

## Higher Margin with Integrated Refinery/Petrochemical Scheme

### Abstract

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Lower crude oil prices and decreasing refinery profit margins has opened avenue for value added opportunities such as integration of Refinery with a Petrochemical facility. In addition to higher operating margin through feed and product integration between the two facilities, refinery – petrochemical integration brings in other benefits such as energy savings, lower operating cost and lower transportation costs.

Rates of propylene and ethylene from units in the refinery and petrochemical plant are key considerations in refinery – petrochemical plant integration. Selection of process unit, catalyst, feedstock and operating conditions can significantly alter light olefin, and aromatic rates and the propylene to ethylene ratio. Additionally, the selection of process unit should be flexible enough to address the challenges associated with large swings in olefins-fuels margins.

KBR's MAXOFINTM technology is designed to maximize propylene and ethylene from traditional FCC feedstock and low valued naphtha streams. We will present schemes using combinations of KBR's MAXOFINTM Technology and SCORETM technology (steam cracker) to integrate refinery with petrochemical complex. We will also present a case study discussing the yields associated with this scheme. The presentation will also cover various options for revamping an existing FCC unit into KBR's MAXOFINTM unit.