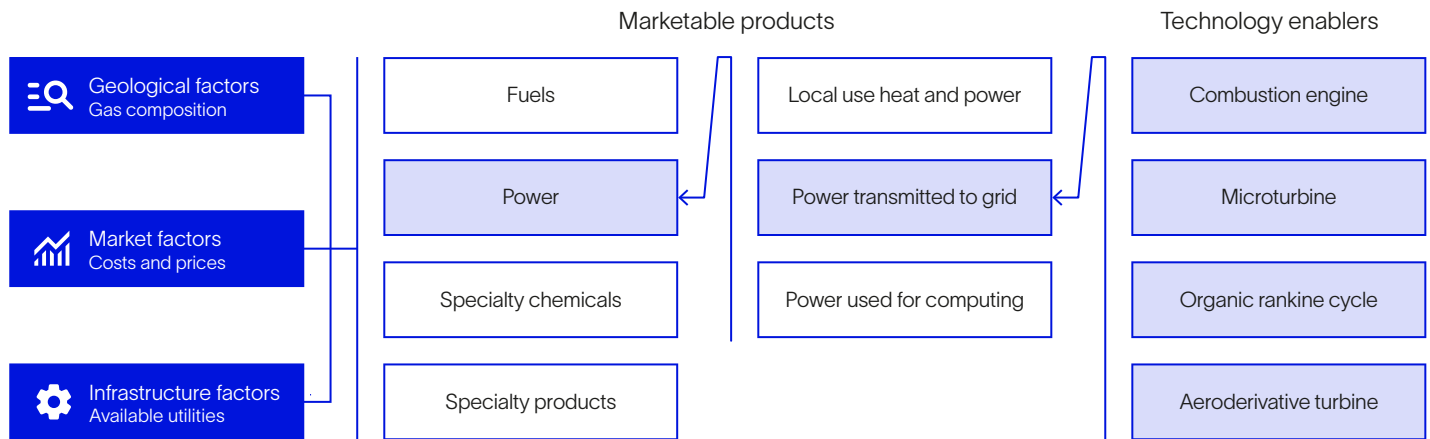


Gas-to-value consulting



Eliminate routine flaring and venting at onshore and offshore facilities while monetizing excess gas

Converting Gas to Value



Gas to value encompasses a range of marketable products (e.g., fuels, power, and specialty chemicals and products) derived from gas that would otherwise be flared or vented.



Emissions reduction:

Enables reduced methane and flaring-related emissions



Service:

Gas-to-value consulting

SLB End-to-end Emissions Solutions (SEES)

To help you achieve zero routine flaring, we use a customized approach for individual flares because the applicability of these technologies varies from site to site. Our experts identify the ideal product for gas transformation considering site-specific factors. Using techno-economic analysis, we rigorously evaluate every technology applicable to a particular site and determine the optimal method to monetize excess gas.

How it is unique

We leverage our technological, digital, and end-to-end emissions management expertise to find the best gas-to-value options for each flare or vent. Using a comprehensive cost-benefit analysis of gas conversion technologies and taking into account current and future economic conditions, our goal is to help you make the most informed decisions for your particular situation. These services include

- broad and deep evaluation of all available and emerging gas-to-value conversion technologies
- accurate assessment of process efficiencies of gas-to-value technologies through rigorous thermodynamics
- consistent analysis using the same methodology for each technology
- consideration of key technical and economic factors such as H₂S content, labor cost, and market prices for specialty chemicals
- sensitivity analysis to address uncertainties in future economic conditions
- additional support to install, operate, and maintain the recommended equipment.

Applications

- Oil and gas production and processing facilities, onshore and offshore
- Remote oil fields that lack infrastructure to transport associated gas

How it reduces emissions

Gas-to-value consulting helps you eliminate routine flaring and venting by turning excess gas into revenue. Routine flaring and venting are often performed for economic reasons when the cost of transporting associated gas to market exceeds its value. Many new technologies enable the conversion of excess gas into alternative products that are more valuable to sell, less expensive to transport, or both. These technologies can transform gas in the field into marketable resources such as electrical power, LNG, pipeline-transportable liquid fuels, and specialty chemicals. By successfully deploying these technologies, you can simultaneously reduce emissions and boost revenue.

Gas-to-value consulting

How it works

Our team of experts generates an accurate thermodynamic and economic model of each gas-to-value technology applicable for a particular location. The model helps you identify and apply the optimal gas-to-value conversion technologies for each unique gas source by projecting the revenue generated and emissions reduction achieved.

Models are continually updated as technologies emerge and improve. For example, recent advances in gas-to-zero-carbon fuels and electric steam methane reforming have been incorporated.

The analysis considers

- geological factors, such as the volume and composition of produced gas
- infrastructure availability, such as equipment already installed for processing gas and transporting products to market, as well as the availability of utilities, including power, water, heat, cooling, and data access
- market conditions, including costs of labor, equipment, services, and utilities, and selling prices for gas and gas-to-value products (e.g., LNG, chemicals, and power).

The analysis can comprehensively evaluate all potential gas-to-value technologies or delve deeply into multiple variations of a single technology, particularly if the product has already been identified.

Based on this detailed picture of available technologies and local conditions, the economic and environmental performance of each option is determined. You can then use this analysis to identify the most effective way to achieve zero routine flaring and venting.

Gas-to-Value Options

Power

- Heat and power for local use
- Power transmitted to the grid
- Power used for cryptocurrency

Specialty chemicals

- Methanol
- Mixed alcohols
- Dimethyl ether
- Acetic acid
- Formaldehyde
- Urea

Fuels

- Compressed natural gas
- Liquefied natural gas
- Extracted natural gas liquids
- Liquid fuels
- Hydrogen

Specialty products

- Carbon fiber
- Fertilizer
- Artificial protein

Many gas-to-value conversion options are available. Identifying the optimal choice is achieved through comprehensive analysis.