# Center for Climate Integrity report exposes longstanding flaws in advanced plastic recycling claims



A recent report by the Center for Climate Integrity (CCI) has cast doubt on the viability of “advanced recycling,” a method promoted by plastic manufacturers as a solution to the plastic waste crisis. The research highlights that while the industry has touted advanced recycling—also known as chemical recycling—as a revolutionary innovation, it has been aware for decades of the technical and economic limitations inherent in these processes.

Advanced recycling entails breaking plastics down into their basic molecular components, which the industry claims can be reused to create new materials. However, critics argue that the rollout of these technologies has faced significant challenges. Davis Allen, an investigative researcher at the CCI and the report's lead author, contends that "the companies make it sound like it’s pretty great, like it’s something we should pursue. But they know the problems, the limitations."

This report follows a previous CCI analysis that suggested plastic producers had concealed the effectiveness of traditional recycling methods. The allegations have led to legal actions such as the September lawsuit initiated by California Attorney General Rob Bonta against ExxonMobil, focusing on the company’s role in the plastic pollution crisis.

The narrative of advanced recycling as a game-changing solution has been echoed by industry leaders. In a video from 2020, Chevron Phillips described it as a “revolutionary innovation.” Three years later, ExxonMobil’s CEO, Darren Woods, referred to it as “brand new.” Nonetheless, while there have been advancements in technology, the fundamental processes involved in chemical recycling date back to the 1950s, and trade groups have been promoting its potential since the 1970s. A brochure published by the Society of the Plastics Industry in 1977 claimed that pyrolysis—the most common form of advanced recycling—would enable plastic waste to be recycled into feedstocks for new plastics.

In response to the report, ExxonMobil spokesperson Michelle Gray maintained that “advanced recycling is a proven technology,” pointing out that the company has processed over 80 million pounds of plastic at its Baytown facility since its inception. Chevron Phillips chose not to comment.

Despite assertions of progress, advanced recycling technologies have not been capable of scaling up for widespread use, primarily due to their costly nature and high energy requirements. A market research analysis from 1991 revealed that "the economics of these processes has not been demonstrated." Moreover, at a 1994 trade meeting, Exxon Chemical's vice-president, Irwin Levowitz, branded pyrolysis as “fundamentally uneconomical.”

The report also notes that many facilities involved in advanced recycling do not produce new plastic but instead generate fuel. This discrepancy raises questions about the industry's claims regarding the creation of a circular economy, as Allen stated, “it’s not circular if you’re not using the materials to make new plastic.”

Furthermore, the industry tends to sidestep the challenges of processing post-consumer items, which are often heterogeneous and contaminated. Many facilities primarily process clean, industrial waste, thereby limiting the efficacy of the advanced recycling processes in dealing with actual consumer products. This challenge was also cited in the California lawsuit against ExxonMobil.

Matthew Kastner, a spokesperson for the American Chemistry Council, countered the report by claiming that critics of advanced recycling were “ignoring science, innovation, and measurable results.” He suggested that the report by CCI was based on selective data and represented an anti-plastic agenda.

The report also raised concerns about the environmental impact of advanced recycling technologies. Although marketed as sustainable, these processes emit toxic pollutants and contribute to climate change. Internally, the industry acknowledges these issues, as indicated by a 2024 report from consulting firm Roland Berger, which pointed out a substantial carbon footprint associated with advanced recycling.

While the report aims to inform the public about the limitations and challenges of advanced recycling, it may also open avenues for further legal scrutiny. Allen expressed concern over the prevailing narrative that surrounds advanced recycling, stating, “The information ecosystem around advanced recycling is totally dominated by the industry itself." He added that the goal of the CCI is to equip the public with the tools necessary to critically assess the industry's claims.

Source: [Noah Wire Services](https://www.noahwire.com)

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