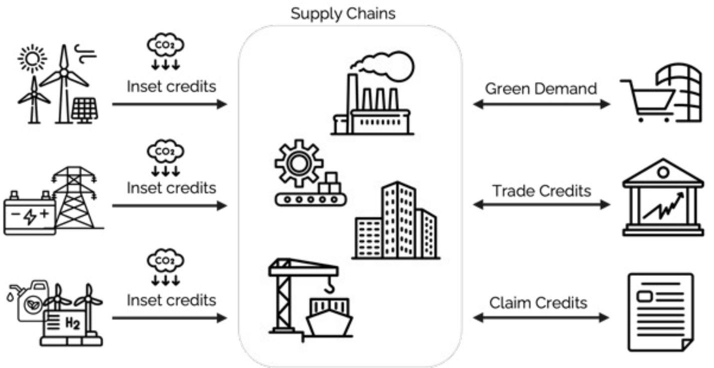
C3 as Financial Instrument to Decarbonize the Chemicals Industry

A New Path to Sustainability

Carbon3 (C3) is an innovative financial instrument that certifies incremental GHG emission reductions within supply chains as tradable "inset credits." For industries facing hard-to-abate emissions and complex value chains, C3 provides a market-driven solution to decarbonize, unlock investments, and mitigate rising compliance costs under EU's stringent policy frameworks.



The Escalating Cost Challenge

The EU's tightening regulatory framework is increasing compliance costs for industries. By 2030, non-compliance penalties could reach €12 billion annually under EU ETS and €9-10 billion from CBAM, escalating to tens of billions by 2050. For chemical producers, retrofitting plants or shifting to cleaner feedstocks such as bio-methane for bio-methanol production demands substantial capital investment (€50-100 million per facility) alongside additional operational expenses.

From Reductions to Revenue

C3 transforms emission reductions into financial assets. Companies implementing decarbonization projects, such as replacing fossil with bio-methane, can monetize these reductions. Independent certification bodies (e.g., ISCC) validate these reductions, enabling the issuance of inset credits on the C3 platform. These credits can be traded, preventing double-counting while allowing buyers to claim the reductions in their carbon accounting. Trading inset credits becomes a new revenue stream for these companies.

Financial and Strategic Benefits

For Chemical Companies:

- Revenue Generation: A 50,000-ton annual CO_2 reduction could yield €2.5-5 million at €50-100 per credit, based on current carbon markets.
- **Investment De-Risking**: Credit sales can offset 20-30% of CapEx (e.g., €15-30 million on a €75 million project), easing reliance on costly debt.
- **Competitive Advantage**: Early movers position themselves as ESG leaders, attracting sustainability focused investors & customers.

For Value Chain Stakeholders:

- **Savings**: Purchasing credits can cut Scope 3 compliance costs by 15-25%, avoiding €1-2 million in annual penalties per mid-sized firm under EU policies.
- **Flexibility**: Credits offer a viable alternative to direct control over upstream emissions, critical for chemical supply chains.

Real-World Case Example

Consider a chemical plant investing to replace fossil methane with bio-methane as a feedstock for bio-methanol, with the following **economic breakdown**:

- CapEx Investment: €75 million
- Annual CO_2 Reduction: 80,000 tons
- Certified Inset Credits Issued: 80,000
- Revenue from Credit Sales: €4-8 million annually

Downstream stakeholders can purchase these credits to reduce their Scope 3 emissions, avoiding approximately €1.5 million in CBAM penalties and reinvesting savings into further sustainability goals.

A Win-Win for Value Chains

C3 transforms decarbonization into a strategic advantage, lowering compliance costs, unlocking investment for sustainable feedstocks, and ensuring alignment with global net-zero goals. By leveraging inset credits, companies reinvest revenue into deeper decarbonization, preventing carbon intensive lock-ins and accelerating decarbonization.

Visit carbon3.net to learn more and get in touch.