

ESF: Clean Hydrogen for Clean Steel Workshop

Thursday, 7 November 2024 | 09:00–13:00

The U.S. Department of Energy's Hydrogen and Fuel Cell Technologies Office (HFTO) is hosting a workshop in coordination with the Association for Iron & Steel Technology (AIST) European Steel Forum (ESF), focused on advancing steel decarbonization technologies involving clean hydrogen. The Clean Hydrogen for Clean Steel Workshop is organized under the Mission Innovation initiative to build global collaboration and share knowledge as the field develops, and demonstrations take shape. This Clean Hydrogen for Clean Steel workshop will help identify research needed to accelerate technology development and address barriers to industry commercialization. We are seeking experts to join this discussion to shape the future of the global research and innovation agenda in clean steel technologies.

08:00 **Coffee and Networking**

09:00 **Opening Remarks: AIST & DOE**

09:30 **Plenary/Keynote**

10:00 **Session 1: (Roundtables A&B in parallel)**

**Roundtable 1A:
Direct Reduced Iron (DRI) /
Balance of Plant (BOP)**

Participants will convene to discuss the state of DRI and identify major technical barriers and learnings from current and future demonstrations.

**Roundtable 1B:
Iron Ore Quality**

Large-scale implementation of hydrogen DRI requires attention to the scarcity of suitable iron ore and the production of DR-grade pellets. Potential innovations to mitigate and avoid this bottleneck will be explored.

11:00 **Report Out and Discussion**

11:30 **Break**

12:00 **Session 2: (Roundtables A&B in parallel)**

**Roundtable 2A:
Hydrogen Integration**

Industry leaders will share challenges and opportunities for siting, storing, and integrating clean hydrogen up to 100% for iron production. Novel innovations in thermal integration will be explored.

**Roundtable 2B:
Smelting**

Impurities present in iron ore pellets can remain through the DRI process, resulting in higher gangue content/foaming volumes during smelting. Potential innovations to mitigate this challenge and maintain throughput will be explored.

13:00 **Report Out and Next Steps**