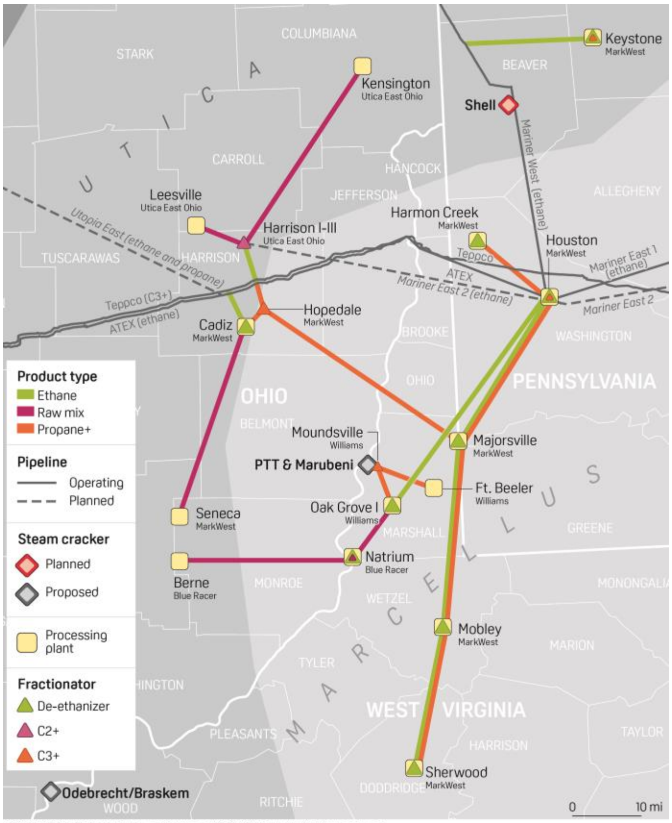
June 8, 2016

First Northeast greenfield ethane cracker presents opportunities

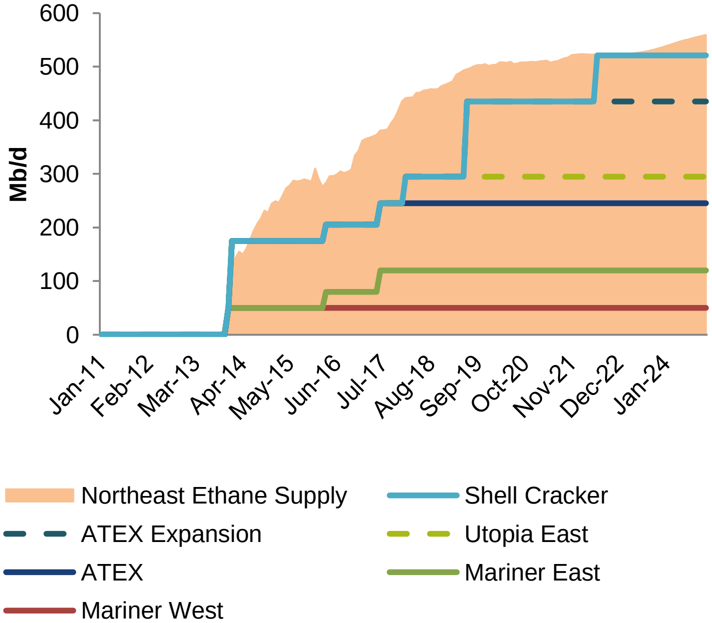
Shell Chemical announced on June 7 that it has made a final investment decision (FID) to build a new petrochemicals complex in Pennsylvania, consisting of a 3,300 MMlbs/yr world-scale ethane cracker integrated with three polyethylene units, with a total capacity of 3,500 MMlbs/yr. The project, initially announced in June 2011, will be the first ethane demand project in Appalachia since the Marcellus/Utica region became a major NGL producer. Construction of the ethane cracker (86 Mb/d ethane demand) will start in about 18 months and is anticipated to take about 4 years, which would imply a 2022 start date. Currently, about 153 Mb/d of Northeast ethane is being rejected into the natural gas stream. Northeast ethane production is expected to grow by about 88% to 523 Mb/d in 2022. Shell's project will allow Northeast producers have an opportunity to sell ethane regionally instead of relying for increased takeaway to other markets or rejecting into the gas stream.



The Shell complex will be built on the banks of the Ohio River on a 400-acre site near Monaca in Beaver County, Pennsylvania. The facility is strategically located to have easy access to Northeast ethane (see map). The location is in close proximity to MPLX's Houston and Keystone sites, as well as the proposed Harmon Creek complex. In addition, all of MPLX's plants in the Marcellus region, from Sherwood to Keystone, are connected by pipeline (see map). Further, Mountaineer NGL Storage LLC recently announced the successful completion of its non-binding open season to construct about 2 MMbbls of NGL storage caverns storage in Clarington, Ohio by early 2018.

Shell will have access to ethane that would otherwise be rejected in the basin. Bentek believes that ethane production growth is sufficient to support the Shell cracker by its in-service date. Including ethane demand from this project and full utilization of current pipeline takeaway, Platts Bentek estimates about 175 Mb/d of ethane would still be rejected in the Northeast in 2022. Adding on an expansion of the ATEX pipeline to 265 Mb/d in mid-2019, as is included in Bentek's current forecast, still leaves enough ethane to supply the Shell cracker in 2022, but rejection falls to extremely low levels (Figure 1). The official FID of the Shell project may make an ATEX expansion less likely, as many producers have committed volumes to the Shell project. There is also still the possibility of another Northeast cracker. Currently, PTT & Marubeni is the most likely candidate to construct a cracker (see map). The company is expected to make an FID on this project by March 2017 and start construction in 3Q2017. Bentek's forecast indicates that there could be enough feedstock to supply both cracker projects, but only if ATEX were not expanded to the full 265 Mb/d capacity.

Figure 1: Northeast Ethane Supply vs. Takeaway



Source: Bentek