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#### TANGGUH LNG OPTIMIZATION BY ADVANCED PROCESS CONTROL

As an integrated LNG Production Facility, Tangguh LNG faces several challenges in its operation, including variations of operating condition. The production rate is highly influenced by diurnal effect of ambient temperature which requires continuous alterations to be made by operators. Therefore, it holds significant potential for automation benefits delivered by introduction of Advanced Process Control (APC) technology. APC is a multi-variable predictive control technology that can improve plants profitability and efficiency by maintaining process parameters close to their optimal condition. The APC application has been implemented at Tangguh liquefaction trains with main control objective to maximize LNG product and optimize energy efficiency while maintaining other parameters within their limit. Modified regulatory control strategies utilized by the program includes Cryogenic Heat Exchanger flow ratio control that have been formatted as ratios to Mixed Refrigerant Liquid flow which has the most significant impact to the refrigeration power consumption.

Tangguh APC benefit audit indicates significant optimization of operating constraint, and in doing so has pushed the averages of the Propane compressor discharge pressure, reduced scrub column reflux flow and thereby increased LNG product with an estimated production gain of up to 2%. The optimized operating parameters also resulted in reduced flaring emission and at the same time, operator interventions to the process

To view the full conference agenda, visit <https://www.lng2023.org/lng-programme-overview>