The chemical industry has a “trifecta” opportunity to lower scope 1 and 2 emissions, as well as downstream end-market scope 3 emissions. A properly designed and optimally deployed core business strategy, with sustainability as a critical component, may represent one of the biggest-ever opportunities for chemical and materials companies. This strategy can help the industry decide where to play and how to win in lowering emissions and creating new sources of value.

Read the full report at www.deloitte.com/us/Loweringchemicalemissions

**WHY IS THIS IMPORTANT?**

- **96%** OF ALL MANUFACTURED GOODS are directly touched by chemistry\(^a\) (e.g., chemicals make up <96% of the weight of a new vehicle but 50% of its volume)

- **13 OUT OF 17** OF UNITED NATIONS’ SUSTAINABLE DEVELOPMENT GOALS\(^b\) are attained by contributing factors from chemical products and R&D

**THE CHALLENGE**

- **72%** OF CONSUMERS SURVEYED think climate change is an emergency\(^c\)

- **2X** As the need for materials continues to grow, emissions are expected to double by 2050 unless abated\(^d\)

- **10%** OF ALL FOSSIL FUELS PRODUCED\(^e\) are consumed by the chemical industry

- **4%** OF TOTAL US EMISSIONS comes from chemical industry scope 1 and 2 emissions (over 200,000,000 metric tons of carbon dioxide equivalent or MtCO\(_2\)\(^e\))

- From 2005 to 2020, US chemical industry emissions grew by\(^e\) **8.9%**, despite an **11%** reduction in emissions intensity\(^f\)

- **4%** OF TOTAL US EMISSIONS comes from chemical industry scope 1 and 2 emissions (over 200,000,000 metric tons of carbon dioxide equivalent or MtCO\(_2\))\(^e\)
THE OPPORTUNITY

$3 TRILLION
POTENTIAL US ECONOMIC GROWTH
from rapid decarbonization to 2070$^c$

15% OF EMERGING ABATEMENT SOLUTIONS have the potential to address

90% OF THE INDUSTRY’S SCOPE 1 AND 2 EMISSIONS

22% OF US CHEMICAL COMPANIES have targets to achieve net-zero emissions by 2050 in line with 20% of Fortune 500 companies$^i$

4 SOLUTIONS will be ready in the next decade

11 SOLUTIONS need further development to drive long-term impact

The industry’s innovation know-how will be critical in accelerating technology maturity

Lithium-ion batteries are an example of material science innovation driving price-to-performance improvements of over 97%

Companies that are sustainability leaders are

4 TIMES more likely to be recognized as innovation leaders$^j$


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