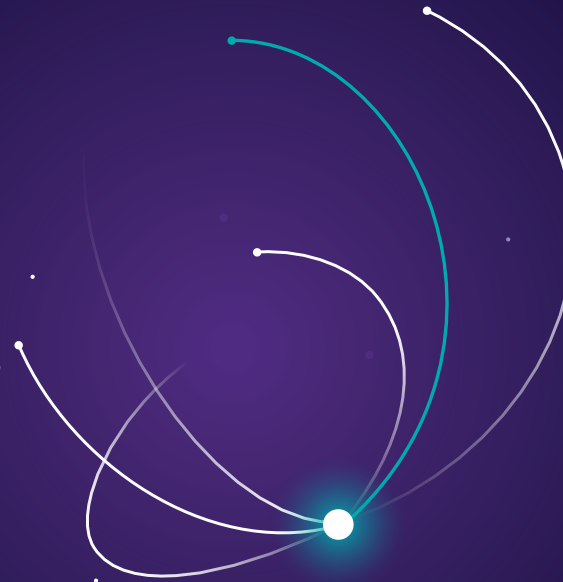


Flare Minimization

The leader, trusted partner and advisor of choice in process safety



Gas flaring is the process of burning-off associated gas from wells, hydrocarbon processing plants, or refineries, either as a means of disposal or as a safety measure to relieve pressure. Upwards of 140 billion cubic meters of gas was flared globally in 2017 ¹.

Resulting in almost 20% of natural gas production in the United States for that period and resulting in 400 Mt of Carbon Dioxide (CO₂) into the atmosphere with potentially adverse impacts on the environment.

Processing facilities are using expensive utilities to enable safe and controlled incineration of valuable hydrocarbon commodities that are susceptible to regulatory sanctions for the emissions that result.

Siemens Solutions

Siemens Process & Safety Consulting helps our customers achieve safer flaring operations through better flare management practices by finding opportunities to maximize hydrocarbon recovery, minimize carbon emissions, and reduce the operating cost associated with continuous flaring.

Our flaring minimization assessment offers a systematic review of the modes of an operator's flaring operations to reduce the frequency and volume to achieve safer flaring operations by identifying opportunities to:



- Develop implementation plans to minimize routine flaring associated with normal purging, sweep, shut down, and startup operations requirements in line with applicable standards and internal flaring targets
- Reduce frequency and volume of emergency flaring scenarios for more reliable and safe operations by assessing probable upset scenarios with a focus on mitigating likelihood of occurrence, reduce emergency flare loading, and identify inherently safer design options
- Improve operational and maintenance flexibility and maximize utilization of flaring assets by assessing multi-flare system to align redundancies and increase disposal capacity for multiple operation and maintenance scenarios

Value to Customer

Our systematic and holistic flare minimization assessment executed by best-in-industry SME's drives the identification of opportunities for customers to improve:

- **Facility risk management** through minimizing toxic and flammable emissions and satisfying flaring regulatory requirements
- **Operational flexibility** to reduce downtime and the volume and frequency of flaring, and maximize asset utilization
- **Profitability** through maximizing hydrocarbon recovery and generating additional disposal capacity allowing for the increase in processing throughput

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