Pipeline

Maximize productivity in your operations
Maintaining top operational efficiency in your pipelines doesn’t just protect the value of your assets — it is directly linked to your profits. Baker Hughes, a GE company (BHGE), helps you maximize efficiency, productivity, and safety across your operation.

Building an efficient pipeline network is easier than you might think with our advanced turbo-compression and pumping systems. Compact, modular designs increase installation speed and long-term reliability, reduce maintenance requirements, and meet the most stringent emissions regulations. We also provide a comprehensive range of industry-leading maintenance, inspection, and integrity capabilities.

With BHGE, you can:

• Move oil and natural gas efficiently
• Combine powerful technology and innovative service
• Ensure the integrity of your pipeline
• Reduce your emissions with advanced solutions
Move oil and natural gas efficiently

You can increase throughput and maximize your saleable resources with BHGE technologies that use minimal gas. We can help you lower emissions and extend equipment life across a complete range of operating conditions and extreme environments. No matter where your energy source is located, or where it’s headed, we have the technologies and expertise to harness it, and help you deliver it to market in the smartest manner possible.

Reduce energy consumption and costs by 50%

A pipeline transporting refined petroleum products across long distances required pump stations every 50 miles. The operator asked BHGE to help reduce energy consumption of the pump stations and maintain production throughput rates to help lower their overall operating expenses. A FLO™ drag reducing agent (DRA) was injected into the pipeline to treat both gasoline and diesel streams, which reduced drag by more than 50% with no impact on flow rates. Reducing the drag lowered pump energy requirements by 50%, cutting monthly energy bills in half.

Profit from best-in-class total cost of ownership

The NovaLT™ family of gas turbines provides a variety of output and design options for power generation and mechanical drive applications. Designed to deliver up to 99% availability and 35,000-hour mean time between maintenance intervals, it uses standardized, modular components that can be swapped in or out of the package depending on your operating requirements. This improves manufacturing time and consistency — while simplifying future upgrades and advanced technology injections. In an ongoing endurance run at our Florence manufacturing facility, a NovaLT16 turbine recently passed 4,000 hours without incident.

Maintain safety at a lower cost

Based on standard-resolution in-line inspection (ILI) data, around 20% of excavated defects don’t yet require immediate repair. This is an expensive discovery to make in the ditch. Super High Resolution (SHR) and “+” ILI data from PII Pipeline Solutions can help you avoid unnecessary digs. Calculations for a 99-mile (160-km), 24-in. (610-mm) pipeline showed that a crack inspection program with our UltraScan™ CD+ or UltraScan™ Duo would save over $1.4 million USD, while a corrosion inspection program with our MagneScan™ SHR would save over $480,000 USD. Our tools and analysis capabilities improve your efficiency — without compromising safety.
Combine powerful technology and innovative service

Choose from our broad array of technologies, expertise, and global resources to provide design, installation, and service support. Or you can take advantage of the unique long-term performance guarantees and technology-upgrade opportunities possible through our Contractual Service Agreements (CSAs).

Pre-commission the world’s longest subsea pipeline

The Nord Stream subsea pipeline had to be pre-commissioned through a series of stringent qualifications — including flooding, cleaning, testing, dewatering, and drying services — before startup. BHGE completed full pre-commissioning in less than 150 days within budget and ahead of schedule. We attribute our success to early engineering and planning, experienced personnel, professional project management, innovative equipment and technologies, and a relentless focus on HSE.

Convert data into performance

Advanced prognostic and diagnostic solutions dramatically improve machine performance, enhance plant efficiency and availability, reduce maintenance costs, and minimize downtime. Drawing on operating data generated by BHGE’s advanced sensing systems, a dedicated team of diagnostic engineers evaluates actual and target statistics — and interrelationships between components — to continuously monitor performance and safety parameters in real time from our iCenters.
Ensure the integrity of your pipeline

As pipelines age and environmental regulations tighten, pipeline integrity technologies and services are crucial to protect the safety and productivity of your assets. We pioneered many of the industry’s benchmark solutions decades ago, and we continue to re-invent inspection, analysis, and integrity management capabilities with solutions like our **MagneScan** and **UltraScan** in-line inspection technologies.

