

# ARGUS HYDROGEN TAXONOMY



## Baseline

Business-as-usual steam methane reformation unit. Emissions released unabated.

## BAT+

Best Available Technology, i.e. new-builds & retrofits, with Carbon Capture and Storage.

## Low-C

Lowest technically achievable CO<sub>2</sub> emissions via fossil fuel reformation.

## No-C

No CO<sub>2</sub> is emitted during hydrogen production.

	H <sub>2</sub> Purity	Co <sub>2</sub> e kg/kg of H <sub>2</sub> *	Pressure	Example Colours	
Baseline	99.9%	<11.3, >8.0	30 bar	Grey	Yellow
BAT+	99.9%	<2.88, >1	30 bar	Blue (SMR+CCS retrofits)	
Low-C	99.9%	<1, >0.5	30 bar	Blue (ATR+CCS),	Turquoise
No-C	99.99%	<0.01	30 bar	Green	Purple

Source: Argus Media 2022

The collage features several documents from Argus Media. At the top left is the Argus logo and website. Below it is a document titled 'Argus Insights'. To the right is a document celebrating Argus Media's 50th anniversary (1970-2020) dated November 2021. The central focus is the 'Argus White Paper: Hydrogen, awash in colours, in search of definition'. Below this is an 'Executive summary' section which reads: 'Hydrogen (H<sub>2</sub>) as a fuel offers a crucial decarbonisation pathway, emitting no carbon dioxide (CO<sub>2</sub>) when burned. But while it can be produced CO<sub>2</sub>-free, using renewable energy and water, most existing production routes entail emissions, and lots of them. Proper classification of H<sub>2</sub> is necessary to assess any relative merit over fossil fuels, as well as the decarbonisation value of H<sub>2</sub> from differing sources. Yet the current naming convention (green, blue, grey) and new prefixes ("clean", "sustainable") is at best unfit for purpose and at worst misleading. All fail to capture the variable that matters – carbon intensity. This definitional quagmire poses obstacles to market development and threatens public confidence. Argus proposes breaking the impasse, classifying hydrogen by the amount of carbon generated in its production, not its production route.'