PSI Gas Management Suite

For a safe and reliable gas supply

Extend your network control system into an enterprise-level gas management system. Add powerful applications such as network simulation, forecasting, transportation management and gas quality tracking. Use valuable and accurate information for continuous operations.
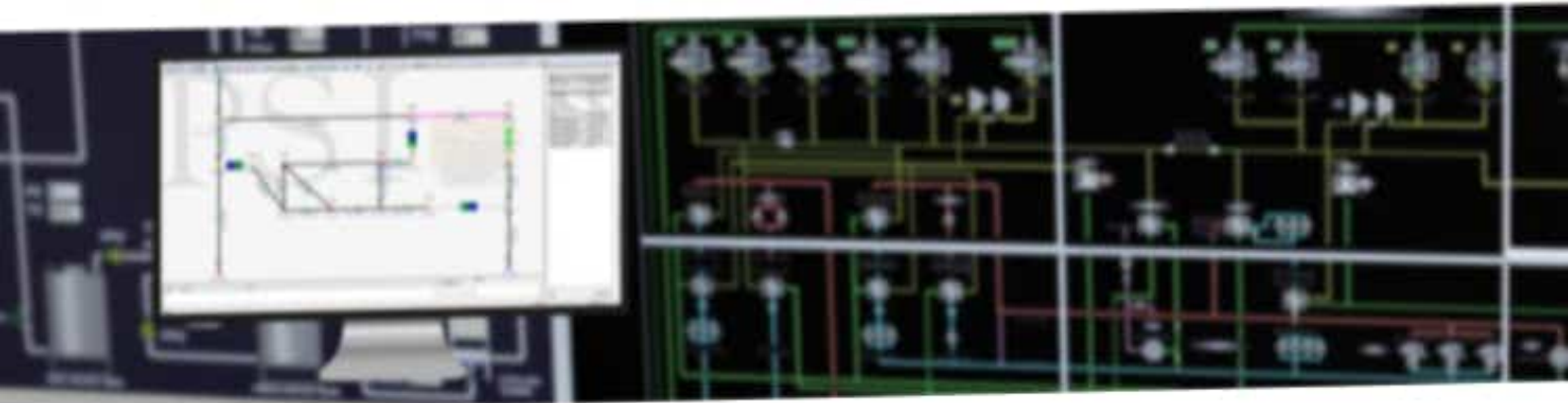
Gas Network Simulation

Energy Calculation

Commercial Dispatching

Storage Management

Contract Management

State of the art

Use the most advanced simulation technology to discover what really happens at each point inside your transportation or distribution gas network. Thousands of virtual sensors and virtual meters are automatically made available to provide highly accurate data. Quickly identify changing conditions and their root causes. Observe immediately all effects of operator actions. And, combine the simulation with other applications to improve gas transportation, gas quality tracking, leak detection, and more.

Real-Time

Estimate the current process state taking pressure, flow, gas composition as well as temperature into account. Simulation results are checked continuously. All information including alarms and warning messages is logged and displayed.

Look-Ahead

A preselected operation mode might become inappropriate. Quickly identify any negative drift towards undesirable conditions in advance. Detect the process element that is going to reach a certain

What-If

Determine in advance the consequences of operator-initiated actions. Based on real-time simulation, valve settings, modified set points and other information the What-If simulation calculates future process values. Multiple scenarios can be evaluated. Validate load in order to ensure safe supplies.

Planning

Analyze the impact of new delivery, transportation and storage contracts. Plan new network sections and stations, also for the feeding of biogas, hydrogen or synthetic methane. Verify operational impacts and determine capacity utilization under different supply conditions.

Sensitive. Reliable. Accurate. Robust.

Protect people and nature. Reduce damages and financial losses. Detect and locate pipeline leaks and ruptures quickly and accurately. Use a single method or combine multiple methods to a powerful system that works effectively under all operating conditions in different environments.

Detect leaks reliably and accurately under all operating conditions based on very accurate pipeline inventory and other simulation data.

Tracking with PSIganesi

Exactly calculated. Exactly balanced.

Determine precise calorific values at all exit points. Monitor gas qualities everywhere in your network. Reduce the cost for measuring calorific values or gas conditioning when you need to inject different gas qualities. Track the

Gas Quality Tracking

Track volume and location of different gas qualities from entry to exit points. Monitor interface mixing and adjust your schedules in accordance to changed conditions.

