

CHEMISTRY THAT MATTERS™



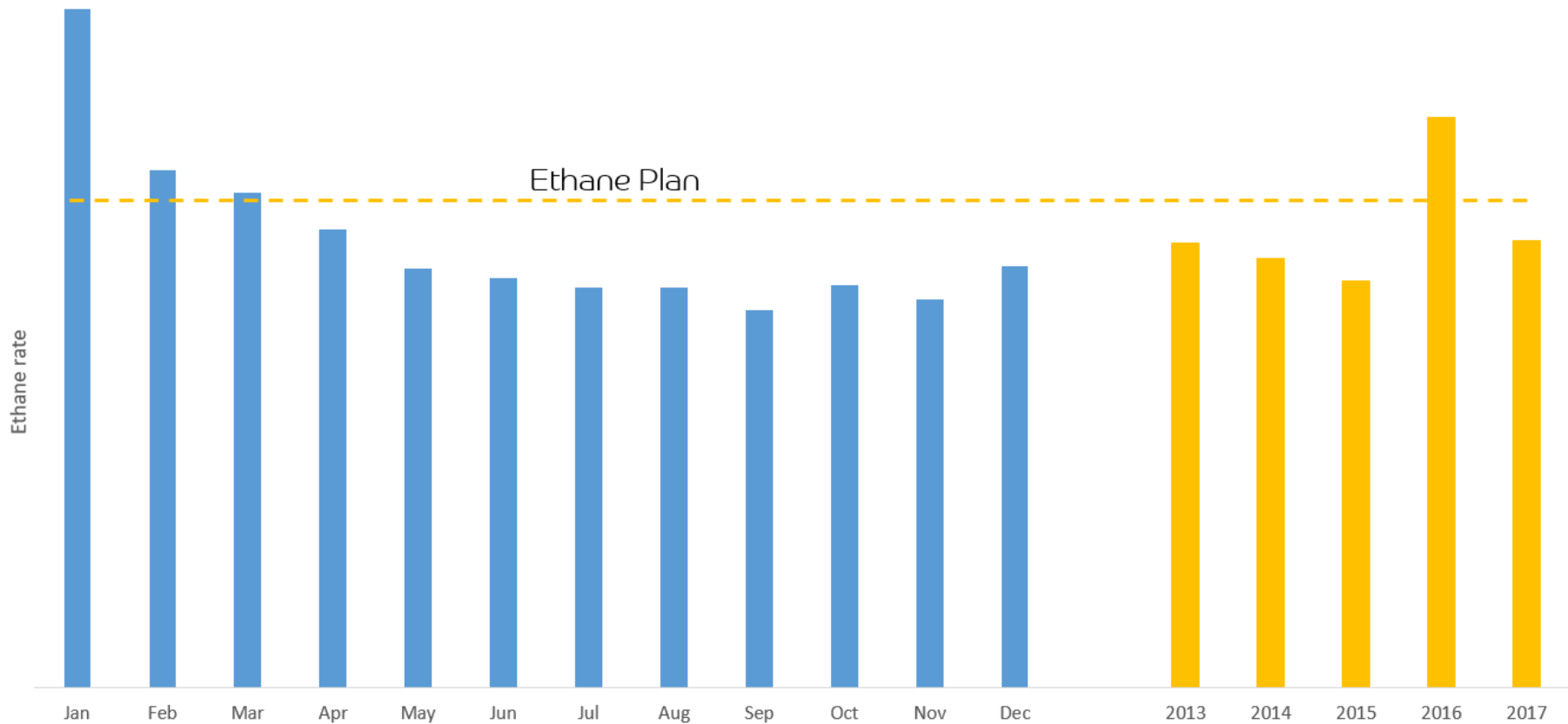
MAXIMIZING FURNACE CAPACITY UTILIZATION DURING FEEDSTOCK CURTAILMENT

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FEEDSTOCK CURTAILMENT

➤ Fluctuating feedstock condition has been a challenge in the region.



