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Climate targets are becoming out of reach: Lessons learnt from bridging the gap between industry and best practice emissions reporting

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ABSTRACT

Global climate targets are slipping out of reach where ambition is not meeting reality. Emissions reporting plays a key role in supporting climate targets by providing a data foundation for tracking progress over time. There is however a material gap between best practice emissions monitoring, and the reporting methods commonly used across the energy, chemicals and resources (ECR) industry. This has led to significant underreporting of emissions, allowing for merely the appearance of climate action.

While direct, continuous measurement at the source level is widely recognised as the most accurate approach, it is rarely implemented at scale. Continuous monitoring requires year round deployment of specialised equipment, an investment many facilities deem impractical or unnecessary. As a result, industry has largely relied on emission factors derived from short term measurement campaigns. Although globally accepted, these factors fail to capture local conditions and operational variability, leading to systematic underestimation of emissions.

Developments in monitoring technologies such as drones and satellites with shortwave infrared spectrometer systems has dramatically expanded the ability to observe emissions from a top down perspective. These observations have revealed significant discrepancies between reported bottom up inventories, prompting major upward revisions of various emission factors.

These revelations are occurring against a backdrop of intensifying investor scrutiny, strengthened regulatory action on greenwashing, and growing pressure from stakeholders for transparent climate disclosure. As emissions from current operating practices are recalculated to reflect more accurate data, many organisations are discovering that their historical emissions are substantially higher than previously assumed. This recalibration makes existing 2030 and 2050 targets far more difficult to achieve, contributing to a trend of delayed decarbonisation efforts and climate targets either extended or reduced.

Altering operations to reduce emissions is often greater than low cost actions such as behavioural changes or sourcing low-carbon alteratives. Transitional capital needs to be allocated to systematically decarbonise operations, of which there has been a severe lack of industry wide. Compounded now with greater total emissions than initially assumed, without drastic changes in investment strategies, the ability to achieve climate targets begins to appear out of reach.

Continued reliance on low quality emission factors provides an avenue for avoiding climate action, unintentional or deliberate, allowing organisations to appear more climate aligned than they truly are. By adopting accurate measurement technologies and committing to transparent reporting, companies can realign with best practice, restore stakeholder trust, and pursue climate targets grounded in reality rather than ambition.

KEY WORDS

Climate targets

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BIOGRAPHY

Kane is a Senior Technical Consultant for Worley Consulting's Advisory group with experience in Life Cycle Assessments (LCA), decarbonisation, commercial strategy and due diligence across oil and gas, mining, and new energy. A published author on methane emissions measurement, reporting and verification; Kane supports the energy transition by creating a targeted approach to bridge the gaps between industry, government, and modern society. He has bachelor degrees in Chemical Engineering (First Class Honours) and Business Management, an operations management background, and a passion for sustainability.

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