Removing or Reducing CO2 Emissions without Compromising Profit or Performance

So how can companies start reducing, or removing, carbon emissions from their processes? And how can they make sure that, in doing so, they are not compromising performance or profit? There is growing talk throughout the industry of a possible future role for hydrogen in the manufacturing stage, as a direct replacement for carbon-rich coke. In fact, one commercial steel mill in Sweden recently became the first of its kind to demonstrate this potential; in this instance, hydrogen replaced liquefied natural gas (LNG), showing no effect on the quality of steel produced [4]. However, despite large strides being made by some major players, its success is yet to be widely proven and a switch to hydrogen still remains commercially out of grasp for most.

A more immediate solution – and one that has been gaining traction over the last decade – is the proliferation of electric arc furnaces (EAF), which accounted for 29 per cent of global steel production in 2018 [5]. In contrast to more traditional blast furnaces that rely on raw material, EAFs are able to melt scrap, while generally being smaller and less expensive than their more established counterparts. Despite these undeniable positives, a limitation does exist in their huge and inescapable electricity demands. And though the circular economy of steel is well established – it is currently the world's most recycled material – the supply of quality scrap can often be limited due to the specific demands of various applications and sectors [6].

As the last few months have proven, the effects of COVID-19 have led many sectors to a defining crossroads and the metals industry is no exception. Though production has largely been able to withstand initial pandemic pressures, its long-term effects – alongside the looming energy transition – are likely to accelerate the shift toward more sustainable and efficient global economies.

"Sustainability and profit can not only coexist, but coalesce."

Perhaps most significantly, stakeholder behaviour is changing as a result, affected by the wider social discussion around ESG concerns. And while day to day decisions can often seem far removed from those made in the boardroom, the reality is that they're becoming more entwined than ever before. Whether they relate to water usage or carbon emissions, the choices made on the factory floor must be aligned with those coming from above to ensure progress is made around a company's mission, purpose and social license to operate. Those who are able to achieve this quickly will find that doing so can present them with a huge opportunity. Not only one that allows them to become a key pillar of the emerging infrastructure of tomorrow – as consumers, industries and regions turn to cleaner sources of energy – but also one that can help drive greater operational efficiency throughout their business. The same efficiency that can help to strengthen business' bottom line, proving that sustainability and profit can not only coexist, but coalesce.

To learn more about how to navigate the energy transition visit:

https://www.shell.com/sustainability/environment/climate-change.htm

Gavin Warner, General Manager Sustainability - Global Commercial at Shell is focused on addressing the opportunities and challenges associated with the transition towards a lower carbon and more sustainable Global Commercial business. Gavin is responsible for the translation of Shell's sustainability strategies into action, by helping convert external insights on sustainability into business value. He has developed an article exploring the key issues standing in the way of a more sustainable metals industry, and how companies can start improving their footprint and their finances.

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