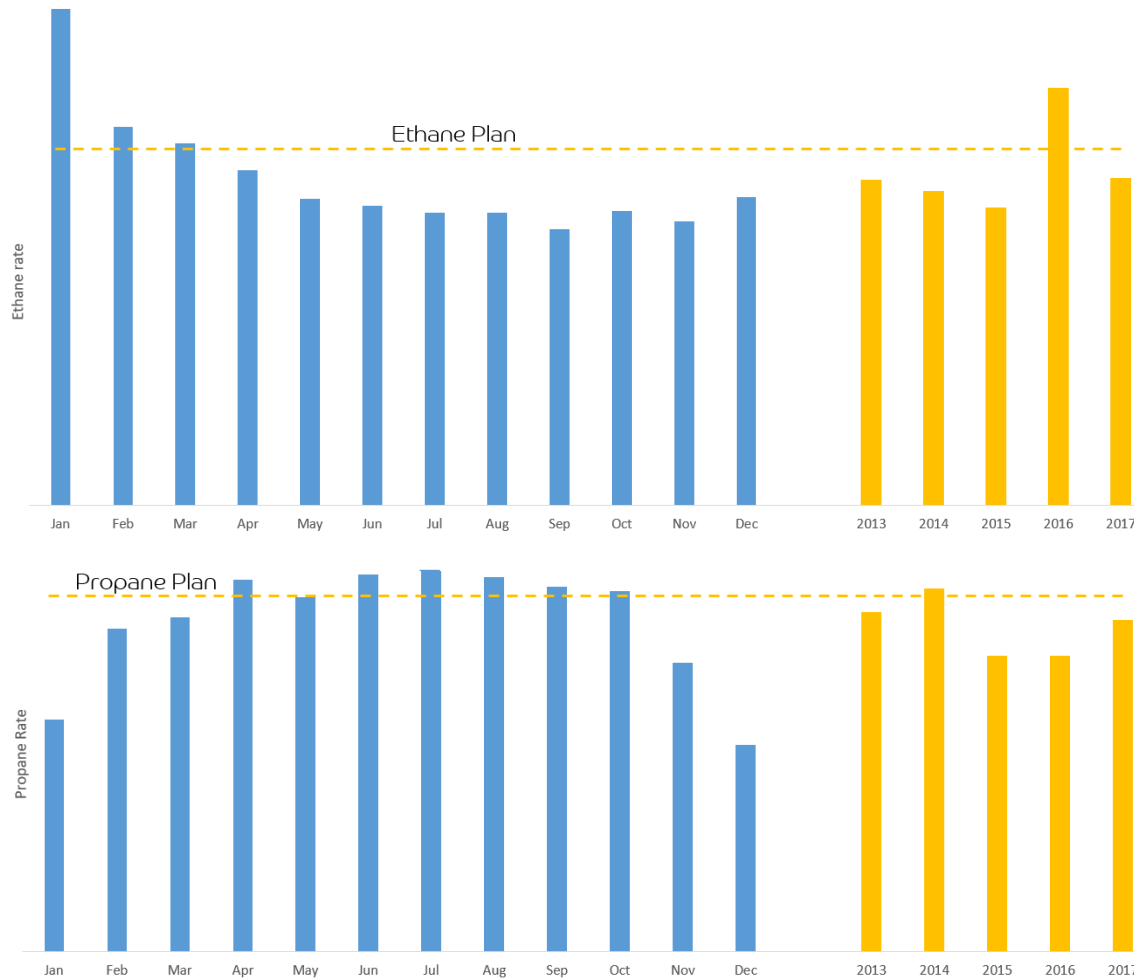
Feedstock curtailment provides an opportunity for yield optimization

OPTIMIZATION SCENARIOS

Optimized Scenario	Base Case	Curt. Case	Case 1	Case 2	Case 3	Case 4	Case 5
Ethane Curtailment	0%	9%	9%	9%	9%	9%	9%
Ethane Feed, MMSCFD	50	45.5	45.5	45.5	45.5	45.5	45.5
Ethane Conversion	65%	65.0%	64.0%	63.0%	62.0%	61.0%	60.2%
Ethane Furnace Load	100%	92.7%	94.2%	95.6%	97.1%	98.7%	100%
Recovered Volume, KTA	-	-	1.3	2.6	3.9	5.1	6.1

