
Question 18: The increased production of light straight-run (LSR) from crude units is likely to have an impact on refiners' plans for Tier 3 compliance. What strategies do you employ in order to manage this issue?

JEFF BRAY (Honeywell UOP)

Tier 3 drives hydrotreating of essentially all light naphtha streams. Since most United States refineries have FCCs, it is usually desirable to hydrotreat other gasoline streams more completely to minimize the FCC naphtha olefin saturation and the associated octane loss. Even streams such as alkylate, and butanes can contain sufficient sulfur to impact the pool. Complete hydrotreating of these streams will often require additional hydrotreating capacity. With the increase of light straight-run naphtha yields from crude and the availability of cheap natural gasoline, many sites have become limited in hydrotreating capacity for the gasoline range streams. The regulatory requirement then drives an expansion of hydrotreating, which is very hard to avoid without significant impact on site economics. To make the project add to the site profitability, a key aspect is to try to extend the project not only to just meeting regulatory needs, but also to debottleneck the site so that more material, such as natural gasoline or other condensates, can be upgraded or value added in other ways.

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