

## **ReOil – OMV's Pace to Circular Economy**

O. Schneider

OMV Refining & Marketing GmbH, Vienna, Austria

### **Abstract**

OMV has early recognized the potential of plastic waste as a valuable feedstock source. With the right Plastic-to-Oil technology in place plastic waste (more felicitous: post-consumer plastics) can perfectly complement OMV's existing oil and gas business.

OMV has been exploring the potential for utilizing post-consumer plastics (PCP) – polyethylene, polypropylene, and polystyrene – since 2011. The first Plastic-to-Oil test facility was launched in 2013 in the pilot plant facility at the Schwechat refinery. It has a processing capacity of around 5 kg of used plastics per hour. The next-level test facility – the ReOil pilot plant – started the already fully refinery-integrated operation in 2018 with a processing capacity of up to 100 kg per hour and a related production of up to 100 liters of synthetic crude per hour.

The produced syncrude is further processed in the Schwechat refinery into fuels products and petrochemicals. The latter are again potential base materials for the polyolefin industry. This process creates a closed loop (“the circular economy”), where post-consumer plastics are used to create value-added products, thereby reducing dependence on natural resources and lowering carbon intensity as compared to standard crude oil processing.

The presentation provides a view onto both the overall R&D journey OMV accomplished over its Plastic-to-Oil strategy and an insight into current test results and latest developments. OMV aims to develop ReOil into a commercially viable, industrial-scale recycling technology with a processing capacity of approximately 200,000 t of PCP per year until 2025. OMV holds the patent for this recycling process in Europe, the US, Russia, Australia, Japan, India, China, and other countries.