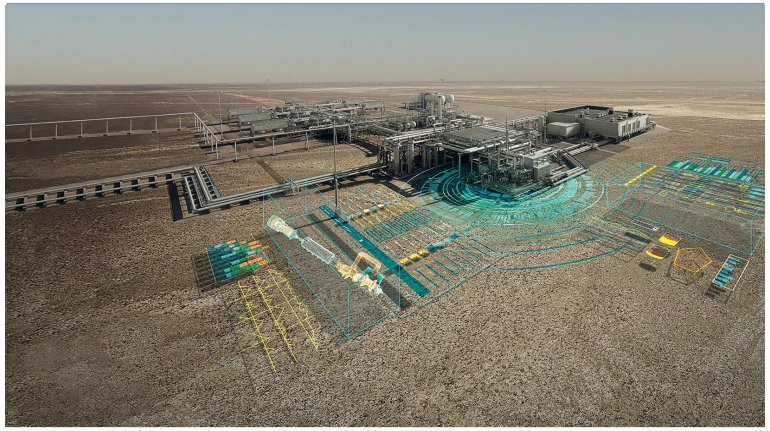
Maximizing hydrocarbon recovery, reducing utility consumption, and controlling carbon emissions

Project reference: Flare Minimization at a Major Gas Processing Complex



Location	Middle East
Background	• Gas Processing Complex • Existing Installation: 3 gas treating plants with designs for a 4th to make the world's largest gas complex
Siemens' Offerings	Comprehensive flare minimization assessment to identify opportunities to reduce overall facility flaring and provide management with implementation roadmap

Customer challenge

Exceeding emission levels from flaring events

Increased operations cost and hydrocarbon losses

High plant utility consumption

Methodology

- Data analysis: review and validation of flaring loads scenarios and calculations
- Identification of flare and utility reduction options
- Technical evaluation of flaring reduction options and feasibility
- Desktop safety review (DSR) including Engineering, Safety, and Operations
- Economic evaluation (cost-benefit analysis) of to achieve flaring reduction options

Results

- >65% flaring reduction from identified process operation and design improvement opportunities
- >30% reduction in utility demand from flaring gas recovery
- Comprehensive roadmap to mitigate unplanned flaring loads, e.g., emergency and upsets, by up to 25% with improved control systems, and equipment reliability

Key Opportunities

↑ **Improve profitability**	Maximize hydrocarbon recovery and minimize utility consumption from excessive flaring
↓ **Minimize carbon footprint**	Ensure compliance with emission targets and environmental standards
↑ **Improve operational flexibility**	Maximize utilization of existing flaring assets