



Home » Technology » Ethylene to Liquids

Font Size   100%

Ethylene to Liquids

Siluria has developed a second process, known as Ethylene to Liquids (ETL), to convert unpurified ethylene from the OCM process to hydrocarbon liquid fuels.

Siluria ETL Process

In the ETL process, the OCM ethylene effluent is oligomerized over a catalyst (different than the OCM catalyst) to selectively produce targeted products, such as gasoline, condensate, aromatics, heavy oil diluents or distillates including diesel or jet fuel. Oligomerization refers to the process of producing higher carbon number molecules from ethylene or other alkenes.

Siluria's ETL catalyst development strategy has leveraged decades old commercial alkene oligomerization catalyst experience and practice. Through catalyst formulation and process condition optimization, Siluria's ETL processes are robust and have extremely high ethylene conversion and product selectivity. The ETL process is being developed in a large-scale integrated pilot reactor system located in Siluria's Hayward, California facility.

Advantages Over Other GTL Technologies

Siluria's OCM + ETL process differs substantially from other Gas to Liquid (GTL) processes, such as Fischer-Tropsch (FT) and Methanol to Gasoline (MTG).

For example, Siluria's OCM+ETL process does not go through any syngas (carbon monoxide and hydrogen) intermediates, which is utilized in the FT process. Converting syngas into hydrocarbon products result in a broad product distribution ranging typically from C₁ to C₄₀. This necessitates significant additional refining/separations and energy input. In contrast, utilizing ethylene as an intermediate in place of syngas allows for very targeted production of a specific narrow product slate. The result is a simpler process, lower capital costs and more flexibility in term of scale.

Siluria in the News

Saudi Aramco invests in Siluria: will BIO rescue OCM and put the ROI back into GTL?
08-20-2014

Siluria's Oxidative Coupling Nears Reality
07-07-2014

Siluria Technologies, Linde Announce Ethylene Technology Partnership
06-02-2014

→ READ ALL

Events

IHS 30th Annual World Petrochemical Conference
03-24-2015

ABLCNext 2014
11-10-2014

Gas-to-Market & Energy Conversion Forum
10-21-2014

→ VIEW ALL