



TURNING CO₂ INTO ENDLESS POTENTIAL

ECONIC – TURNING CO₂ INTO ENDLESS VALUE

In a world where CO₂ emissions are ever increasing and creating havoc, it is imperative that individuals and companies alike adopt solutions that are kinder to our environment. For heavy emission industries, like construction and chemicals, carbon capture and storage is an option to offset emissions, but these technologies are typically expensive, do not generate value and cannot be implemented everywhere. Carbon capture and utilization, however, is significantly more attractive, especially when transforming CO₂ adds value to existing industry. Econic's ready-now technology enables polyol producers to do just this.

Econic's innovative catalyst technology allows captured waste CO₂ to be used as a raw material in polyols, replacing up to 50% of traditional oil-based feedstocks, in a low-energy, low-cost process. These CO₂ containing polyols can be used in a range of everyday products, like mattresses, building and refrigerator insulation, cleaning products, sportswear and in cars. Also possible, and specific here, is the introduction of waste CO₂ into polyurethane products and surfactants, with Econic's technology offering three pillars of added value to the product and the industry:

1. **Economic:** CO₂ is an order of magnitude cheaper, and less volatile in price, than traditional oil-based feedstocks. Furthermore, Econic's technology operates at low pressures and temperatures, so can be retrofitted onto existing manufacture assets, and means it has low-cost entry to market.
2. **Environmental:** As demonstrated in our recent LCA, for every tonne of CO₂ that is used as a raw material in manufacture, a further three tonnes minimum of CO₂ emissions are avoided. In the polyurethane and surfactants industries, this would be the equivalent of planting 19 million trees every year.
3. **Performance:** The unique tunability of CO₂ content in polyols offers the ability for polyurethane and surfactants producers and end users to select the properties of the polyol to match the specific downstream applications.

In contrast to many 'green' chemical technologies, Econic's technology combines improved economic, technical, and environmental performance in one sustainable package.