# New Initiative Launched to Better Define Carbon Intensity for Hydrogen

**GTI, National Energy Technology Laboratory (NETL) and S&P Global Platts Invite Experts to Further Transparency in Hydrogen Markets and Develop New Protocols to Measure Hydrogen GHG Emissions at the Production Facility Level**

WASHINGTON, Feb. 16, 2022 /PRNewswire/ -- **GTI, the National Energy Technology Laboratory (NETL) and S&P Global Platts** today launched the Open Hydrogen Initiative (OHI), a new collaboration to further transparency into the environmental impact of hydrogen production and help unlock its full potential as an important driver of energy transitions.

There is a high degree of variability in the carbon intensity of hydrogen production, even using the same technologies or pathways. Precise measurements of hydrogen's carbon intensity at the production facility (also known as the asset level) are needed to more accurately reflect the environmental bona fides of a given kilogram of hydrogen produced and overcome the limitations of the "color-wheel" labeling model. An apples-to-apples comparison of hydrogen production carbon intensity would hold benefits for stakeholders throughout the value chain—producers, users, engineers, academia, market participants, investors and policymakers.

The mission of OHI is to create objective, credible, peer-reviewed, transparent and open-sourced tools that allow participants from across the hydrogen value chain to assess the carbon intensity of hydrogen at the asset level. The creation and adoption of these technical protocols will help build and harmonize the hydrogen market, contextualize climate solutions, advance transparency and support global trade in low-carbon hydrogen.

"The world is rapidly preparing for aggressive decarbonization, and having access to precise carbon intensity assessments is no longer 'nice-to-have' but required," said **Paula Gant, Ph.D., Senior Vice President of Strategy and Innovation at GTI.** "With hydrogen applications increasing, more sophisticated measurement solutions are needed to assess the carbon intensity impacts of using this energy source. This world-class collaboration leverages the strengths of our respective organizations to develop thoughtful, market-ready solutions that will redefine how the world measures and benchmarks the carbon intensity of hydrogen production."

Failure to consider or appropriately convey the carbon variability across and within the production pathways only acts to cloud decision-making and risks a slower, more costly transition to a low-carbon energy future.

**Jonty Rushforth, Senior Director, Energy Transition Pricing at S&P Global Platts, said:** "Across mature commodity markets such as crude oil, we are already seeing that the energy transition is driving market participants to assign a value to crude based on its carbon intensity. As the hydrogen markets mature and start to be legislated for hydrogen's associated carbon footprint, a clearly agreed framework is needed to allow market participants to make informed decisions. We look forward to offering a cross-commodity perspective that will help OHI advance transparency towards the commoditization of hydrogen as a freely traded commodity."

**Brian Anderson, Ph.D., Director at NETL, said:** "The potential for hydrogen to play a significant role as the global energy system transitions to a lower carbon intensity is vast. As hydrogen generation and use scales up, the market needs to adopt a consistent approach to the assessment of hydrogen's greenhouse gas (GHG) footprint that is agnostic to the different production technologies, modes of transportation and end-use sectors."

OHI's measurement tools can play an important role in informing market participants, technology innovators, policymakers and others tasked with evaluating and delivering against decarbonization targets. The initiative

will draw inspiration from Stanford's OPGEE Model, which has become the industry standard adopted to effectively measure the carbon intensity of oil.

The initiative will be discussed at the S&P Global Platts London Energy Forum on February 21, 2022, and again on February 24 during GTI's public webinar, or Tech Talk. Register here to join the discussion featuring experts from GTI, NETL and S&P Global Platts.

Success depends on the inclusion of a mix of perspectives and real-world insights. OHI will convene stakeholders from all sectors of the hydrogen market to develop a measurement model that will enhance the transparency around the carbon intensity of hydrogen production. To lend your expertise or learn more about this initiative, visit www.gti.energy/OHI or contact OHI@gti.energy.

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**About GTI**
GTI is a leading research, development, and education organization. We aim to scale solutions that shape energy systems transitions by leveraging gases, liquids, and infrastructure. We embrace systems thinking, open learning, and collaboration to develop and prove the solutions needed for low-carbon, low-cost energy systems. www.gti.energy

**About NETL**
NETL is a U.S. Department of Energy national laboratory that drives innovation and delivers technological solutions for an environmentally sustainable and prosperous energy future. By leveraging its world-class talent and research facilities, NETL is ensuring affordable, abundant and reliable energy that drives a robust economy and national security, while developing technologies to manage carbon across the full life cycle, enabling environmental sustainability for all Americans. http://netl.doe.gov

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