Pig Tracking

Track different types of smart pigs, scrapers and spheres. Get real-time updates on position, speed and arrival time. Optimize operations and avoid collisions at intermediate stations.

Determination of Arrival Times

Get accurate information on biogas feed-in and feed-out at all points in your network. Track every change in gas qualities and properties. Determine exact arrival times at exit points.

Prevent incidents before they occur

Measure continuously the efficiency of your network. Optimize energy consumption and find cost-effective pigging frequencies. Detect drift, anomalies and failures of your instrumentation as fast as possible. Maintain pipeline safety and extend the life time of your infrastructure.

Pipeline Efficiency

Obtain pipeline throughput at the lowest operating cost. Avoid flow blockage and corrosion growth. Get notified in advance to initiate pipeline cleaning. Find the optimal pigging frequency.

Instrumentation Analyzer

Improve maintenance and quickly detect failures. Compare the readings from field instrumentation with simulation data to detect drift and malfunction.

Transport Conditions

Reduce carbon dioxide emissions. Set optimal operating pressures to reduce control energy and power consumption. Identify undesirable operating

Natural Gas. SNG. Biogas. Gas mixtures.

Provide accurate calorific values and gas properties for billing. Use our software and avoid costs for measuring equipment or gas conditioning facilities.

Calorific Value Calculation

Calculate accurate calorific values. Avoid expensive measurements at exit points of your gas network.
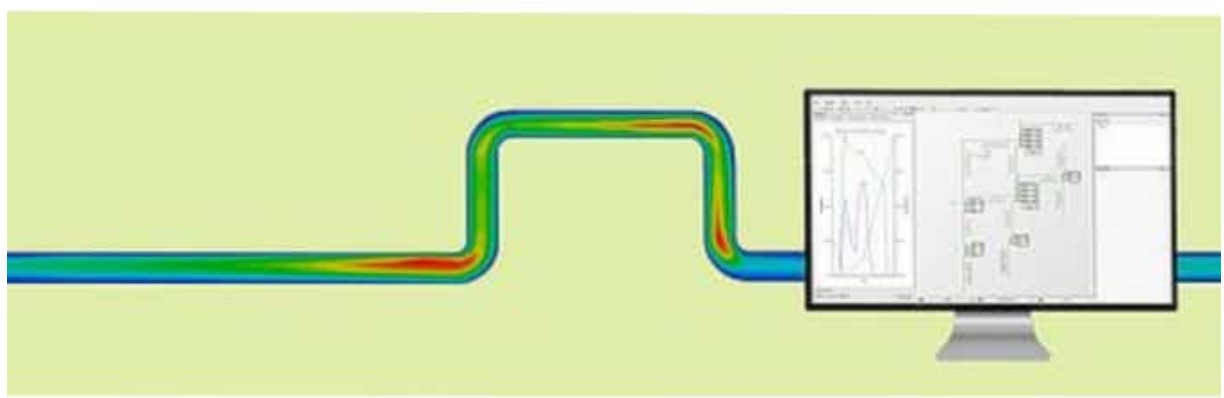
Without Conditioning

Inject natural gas, biogas, bio-methane or hydrogen into your network without expensive conditioning.

Official Approval

Values calculated by our software are approved and officially accepted by PTB, the National Metrology Institute.

Commercial Dispatching with PSItransport

Efficient gas transportation

Ensure that the agreed gas quantities are transported within agreed time periods in accordance to contractual conditions. Fulfil the European regulations. Execute your gas transportation in the most beneficial way.

Forecasting

Determine future sales.

Balancing

Balancing of different balance groups.

Market Communication

Processing of business messages for efficient transport operations.

Capacity Booking

Processing of capacity bookings.

Optimization

Optimal utilization of capacities.

Accounting

Allocation and energy calculation for billing.

Continuous gas supply

Balance demand fluctuations. Ensure a continuous gas supply when deliveries are subject to delays. Enable traders to optimize their gas supplies and trading portfolios.

Booking

Booking of storage products.

Inventory

Manage storage inventories.

Optimization

Optimal utilization of capacities and technical assets.

Data Storage and Reporting

Historical data management and reporting.

Accounting

Allocation and energy calculation for billing.

Market Communication

Processing of business messages.

Trading with PSItransact

Helping gas traders

Deliver gas to your customers reliably, optimize your position and meet all contractual obligations.

Accounting

Allocation & energy calculation billing.

Balancing

Balancing of your position and other portfolios.

Optimization

Optimal utilization of capacities and contracts.