



Constellation®

# Effectively Managing **Natural Gas** Operational Flow Orders



## Understanding How Reliability is Built Into the Natural Gas System

The natural gas system is built to be reliable due to several key operating features. First, the natural gas network is designed with very few points of failure, so a problem in one area is unlikely to lead to a system-wide failure. Gas pipelines are located predominately underground, which protects them from weather and other outside risks. In addition, gas is sourced from diverse geographic regions, so it moves by pressure and at a speed that allows for flow control. Another critical reliability factor is that gas can be stored, providing flexibility to meet demand fluctuations and maintain system balance. Given these characteristics, the natural gas network typically operates smoothly, and disruptions are rare and usually short-lived. If there is an interruption in the network, the impact can often be avoided or offset.

Even with these safeguards, unexpected events like extreme weather, natural disasters or other unforeseen disruptions can still impact demand and pipeline system needs. In those situations, pipelines and utilities have tools to manage the operational integrity of their systems, including issuing instructions, often referred to as operational flow orders (OFOs), to their shippers.



These orders are based on the structure and rules of the natural gas system, which is complex – operating through a sophisticated network that moves fuel from production wells to gathering lines, processing plants, interstate or intrastate pipelines, storage, local gas distribution utilities and finally to the end user meter. Each aspect of the natural gas system is owned and operated by a variety of companies. Some of these entities may be regulated by the Federal Energy Regulatory Commission (FERC), the Pipeline and Hazardous Materials Safety Administration (PHMSA) and applicable state Public Utility Commissions. Under applicable statutes, these regulators set rules that regulated entities must follow, and they approve the tariff terms and service schedules that pipeline and utility companies file for the services they provide. Regulators also monitor and provide oversight, audit compliance, enforce compliance and provide procedures for complaints. This federal and state regulatory structure allows for the delivery of natural gas throughout the United States in a manner that is safe, reliable and provided to customers at fair and reasonable prices.

By becoming familiar with OFOs and the impact of utility disruptions, as well as choosing a supplier and purchasing strategy that matches their needs, businesses can better manage risk and maintain operational continuity.



## Navigating Operational Flow Orders

### What are Operational Flow Orders?

Operational flow orders (OFOs) are tariff-based mechanisms used by pipelines, storage operators and local utilities to issue directives to their customers when the system needs to be balanced. A tariff is simply the official schedule of rates, terms and conditions that governs how natural gas is transported and delivered. These rules, approved by regulators, form the basis for how OFOs are issued and enforced.

If an OFO is issued, customers must take specified actions to maintain operational integrity. In general, OFOs may restrict service or require shippers to take specific actions. Situations leading to OFOs are most common in the winter, but OFOs can also occur in summer months, especially during extreme weather, infrastructure constraints or when demand unexpectedly surges or drops.

Businesses may be familiar with OFOs and curtailments, both are tariff-based tools used by pipelines to protect system reliability. While both curtailments and OFOs are designed to protect system integrity, they differ in scope and impact. An OFO typically requires a shipper to manage deliveries or usage within a specified percentage range to rebalance flow, whereas a curtailment requires reducing or stopping gas usage during severe shortages.

Understanding the difference — and that they are sometimes used interchangeably in certain markets or applied concurrently — helps businesses prepare for both scenarios by developing contingency plans and understanding the actions required to comply with each.

When an OFO is declared, pipeline and utility customers are required to follow the directives to help stabilize the system. Failure to comply can result in financial penalties under the pipeline or utility tariff.

### What are the Levels of OFOs?

Many utilities classify OFOs into levels to indicate severity and recognizing these levels and the risks of noncompliance helps businesses prioritize responses and avoid costly charges when alerts escalate.



#### Advisory

Provides early notice of potential imbalance. Action is minimal, but conditions should be monitored closely.



#### Warning

Signals worsening conditions. Businesses should prepare for compliance measures and possible restrictions.



#### Critical

Requires immediate action. Noncompliance can result in strict penalties and urgent coordination with suppliers.

Recognizing these levels and the risks of noncompliance helps businesses prioritize responses and avoid costly charges when alerts escalate.

