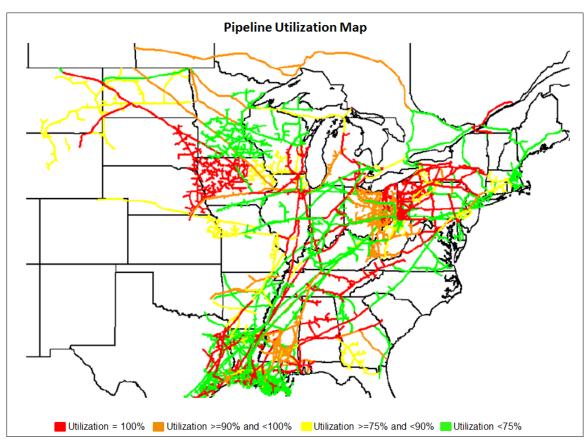
GPCM DailyTM Market Simulator Brief

GPCM Daily is a member of the family of GPCM[®] gas market simulation systems, the most widely used market simulation and predictive analytics tools for developing forecasts and scenarios for the North American gas market. GPCM Daily is used to evaluate the capability of the North American natural gas delivery system to meet peak day loads under a variety of conditions. Including very hot or very cold weather conditions, scheduled events such as maintenance or LNG tanker arrivals or departures, new pipeline or pipeline expansion startups, and infrastructure incidents such as compressor station freezes or breakdowns, ransom-ware attacks, and sabotage. The system predicts the directionality and approximate magnitude of price impacts of such conditions and events.



This map is a forward-looking snapshot of utilization of the pipeline system at a specific point in time. Viewing reports on which this map was based will give insight to power system and pipeline operators to identify requirements for additional pipeline capacity. Figure courtesy of Levitan & Associates, Inc.

GPCM Daily includes RBAC's base case database, which is updated four times per year. This database provides the granularity and transparency licensees need to produce detailed and useful peak-day assessments, while the software component of GPCM Daily provides the tools users need for flexible scenario design. Custom scenarios can span multiple days, weeks, or even months at the user's discretion.

GPCM Daily users can access and view an extensive set of insightful reports, which can also be exported to MS Excel, PowerBI, and other formats for further use in analysis and reporting.

Sophisticated and powerful, GPCM Daily is a modeling system that analysts can use to increase their understanding of the changing dynamics of the natural gas market to the benefit of their own organization and its customers. RBAC support staff will work directly with your team to ensure a smooth integration of GPCM Daily into your organization's analytical ecosystem. Upon implementation, your organization can be up and running within a few days.

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GPCM Daily Brief

What type of questions can you answer using GPCM Daily?

- > Given a certain weather condition will the market be able to meet expected peak day load?
- > Where are the potential choke points in the system that could cut off supply?
- > How will new infrastructure limitations affect the supply/demand imbalance and prices?
- > Will there be enough gas in storage to meet expected demand?
- > Should we acquire additional capacity in gas pipeline or storage infrastructure?

Using GPCM Daily analysts can help you quantify the effects of such conditions and events including identifying constraints that could result in price spiking and/or supply challenges.

Power system operators and strategic planners have successfully used these tools to pinpoint potential outages and opportunities that arise where infrastructure expansions are warranted.

Scenario runs consist of forecasts of the following items:

- Production and spot market prices by region and play
- Pipeline receipts from producers by zone
- Pipeline flows and utilization
- Transfers between pipelines at interconnects
- Injections, withdrawals, and working gas in storage by field.
- Deliveries by pipelines to LDC's, utilities, and industrial customers
- Gas supply available to each customer in each region
- Market clearing prices in each supply and demand region.
- Receipt and delivery price in each pipeline zone
- Capacity release market prices

GPCM Daily is used to help analysts better understand the potential impact that constraints in the natural gas grid can have on the electric power market.

It can be integrated with the industry standard monthly GPCM[®] Market Simulator for North American Gas and LNG[™] and power market models such as EnCompass, Plexos, Aurora, Promod, and MAPS using RBAC's GPCM-PMI[™] (Power Model Interface).

Using RBAC's market simulators and interfaces, your analysts will be enabled to expand their knowledge and understanding of the market and provide even greater value to the investment decision-makers in your organization.

For additional information about GPCM Daily contact James Brooks directly at (281) 506-0588 ext. 126 and visit <u>www.rbac.com</u>.