**Invest in data, not digs**

As excavation costs continue to rise, you need pipeline inspection results you can trust to avoid unnecessary digs and ensure safe pipeline operations. The **VECTRA™ HD MFL enhanced in-line inspection service** has nearly twice the density of the triaxial sensors available in the industry, providing the most accurate view of complex anomalies. This data is then interpreted by certified analysts to help operators make critical integrity decisions with the least amount of disruption.

**Get accurate CP data from the most stable source**

Pipeline integrity depends on the quality of inspection data, which can be challenging to obtain with traditional survey methods. The **BHGE CPCM™ service** measures cathodic protection (CP) current from inside the pipeline to evaluate CP effectiveness and accurately locate and quantify all current sources and drains. It delivers accurate CT data from the most stable source — the pipe. This service eliminates gaps in CP inspection data, providing better detail of CP current flow and CP system anomalies that may have gone unnoticed with previous traditional inspections.

**Keep a severely corroded pipeline in production**

A leak occurred in a three-phase pipeline that typically transported 70,000 barrels of oil per day, 7,000 barrels of water per day, and 65 MM/scf gas between two platforms in the North Sea. An in-line inspection pinpointed severe corrosion in multiple locations, including 15 sites with remaining wall thickness down to 15%. Because it would take 12 months to construct a replacement pipeline, the operator challenged BHGE to find a treatment program that could maintain the line’s integrity during that period. The implementation of a **CRONOX™ corrosion inhibitor program** enabled the operator to maintain production for the year — sustaining $3.5 million USD in daily revenue.
Reduce your emissions with advanced solutions

We believe in the environmental benefits of stringent emissions standards, and we strive to design technologies that achieve those targets while simultaneously increasing machine efficiency and overall productivity of operations. Our software solutions provide data-driven insights that increase network-wide visibility. These solutions predict and accurately diagnose issues — including emissions levels — prompting a response before they can negatively impact your operation.

Get reliable, zero-emissions compression
Each unit in our Integrated Compressor Line (ICL) has a high-speed electric motor fully integrated with a centrifugal compressor in a single, sealed casing. It’s a compact, lightweight, yet powerful package that’s ideal for pipeline compression stations. ICL provides exceptional reliability and availability no matter where it’s installed — and it produces zero emissions.

Upgrade performance with powerful turbine control systems
Improve the efficiency and emissions control of your gas turbines using a wide range of hardware and software upgrade packages, including the Dry Low Emission combustion system for our LM2500. This combustion system allows a number of different burning configurations to match the fuel/air ratio that creates the lowest emissions level.

Tailor compression solutions to your operations
BHGE’s turnkey compression stations deliver the flow you need, regardless of the unique operating challenges you face. Our centrifugal compressors — driven by a wide range of compact and efficient gas turbines or electric motors — deliver high reliability and can be tailored to meet specific project requirements and diverse conditions with proven, standardized components. Our reciprocating compressors are designed for API 618 requirements, with features that minimize power loss, enhance reliability, simplify maintenance, and ensure long operating life.
Pipeline

**Pipeline commissioning and maintenance**
- Pipeline precommissioning
- Pipeline commissioning
- Pipeline inspection
- Pipeline maintenance

**Turbomachinery**
- Turbines
- Compressors

**Processing and control**
- Valves
- Actuators
- Pumps*
- Flow meters
- Control systems
- Fuel gas systems
- Turboexpander-compressors
- Turboexpander-generators

**Virtual pipeline**

**Comprehensive service solutions**
- Contractual service agreements (CSA)
- Condition monitoring and vibration monitoring
- Upgrades
- Spares, repairs, field service engineers (FSE)
- Advisory Services
- Customer training
- Process commissioning and maintenance
- Chemicals

*Combined Baker Hughes / GE Oil & Gas portfolio

For more information:
[bhge.com](http://bhge.com)