## When do OFOs Occur?

Each gas pipeline and utility has limits on the volume that can be transported to a given delivery meter. For utilities, this maximum volume is called the peak day volume, assuming all end-user meters are pulling gas at full capacity. Some utilities also include tariff provisions for inventory levels to balance peak demand and flow limits through the pipeline meter.

At times, end users consume less gas than expected, flooding the system with excess supply. In these cases, pipelines or utilities may require users to either use more gas or reduce deliveries. Price volatility adds another layer of risk, potentially making usage or delivery adjustments costly. Sometimes, OFOs may be issued with little notice — or even retroactively — which can make compliance challenging for businesses. For example, a utility might send notification that an OFO began six hours earlier, leaving limited time to respond and increasing the risk of penalties.

Customers that have an alternative fuel source may be able to maintain operations as normal, without utility penalties by switching fuels during the period that an OFO is in place. However, depending on the cost of the alternate fuel, this option can impact the energy budget and operations during switching. For customers without alternative fuel options, compliance may require reduced usage, which could lead to operational impacts.

## Managing OFOs in Real Time

Effective management of OFOs depends on rapid, coordinated communication between suppliers and customers. Suppliers relay OFO requirements and work with customers to adjust deliveries in real time, using a combination of direct outreach and forecasting tools. Maintaining up-to-date contact lists and clear escalation procedures ensures that critical directives are received and acted upon promptly, minimizing the risk of penalties and operational disruptions.

The goal is to adhere to the terms of the OFO and manage the financial impacts as much as possible. Understanding real-time market pricing, anticipating potential penalties or determining the most cost-effective approach helps ensure compliance while reducing exposure to market volatility.



## Who is Affected?

OFOs are issued by pipelines directly to pipeline shippers with service agreements, and by utilities directly to suppliers and customers on the utility system. These orders can disrupt normal business operations for many gas market participants, including customers of suppliers who hold shipping agreements.

## Customer Impacts

When an OFO is issued, customers may be required – either by the supplier under contract terms or by the utility – to take immediate steps. These directives can interrupt operations, especially for facilities that rely heavily on natural gas for production or heating. As a result, customers may face several operational and financial impacts, including:

» **Usage and delivery restrictions:**

Customers may be asked to reduce or increase consumption or delivery with short notice, which can affect production schedules or service delivery.

» **Fuel switching:**

Customers with alternate fuel access (such as fuel oil or propane) may choose to switch during an OFO to avoid penalties and maintain operations, though this option can be costly or logistically challenging depending on fuel availability and price.

» **Financial costs:**

Customers may have to buy or sell gas when the market is volatile. In addition, if usage or deliveries don't mirror the limits set during an OFO, customers may face charges based on utility or pipeline tariffs, which can be substantial.

» **Operational disruptions:**

Sudden changes in energy availability can impact a company's typical usage needs and schedule, leading to losses in productivity.

## Importance of Accurate Usage Forecast

Having a clear grasp of a customer's gas usage plan over the OFO period is essential to avoid purchasing or selling gas when the market is most volatile. It is also necessary to avoid penalties for not complying with the pipeline or utility's OFO requirements. When customers deviate from their expected usage patterns, it can significantly impact costs.

Effective forecasting combines historical usage data, weather models, and real-time operational insights. By communicating planned workload changes early and often, businesses enable suppliers to adjust delivery strategies, reducing risk and ensuring compliance with OFO requirements.

Natural gas usage behavior can introduce significant unpredictability into the forecasting process. The more accurate the customer's usage forecast, the more efficiently suppliers can plan purchases and mitigate risk. When production schedules shift unexpectedly, forecasting becomes even more challenging because these changes are not tied to the customer's predictable usage history. Clear communication of planned workloads well in advance gives suppliers the ability to adjust delivery plans and purchasing strategies, reducing risk and avoiding penalties.

Suppliers can aggregate all available data, adjust forecasts and make purchasing decisions with the best tools and intentions, only for real-world scenarios like these to cause customers' usage to diverge from initial plans:

#### **Maintenance changes**

Unforeseen adjustments or delayed scheduled maintenance results in higher- or lower-than expected usage.