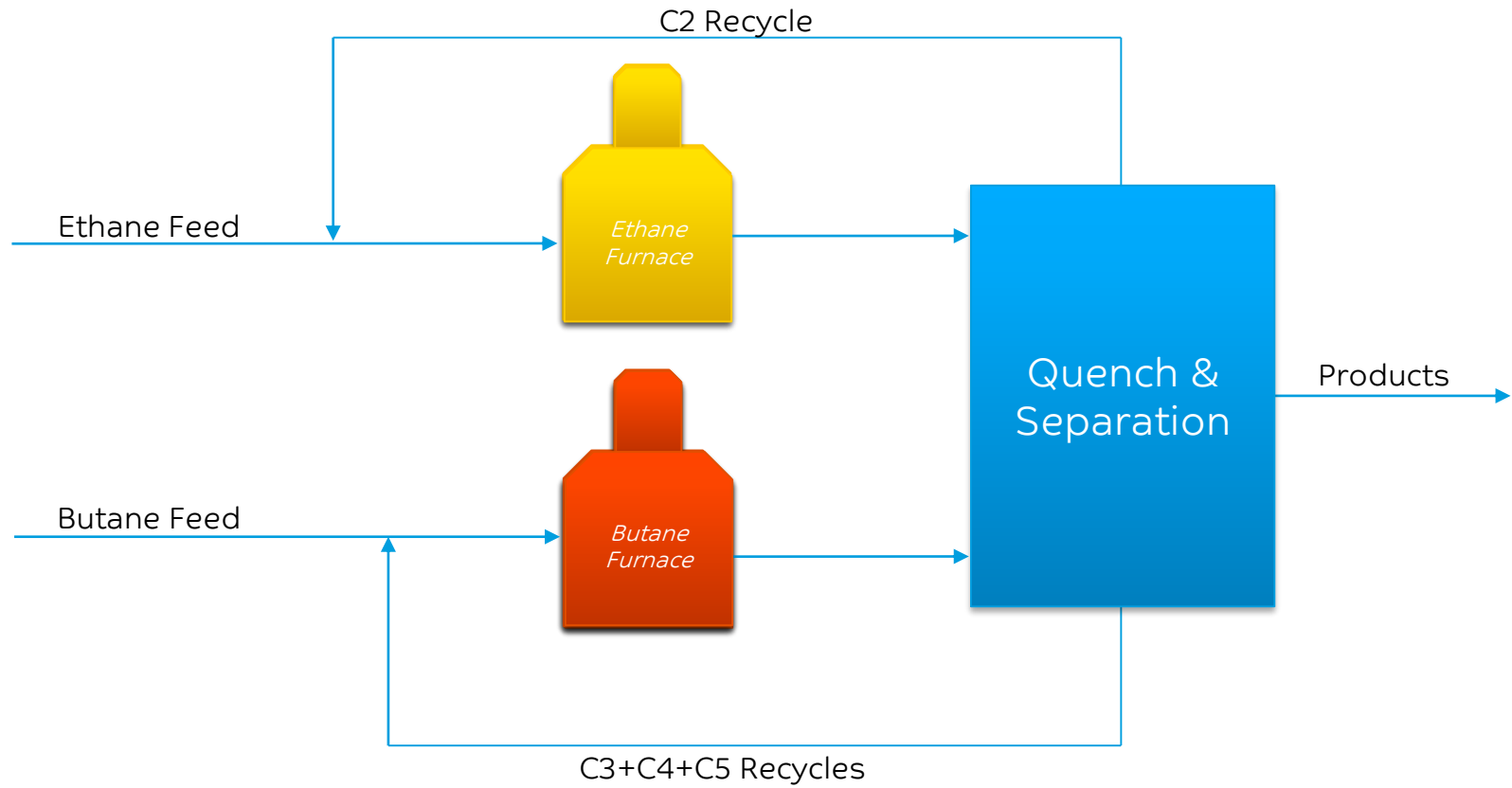
Real-time optimization provides the most from available feedstock

