Marrakech Partnership for Global Climate Action

Event Outcome
Action Event:

UNFCCC COP 27
Sharm El Sheik

11 November 2022
14:30 – 16:00

Organised by Mission Possible Partnership (MPP) and the World Business Council for Sustainable Development (WBCSD)

GCA Industry: Steel Breakthrough – going beyond demonstration projects by 2030 to put steelmaking on a 1.5°C pathway.

SECTION 1 - ACTION EVENT

Key Messages:
[Please summarize in one or two paragraphs the most important messages of the Action Event at COP 27 ~ 300 words]

Outcomes:
[please complete under the following headers, concrete input on how your event addressed these expected outcomes ~ 700 words in total]

1- *Demonstrate implementation and showcase concrete examples of action.*

The Steel Implementation Lab demonstrated the concrete action that has already been taken within the industry towards achieving the 2030 Breakthrough of having 70 (near) zero emission steel plants operational by 2030, producing well over 170Mt of green steel per annum.

The example of HYBRIT technology was referenced in the session. HYBRIT is a collaboration between SSAB, LKAB and Vattenfall to replace coking coal traditionally needed for ore-based steelmaking with fossil-free electricity and hydrogen. For thousands of years, steel has been made using coal to remove oxygen from iron ore, emitting vast amounts of CO2 in the process. But now, with HYBRIT technology, hydrogen is used instead of coal in the ore reduction process, emitting water instead of CO2. The potential of HYBRIT technology would be to bring fossil-free steel to the market in 2026 and eventually eliminate carbon dioxide emissions from the operations and value chains of steel companies to achieve net zero.

2- *Contribute to the COP27 outcomes on progress in implementation of mitigation/resilience and finance goals.*

The Steel Implementation Lab demonstrated the commitment and contribution of the global steel industry to decarbonization and net zero, in support of the COP27 Presidency's objective to enhance the implementation of mitigation activities to fulfil the objectives of the Paris Agreement. With regards to finance, the Lab spotlighted the crucial role of blended finance – where public sector finances de-risks private sector investment in the same investment vehicle – to generate a pipeline of capital that can be deployed into green steel projects this decade.

3- *Target near-term implementation and action to accelerate progress.*

The Steel Implementation Lab highlighted that bringing the steel sector on a path to net zero by 2050 is both technically and economically feasible, but that achieving the net zero target would require the scaled deployment of multiple available and emerging technologies. For example, scaling

production technologies that couple blast furnaces with bioenergy and carbon capture, utilization, and storage (BECCUS) which will become increasingly cost competitive by the late 2020s.

4- *Contribution towards achieving the goals/milestones set in the Climate Action Pathways, 2030 Breakthroughs and Adaptation and Resilience Outcome Targets;*

The Steel Implementation Lab showcased solutions that bring us closer to the 2030 Breakthrough – to have 70 (near) zero emission steel plants operational by 2030, producing well over 170Mt of green steel per annum. The Lab also demonstrated how these solutions could work/be tailored to the market environment in developing economies. For example, countries like China leveraging an expanding domestic supply of scrap steel to invest heavily in secondary steelmaking capacity, which could account for almost 40% of domestic production by 2050. Or for countries like India, where rising demand for steel but lower scrap availability will likely result in the scale-up in primary capacity to meet domestic demand means that direct reduced iron (DRI) technology utilizing hydrogen will need to scale.

5- *Highlight the importance and elevate efforts of resilience and adaptation.*

The Steel Implementation Lab also focused on the role of resilience and ensuring a just transition in the journey towards net zero. Labour focused organizations made critical interventions highlighting that the closure or repurposing of steel plants should not negatively impact the local community or severely harm the local economy in which those plants operate.

6- *Strengthen collaboration with all stakeholders, including the national governments and non-Party stakeholders.*

The Steel Implementation Lab demonstrated the crucial role of multistakeholder collaboration in implementation the action required to achieve the 2030 Breakthrough of 70 (near) zero emission steel plants operational by 2030, producing well over 170Mt of green steel per annum. It revealed encouraging signs of collaboration between stakeholders across supply, demand, policy, and finance to step up to ensure action is undertaken this decade to get the sector on track for net-zero.

The Lab noted that to move away from demonstration projects to a self-sustaining pipeline of projects, collaboration across these levers needs to be accelerated and scaled to bridge the remaining cost difference between low-carbon and high-carbon steel and de-risk first-of-a-kind projects in different geographies. Notably, the net-zero steel game will be mostly won outside of the actual mills as significant ramp-up of clean power and enabling infrastructure is critical.

7- *Showcase concrete examples of accountability and/or progress tracking (when applicable)*

SECTION 2 – STOCKTAKE ON ACTION

Overview of progress and implementation in 2022
[Please summarize the overall political, economic, and social developments impacting the implementation (either supporting or challenging) thematic area which are worth highlighting and how these affected the work of the MP stakeholders in carrying out their work. ~ 300 words]

One of the key elements of progress for the steel industry in 2022 was the development of the Steel Transition Strategy by Mission Possible Partnership. The strategy provides a shared vision for the industry's low-carbon future, providing real economy milestones and detailing the industry, policy, and finance action required to get to net zero on a 1.5C-aligned pathway. It outlines, for example, that over 190 Mt/y of near-zero emissions primary steel production capacity would need to be up and running by 2030 to kick-off the transition to net zero in the 2030s and 2040s. This would mean converting the current pipeline to 2030 of 'low-carbon' primary steel capacity to near-zero emissions technologies and expanding it by a factor of three before the end of the decade.

This work played a crucial role in informing the 2030 Breakthrough target for the steel industry, which is to have 70 (near) zero emission steel plants operational by 2030, producing well over 100Mt of green steel per annum.

Section 3 – Action during 2023-2025
[Please identify the three main objectives for climate action in your thematic area in the next biennium to support the achievement of the milestones in 2030 Breakthrough and adaptation and resilience outcome targets and how you plan to approach them, with a particular focus on collaboration with other thematic areas and leveraging multi-stakeholder fora including regional climate weeks ~ 300 words.]

In line with the Mission Possible Partnership's steel sector transition strategy, there are three areas of action required in the 2020s to bring the steel sector on a path to net-zero emissions by 2050.

Multilateral solutions must be developed, including establishing an international forum/alliance to debate and resolve the issue of how to create a level playing field and create markets for low and near-zero-emissions steel production and develop stable and ambitious trade- and transaction-grade standards for low-emissions steel production.

On the supply side, steel companies should set robust science-based emissions reduction targets and look to forge new partnerships across the steel value chain and upstream energy system for accelerating implementation. On the demand side, key actors should agree to long-term off-take with a green premium that is proportional to the production cost increment and associated risks for both supplier and buyer.

For finance, it must provide sufficient capital to enable at least $100 billion of additional investment in low-emissions steelmaking and supporting infrastructure each year until 2023 and implement 1.5°C aligned investment principle and plan and support a moratorium of non-climate-aligned steel investment from 2030.