Pacific Gas and Electric Company

Operational Flow Order Key Indicator Legend

OFO Probability

This is quick reference dial which indicates the likelihood of an Operational Flow Order (OFO), either for low inventory or high inventory. The potential for an OFO always exists because large customer imbalances can overwhelm the capacity of the system. There are also times when an OFO appears likely but customer imbalances change, eliminating the need to call an OFO.

Balancing Gas Dashboard

Forecast Total Customer Imbalance

The Forecast Total Customer Imbalance is the sum of the daily imbalances for core and noncore customers including Electric Generation. Positive Total Customer Imbalances mean that customers are over-delivering and packing the system and negative imbalances indicate that customers are under-delivering and drafting the system.

Forecast Imbalance Gas in Storage

PG&E has 4,040 MMcf of storage inventory to use for pipeline balancing which helps reduce the risk of an OFO. This inventory can be injected or withdrawn at a rate of 75 MMcf/day to help offset customer imbalances. Pipeline balancing is no longer available when the Imbalance Gas in Storage exceeds 4,040 MMcf or when the Imbalance Gas in Storage is zero. If the Forecast Imbalance Gas in Storage approaches 4,040 MMcf or zero (0) MMcf, the ability of the system to absorb customer imbalances is reduced and likelihood of an OFO increases.

Forecast Balancing Injection

PG&E has 75 MMcf/day of injection capacity it may use to help balance the pipeline system. By injecting balancing gas into storage, PG&E can reduce the amount of gas on the pipeline system and help avoid high inventory OFOs. This bar graph indicates how much pipeline balancing injection is forecast to be used on a given day. If the allocated Imbalance Gas in Storage inventory (4,040 MMcf) is full then balancing injection will not be available. If PG&E is injecting at a maximum rate of 75 MMcf/day and the pipeline inventory continues to trend toward the upper pipeline inventory limit, the likelihood of a high inventory OFO increases.

Forecast Balancing Withdrawal

PG&E has 75 MMcf/day of withdrawal capacity it may use to help balance the pipeline system. By withdrawing balancing gas onto the pipeline system, PG&E can increase the inventory and reduce occurrences of low inventory OFOs. This bar graph indicates how much pipeline balancing withdrawal is forecast to be used on a given day. If the allocated Imbalance Gas in Storage inventory is zero then balancing withdrawal will not be available. If PG&E is withdrawing at a maximum rate of 75 MMcf/day and the pipeline inventory continues to trend toward the lower pipeline inventory limit, the likelihood of a low inventory OFO increases.

Ending Inventory History and Forecast

This graph shows the pipeline inventory history for a period of ten days plus four days of forecast. As the pipeline inventory approaches the upper or lower pipeline inventory limit and the available offsetting pipeline balancing injection or withdrawal is being fully used, the likelihood of an OFO increases. Balancing injection and withdrawal are not available when the Imbalance Gas in Storage inventory limit is reached.

PG&E's Gas Control attempts to provide as much imbalance capacity as possible by managing the inventory with balancing injection or withdrawal. There are times when the inventory is near the limit but the potential for an OFO is moderate. For example, the inventory may be near the lower limit on a Thursday or Friday and balancing withdrawal is available but is not being used. This usually means that the typical weekend over-delivery is anticipated and the inventory is positioned to accept moderate over-deliveries. However if the inventory is near the lower limit and all the available balancing withdrawal is being utilized, there is increased potential for a low inventory OFO.

System Under-Delivery Capacity

When pipeline inventory is high, there is more room on the system for customers to under-deliver and allow the pipeline to remain within safe operating limits. This graph should be used in conjunction with the pipeline system inventory for a comprehensive view.

- Tall graph bars (approaching 800 MMcf) indicate there is a large amount of capacity for under-delivery because the pipeline inventory position is trending towards the upper pipeline operating limit.

- Short graph bars (approaching zero) indicate there is little capacity for under-delivery because the pipeline inventory position is trending towards the lower pipeline operating limit.

System Over-Delivery Capacity

When pipeline inventory is low, there is more room on the system for customers to over-deliver and allow the pipeline to remain within safe operating limits. This graph should be used in conjunction with the pipeline system inventory for a comprehensive view.

- Tall graph bars (approaching 800MMcf) indicate there is a large amount of capacity for over-delivery because the pipeline inventory position is trending towards the lower pipeline operating limit.

- Short graph bars (approaching zero) indicate there is little capacity for over-delivery because the pipeline inventory position is trending towards the upper pipeline operating limit.

Customer Imbalance and Inventory Change

Customer imbalances drive the pipeline inventory position. This chart shows both the customer imbalance and the inventory change. Because PG&E's Gas Control uses pipeline balancing injection and withdrawal to manage pipeline inventory, the inventory changes do not match the customer imbalances.

Customer Cumulative Imbalance

The Customer Cumulative Imbalance graph shows the balancing trend for the most recent ten days and a forecast for the next four days. This graph provides insight into customer imbalance trends and is an aid in forecasting future trends. Typically the accumulated imbalance will increase during the weekend and then decrease over the following weekdays. OFOs are necessary when the accumulated imbalances exceed the imbalance capacity of the pipeline.