#### **Production shifts**

Increasing output due to last-minute operational changes alters demand forecasts and decreasing usage due to holiday shutdowns or maintenance also impacts the forecast.

#### **Weather-driven ramp-ups**

Adjusting operations in response to seasonal weather changes impacts gas consumption.

Proactive planning with accurate forecasting is the single biggest factor in managing a utility's requirements, especially during times when OFO compliance is required. Timing is also critical, as suppliers typically finalize their monthly forecast and make major purchases before the next month's gas flow to customers. In addition, natural gas is often traded on a day-ahead basis, meaning suppliers and customers need to communicate usage changes quickly to ensure accurate nominations and avoid penalties.

Throughout the month, adjustments are made based on actual usage and market conditions to stay within the utility's required delivery tolerance and avoid daily or monthly penalties or cashouts. During an OFO, delivery tolerances can shift rapidly, requiring suppliers to act fast to make real-time adjustments. Customer responsiveness to usage needs becomes essential.

### **Interpreting Billing and Invoices After the OFO**

Natural gas supplier invoices can be complex, reflecting a mix of market conditions, customer usage behavior and pricing strategies. When prices spike or penalties appear, it is often a combination of multiple factors that influence the final bill in different ways. The following drivers help explain why charges fluctuate from month to month:

- » **Market conditions:** Experiencing price spikes, supply constraints or OFOs can increase overall costs.
- » **Customer behavior:** Changing usage patterns, shifting production schedules or submitting inaccurate forecasts can affect billing outcomes.
- » **Penalties and cashouts:** Incurring charges when deliveries don't match utility tariff requirements.

Invoices may include fixed and variable charges, along with line items for monthly usage and any additional adjustments. If any OFO related costs appear on an invoice, it can be confusing, especially for those not directly involved in day-to-day energy operations or OFO management. The right supplier can provide clear explanations and ongoing support to help bridge the gap and ensure customers understand what drives their costs.

## Supplier Challenges

When OFOs are issued, suppliers face significant pressure to stay compliant while maintaining deliveries, adapting quickly to changing conditions and managing risk. These circumstances can challenge even the most resilient and prepared teams with issues such as:

Recognizing the varied impacts for both customers and suppliers helps clarify why OFO compliance demands coordinated, rapid action — and sets the stage for understanding how these events are managed in real time.

## Choosing the Right Natural Gas Supplier

Choosing the right gas supplier is more than a transactional decision — it's a critical factor in managing risk and reliability. When OFOs occur or prices swing, businesses can rely on their supplier's experience, flexibility and proactive support to navigate the complexities of the natural gas market. An experienced supplier can help businesses anticipate disruptions, respond to emergencies and optimize their energy spend.

When evaluating suppliers, it's important to look beyond price and consider the full scope of support and services offered. Key supplier traits to consider include:



### **Industry reputation and experience:**

Demonstrating proven performance during volatile periods.



### **Customizable plan options:**

Offering tailored strategies that align with operational goals.



### **Transparent pricing:**

Providing clear billing structures that eliminate surprises.



### **Reliable customer service:**

Ensuring responsive teams that understand business needs and goals.



### **Decision-making tools:**

Delivering platforms and insights that empower smarter choices.



Operating in the natural gas market during utility disruptions requires more than just awareness — it demands a strategy and knowledge of the various pipelines and utilities served, the flexibility to pivot when circumstances change and the ability to meet customer needs using available alternatives and tools. Businesses need suppliers who understand the natural gas market system and its requirements to deliver solutions that meet business needs and help companies through varied and challenging conditions.

Constellation brings over 20 years of experience, flexible purchasing options and proactive support to help businesses manage risk, control costs and plan for the future. Whether you are responding to an OFO or building a long-term energy strategy, our team is here to help you stay ahead.

Connect with Constellation's energy representatives to explore customized natural gas solutions that support your operational goals and sustainability initiatives. Visit [constellation.com/naturalgas](https://www.constellation.com/naturalgas) to learn more.

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