



Columbia Gas of Pennsylvania, Inc.

2016/2017 Winter Reliability Overview

Winter Readiness

Frost Patrols

Leak surveys based on frost potential will continue on our remaining and declining population of cast iron pipe until this pipe is entirely replaced. Once frost has penetrated the ground in Columbia's service territory, Columbia will conduct weekly surveys of our cast iron systems until the frost has receded.

Winter Operations Preparedness

Columbia's 2016-2017 Winter Operations Plan includes an assessment of all distribution facilities to ensure that adequate capacity and pressures are available to serve projected peak day demand. Considered in the assessment are facility performance under last year's peak demand, system improvements, upgrades, and reconfigurations over the past year along with changes in customer demand. This assessment determines the appropriate monitoring activities to be performed throughout the winter season.

Winter Operations Monitoring

Winter Operations Monitoring involves the recording of distribution system pressures at particular intervals of winter ambient temperatures. Collecting and compiling winter operations information enables Technical Operations and M&R personnel to proactively address operational issues and provides a platform for system planning and modeling.

Emergency Dispatch

Columbia operates a fully-automated call-out process for emergency response with Service personnel on an Emergency Response Rotation. This means that Columbia's emergency response personnel are available on rotation 24 hours a day, 7 days a week, 365 days a year to respond to emergencies on its distribution system.

Employee Safety/Readiness

Employee Safety

Columbia is committed to maintaining a strong culture of safety for employees, customers and the communities we work in. Messages on maintaining safe work habits are shared on a weekly basis with focus on hazards experienced during winter operations. Work site safety audits are conducted on a regular basis and will continue during the heating season.

Staffing

Columbia's Operations Planning team, in conjunction with local operating center leadership, evaluate projected workloads by activity and develop an annual staffing plan to ensure preparedness. These plans are used to coordinate the hiring and training of new employees throughout the year. The plans also identify shift placement to best match workload demands and enhance response to emergency situations.

Personnel Preparedness

In addition to ongoing training and qualification programs, the development of the Winter Operations Plan provides an opportunity for Field Operations personnel to better understand how their systems operate. This process includes a review of system performance during the previous year's heating season, changes made to the system and key monitoring points. Collecting and compiling winter operations information enables Technical Operations and M&R personnel to proactively address operational issues and provides a platform for system planning and modeling.

Communications Outreach

Columbia Gas's Call Center has up-to-date information to respond to customer inquiries in the event of any emergency or outage. As service interruptions can vary in nature and range—and therefore require different levels of customer outreach—Columbia Gas will take the following additional steps to communicate with impacted customers as appropriate:

- a. Web Page Customer Alert – “Customer Alert” posted on Columbia Gas web site. This includes both a “What’s New” box on the home page and an “Outage/Incident Center” page.
 - Post regular updates on Columbia Gas web site.
 - Push major update information out to news media.
 - Provide updates to assignment desks or assigned reporters directly.
 - Be aware of news cycle times in order to prepare updated information.
- b. Local Public Official Notification – Notify appropriate local public officials (i.e. legislators, town managers, public/safety works directors, emergency response officials, etc.) as well as the PUC to ensure all critical external stakeholders are identified and response is coordinated.

- c. News Release – Issue a targeted news release with incident details. For example, an outage release would include the location of outage, number of customers impacted, estimated date and time for service restoration, and the location of potential warming centers.
- d. Social Media – Post time sensitive outage/emergency updates on Columbia Gas’s Twitter and Facebook pages to promote the location of warming center(s).
- e. Customer Emails – When appropriate, send zip-code targeted emails to customers with outage/emergency information including the location of warming center(s).
- f. Warming Center Coordination – If needed, partner with local Volunteer Fire Departments, Emergency Management organizations, and Red Cross chapters to establish a warming center for impacted customers while their service is interrupted. If shelters are open, utilize news media, Columbia Gas web site, social media channels, and the customer email system to disseminate information (location, hours, and resources available).

Gas Supply and Planning

To ensure that it can meet its firm service obligations, Columbia has longstanding daily and winter season “Design Criteria” which serve as the basis for the design and management of its supply/capacity portfolio. Columbia’s Design Day Temperature has a 6.67% probability of occurrence and Columbia’s Design Winter Season is based on colder temperatures having a 10% probability. More specifically, there is a 1 in 15 chance that actual temperatures could exceed Columbia’s Design Day Temperature of -5 degrees, and a 1 in 10 chance that the weather could exceed Columbia’s Design Winter Season criteria. These criteria serve as the basis for the design of Columbia’s supply and capacity portfolio and Columbia’s management of its assets to ensure its ability to reliably fulfill its firm service obligations.

Columbia is well positioned to meet its firm service obligations for the 2016-17 Winter Season. Columbia secures its winter supplies primarily in two ways. First, Columbia contracts for firm supplies equal to its expected purchase needs for the three coldest months of December through February, prior to the start of the winter season. Secondly, Columbia fills its firm pipeline storage services to a level of approximately 96 percent by November 1st. Further, Columbia manages its assets daily in a manner that ensures reliable service in the short term through the use of a 5-day weather forecast from a commercial weather service. In the longer term Columbia protects its firm seasonal service obligations based on managing its assets to meet the “Design Criteria” throughout the winter period. For the 2016-17 Winter Season, assuming normal weather, Columbia expects to serve Firm Sales Markets with approximately a



50/50 split between Firm Purchases and Storage Withdrawals. On a Design Day, at an average daily temperature of -5 degrees, Storage Withdrawals will make up an even greater portion of Columbia's service to Firm Sales Markets, approaching 75%. Columbia would not expect curtailment of any firm requirements.

Natural Gas Demand from Electric Generators

In recognition of the planning criteria and processes described in response to Request No. 4 (Gas Supply and Planning), Columbia is confident about the adequacy of supply and the availability of firm transportation service to meet its firm service obligations for the upcoming winter. As has been noted, Columbia's supply/capacity portfolio, and associated management throughout the winter season are predicated on the occurrence of extreme cold daily and seasonal temperatures having rather limited probabilities of occurrence with the foremost objective being the maintenance of safe, reliable service. For these reasons, the prospect of increased demand for natural gas or increased used of firm transportation service for the purpose of electric generation present Columbia with no undue cause for concern. In fact, Columbia fully supports the concept of firm transportation service capacity being used for such purpose. Because of Columbia's longstanding policies and practices regarding supply and capacity, along with their actual management, no new plans or protocols are in need of being developed or instituted as a result of the prospective increased use of natural gas for electric generation.