Global Chemical Industry announces findings of Carbon Life Cycle Analysis

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Greenhouse gas emissions savings enabled by chemical industry are more than double industry emissions, With abatement potential of more than '4 to 1' by 2030

Rome, Italy
The International Council of Chemical Associations (ICCA), the worldwide voice of the chemical industry, today announced the findings of a carbon life cycle analysis of the chemical industry. The announcement was made in connection with the Major Economies Forum on Energy and Climate meeting in Rome. The study found that for every unit of greenhouse gases (GHG) emitted directly and indirectly by the chemical industry, the industry enabled more than two units of emission savings via the products and technologies provided to other industries and consumers. The study also found that by 2030, the ratio of GHG emission savings to emissions could increase to more than '4 to 1', provided certain actions by industry, stakeholders and policymakers.

McKinsey & Company, the global management consulting firm, conducted independent analyses and overall project management for the study, which examined the global chemical industry's impact on greenhouse gas emissions through the life cycle of chemical products and the difference they make in the applications they enable. The Öko Institut, a leading independent environmental research and consulting institution in Europe, conducted a critical review of the analysis and reviewed the calculations. The chemical industry is the first global industry to embark on such an initiative.

The report will next be launched via regional events in the United States (9 July, Washington, DC) and Japan (10 July, Tokyo).

ICCA President Christian Jourquin, CEO of Solvay, said "This study highlights the vital role of the chemical industry as enabler of solutions to decarbonise the global economy by making products that save energy and create a net emission reduction along the chemical value chain."

The most significant emissions savings by volume were found to be from building isolation materials (such as expanded polystyrene, extruded polystyrene or polyurethane), agrochemicals, lighting, plastic packaging, marine antifouling coatings, synthetic textiles, automotive plastics, low-temperature detergents, engine efficiency, and plastics used in piping.

Alain Perroy, ICCA Council Secretary, said "The McKinsey 2030 scenarios show that the chemical industry has substantial potential to help the world further reduce greenhouse gas emissions, both through greenhouse gas emissions savings in its own production and through its products. If industry, policymakers and other stakeholders take steps to facilitate emissions reductions and fully utilize

chemical products, the study suggests the ratio of emissions savings to emissions could increase to more than '4 to 1' by 2030."

The global chemical industry is committed to helping to reduce greenhouse gas emissions by improving chemical production processes. The chemical industry has significantly improved energy efficiency and reduced greenhouse gas emissions at its manufacturing sites and is committed to continued improvement. It also has a role through its chemical products that save energy and create a net emission reduction along the chemical value chain.

The study used a life cycle carbon dioxide-equivalent (CO2e) emissions analysis to assess the impact of the use of chemical products improving carbon efficiency in the global economy. Analyses were performed for over 100 individual chemical product applications. Emission savings were compared with all emissions linked to the chemical industry.

The analyses spanned the major relevant products and sectors of the chemical industry and cover a representative portion of the CO2e emissions linked to the chemical industry. All industry production-related emissions were included, whereas only the major use-driven emissions savings were measured. Additional life cycle analysis could therefore reveal greater emissions savings than reported in this study. Finally, 2030 modeling scenarios were used to extrapolate how emissions for both production and use phases may develop.