

Initiatives for an advanced recycling-oriented society

Plastic chemical recycling

Basic approach

We are engaged in plastic chemical recycling to process used plastics into raw materials for manufacturing ammonia, carbon dioxide gas and frozen carbon dioxide. The related processes enable molecular level decomposition of plastic waste, which would otherwise be incinerated, to recover hydrogen for use in manufacturing new products. Showa Denko, being the world's only long-time commercial operator in gasification chemical recycling, will leverage its proven track record to meet mounting social expectations for addressing plastic waste recycling issues, particularly those associated with climate change and marine plastic waste.



Challenge toward 2030 and Showa Denko's initiatives

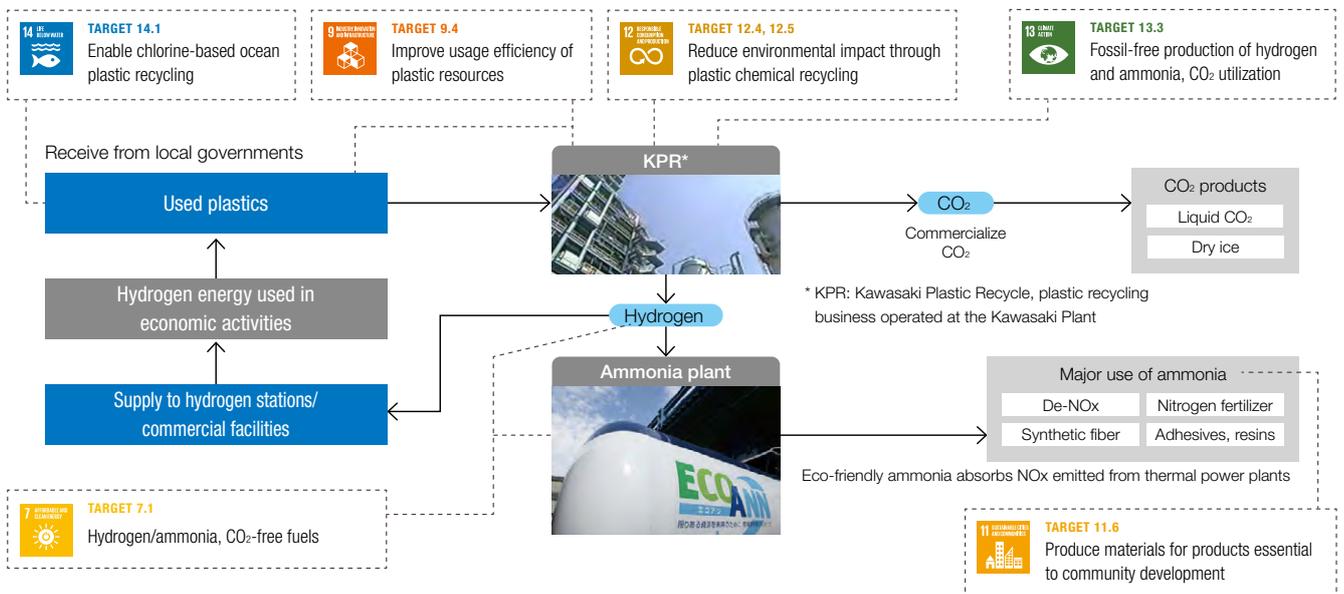
In Japan, the recycling rate of plastic waste approximates 85%, out of which only 5% is related to chemical recycling with most of the remaining portion related to thermal recycling. Recently, international standards have begun to disallow thermal recycling in order to promote proper plastic waste utilization, calling for governments to raise the combined rate of chemical and material recycling to around 70% of the total, including the currently unrecycled portion. To address this situation, Showa Denko will draw on its long-established track record in commercial chemical recycling operations in order to raise the chemical recycling rate through innovating technologies to accommodate types of plastics that are presently hard to recycle, while providing technologies for stable production processes to operators inside and outside of Japan.

Challenges facing society

- Raise chemical recycling rate of plastic resources
 - Raise Japan's chemical recycling rate from the current 3% to 17%
- Reduce ocean plastic pollution

Showa Denko's initiatives

- Address types of plastics that are hard to recycle to improve the recycling rate
- Provide stable production process technologies developed through years of commercial operations to operators inside and outside of Japan



Promote plastic chemical recycling to achieve zero emissions