

### Affordable and Reliable Solutions

For over 60 years, GE has been applying its gasification technology expertise to help customers convert lower value feedstocks to higher value products in applications across the power generation, industrial/chemicals, and refining segments.

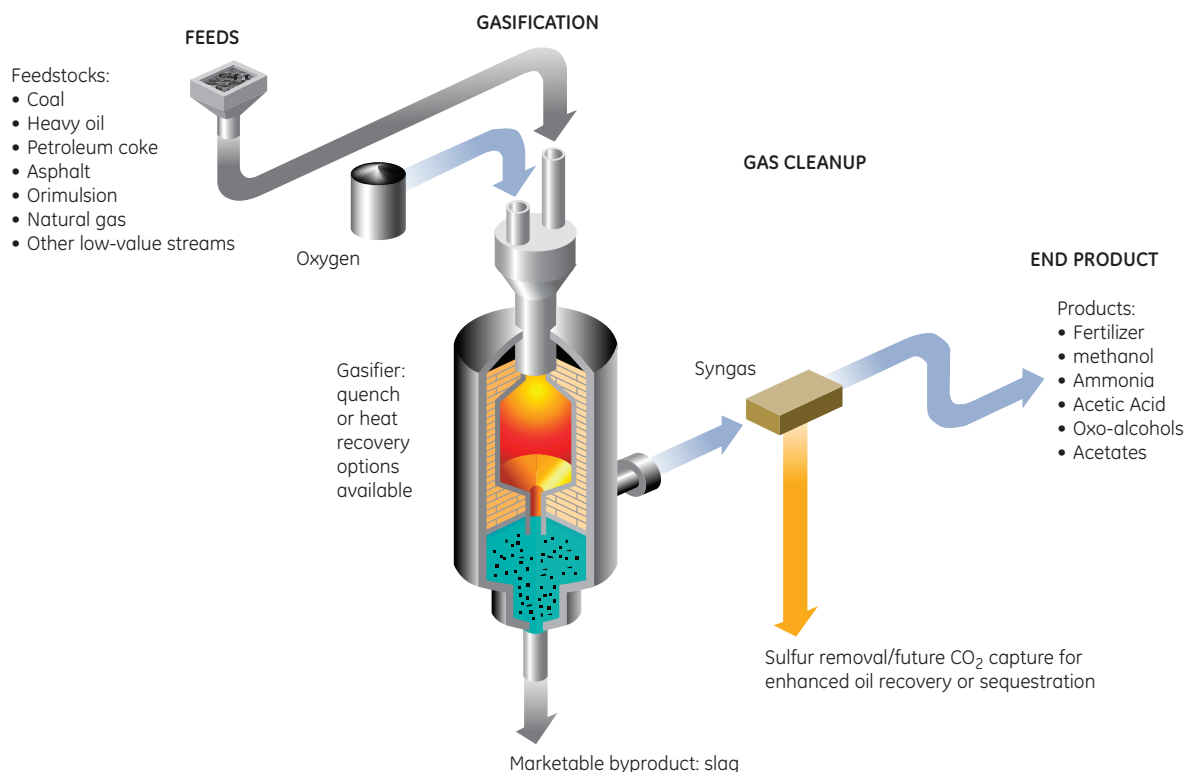
Chemical and industrial customers around the world are using GE's gasification technology to convert coal to ammonia, acetic acid, methanol, and other useful chemicals and products. Our combination of technical expertise, experience, and product innovation helps customers increase efficiency, performance, and profitability.

### The Gasification Process

Gasification is a flexible and efficient process that produces mixtures of hydrogen and carbon monoxide (synthesis gas or syngas) from carbon-based feedstocks such as coal, petroleum coke, oil residuals, and even natural gas.

There are three basic components to gasification: air separation; gasification; and gas clean-up. Air separation is used to produce the oxygen that is fed into the reactor with the carbon-based feedstock. In the case of coal, the feedstock is ground, mixed with water and fed in a slurry form into the gasifier, which operates under high temperatures and pressures to produce syngas. The ash and typical contaminants in the feedstock are consolidated into a marketable, vitrified slag material. The syngas product is subsequently cooled and cleaned, including highly effective sulfur removal prior to use.

Syngas components are the basic building blocks of many chemical products including plastics, oxo-chemicals, methanol, and chemical fertilizers.



## Benefits from GE's Proven Gasification Technology

- Improved operating margins by reducing or eliminating the need for natural gas in the production of chemicals
- Syngas for multiple applications including methanol, ammonia, fuels, oxo-chemicals
- Experience and technology innovation
- Feedstock flexibility
- Increased yields and margins

## Capitalizing on Experience

GE has one of the largest installed bases of industrial gasification facilities globally and as existing customers look to expand their operations, they turn to GE for additional technology solutions to support their growth. Our experience allows us to offer improved cycle times, reduced start-up times, and high availability.



## Customized Gasification License Solutions

GE provides long-term license agreements that include the gasification process design package; process and instrumentation design review with the EPC; start-up support; operator training; and ongoing technical support and certain equipment. We can tailor gasification and power block solutions to help customers meet the needs of challenging project requirements.

## Gasification Technology Solutions Offered

- High capacity quench gasifiers
- Screening and feasibility studies
- Technology license
- Process design package
- Process guarantee
- Technical services
- Comprehensive onsite training and support
- Hot gas path equipment
- Ongoing access to technology advances



For more information about putting GE's gasification technology to work for your plant, contact your GE representative or visit [www.ge-energy.com/gasification](http://www.ge-energy.com/gasification).