



# How Preventing Leaks in Bolted Joints Significantly Reduces Fugitive GHG Emissions



**170M metric tons**

of fugitive GHG could be avoided each year by preventing leaking bolted joints. This is equivalent to 36 million ICE cars.

*Source: 2021 Case Study by GEC*



**100X reduction**

in bolted joint leak rates by using Cumulus technology, reducing leak rates from over 10% to 0.1%.

*Source: GasTech 2022 Paper by Cumulus, Shell plc and Bechtel Corporation*

Since 2018, Cumulus technology has been used to assemble or maintain **over 2 million bolted connections.**



## THE NUMBERS

There are an estimated 80 million bolted joints in the oil and gas industry.

26.4 million bolted joints are touched each year during maintenance or construction.

There are about 2.64 million bolted joint connection leaks per year (using the 10% leak rate industry average).

Each leak releases an average of 64 metric tons of fugitive GHG.

Cumulus technology has allowed customers to abate an estimated **12.6 million metric tons of GHG emissions.\***

*This is equivalent to the annual emissions of 68.3 million ICE cars.*

\* Calculation based on the 2 million connections that use Cumulus, the industry standard 10% leak rate, and the average 64 metric tons released per leak