The problem
Over the past 40 years, NGL plant designs have evolved to increase performance and flexibility. However, plant propane refrigeration systems have remained remarkably unchanged. Refrigeration systems are costly, have a sizable footprint and cause high thermal stresses within plate-fin exchangers that lead to failures. Designers and operators are also forced to make a critical decision for each new plant: more refrigeration horsepower or more residue horsepower?

Until now.

The solution
ROCTM technology eliminates the need for a propane refrigeration system.

In the ROC design, the propane refrigeration system is replaced with more efficient equipment that utilizes residue compression for both product and refrigerant compression. ROC avoids all of the issues associated with a conventional propane system while maintaining high recovery levels. With only residue compression required, a simple change of controller set-points can switch residue compression horsepower to either increase throughput or achieve higher recoveries of C2+ or C3+, leaving no compression unused. The ROC core uses 25% less equipment, with more modularization.

Advantages
→ Plant core is cost-competitive with RSV, with higher performance
→ Lower horsepower requirements than any open art technology
→ No medium voltage sub-station for plant core, lowering capital and operating costs
→ No need to buy or store process refrigerant
→ Eliminates need for propane refrigerant system spare parts
→ Flexibility to meet operational needs - higher capacity or higher recovery
→ Smaller plot space required
→ More modularized equipment decreases time to on-stream
→ Feeds up to 12 GPM without modification to plant core