FEEDSTOCK FLEXIBILITY

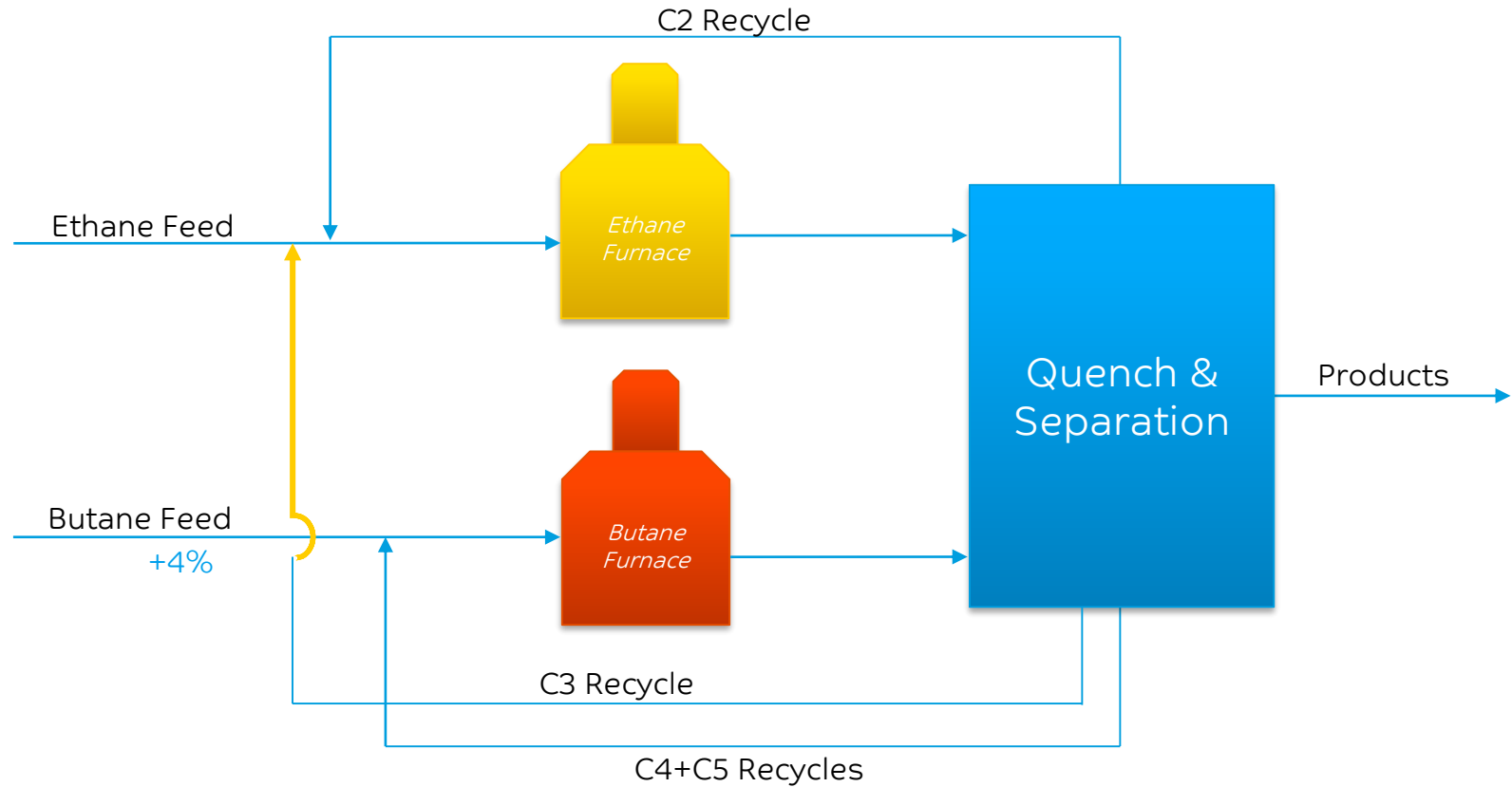


Multi-feedstock crackers can take advantage of feed swapping and co-cracking

LIMITED FLEXIBILITY



IMPROVED FLEXIBILITY



Proposed C3 recycle configuration provides the plant with further flexibility

BENEFITS

Proposed Scenario	Base Case	Case 1	Case 2	Case 3	Case 4	Case 5
Ethane Curtailment	0.0%	9.0%	9.0%	9.0%	9.0%	5.4%
Co-Cracking C3 with C2	No	No	Yes	Yes	Yes	Yes
Ethane Feed, MMSCFD	50.0	45.5	45.5	45.5	45.5	47.3
Butane Feed, MBD	80.0	80.0	80.0	80.6	83.0	83.0
Production Impact, KTA	-	-45.8	-48.1	-35.6	0.2	18.5
Recovered Volume, KTA	-	-	-2.3	10.2	46.1	64.4

- The new co-cracking configuration:
- ✓ requires minimum capex
 - ✓ allows the plant to maximize its furnace capacity utilization.
 - ✓ fully recover production losses due to Ethane curtailment.



THANK YOU

