Gas Operations – Winter Storm Elliott Response Summary
December 22 – 25, 2022

Gas Sendout Forecast Information:

Date	Day	Avg Temp Forecast	Sendout Forecast (Mcf)	Planned Storage Withdrawals (Mcf)	Actual Avg Temp	Actual Sendout (Mcf)	Actual Storage Withdrawals (Mcf)
22-Dec	Thurs	24	342,000	115,000	20.8	335,795	98,852
23-Dec	Fri	7	469,000	118,000	3.4	510,726	216,232
24-Dec	Sat	15	408,000	179,000	15.1	422,548	178,340
25-Dec	Sun	19	375,000	122,000	19.1	371,739	133,332

1. The 510,726 sendout on 12-23 exceeded forecast by just under 9%.
    a. 11th highest on record for LG&E
    b. 2nd highest for December on record (record was 522,590 on 12/22/1989)
    c. Highest since the all-time peak of 557,465 on 1/6/2014

Gas Operations Information:

- There were no weather-related gas outages during the event.
- Staffing:
    - Gas Control and Storage (GC&S) had over 50 employees working during the 12/22 – 12/25 time period
        - Magnolia Station added staff for 24x7 operation
        - Muldraugh Station added staff to support 24x7 operation
        - Gas Control added additional on-call staff to support 24x7 operation
    - Gas Operations and Construction had additional personnel on staff and on-call though customer trouble calls were typical for a winter day.
- GC&S experienced various issues with equipment, largely related to the cold temperatures, that were addressed quickly by employees:
    - Magnolia Compressor Station:
        - Booster compressor starting issues
        - Upper and Deep dehydrators lost power
        - Center dehydrator lost power due to electrical power outage and failure of emergency back-up generator to immediately start
        - Center station piping from BTEX flare to tank froze off and had to be heated
        - Diesel fuel was very difficult to pump from tank to equipment
    - Muldraugh Compressor Station:
        - Power blip Friday morning led to equipment shutdowns and manual restarts for amine purification plant, dehydration plant, odorant system and misc. equipment
        - Minor gas leak in compressor building picked up by the #2 gas detector caused delay starting compressors
        - Various valve issues due to cold
        - Temporary delay in starting yard coolers due to cold.
    - Gas Control:
        - Various regulator facility manual pressure set point adjustments associated with alarm indications
        - Manual pressure control set point monitoring at LaGrange city gate station
        - Penile and Crestwood city gate stations had regulator heater failures
        - Monroe city gate station emergency back-up generator failed to start on loss of primary power to station

Business Use

Gas Supply Information:

- With the exception of some small supply cuts, LG&E's suppliers performed well throughout the storm.
- Texas Gas gave us approval to over-pull from our Texas Gas Rate NNS storage service if needed. Rate NNS service was also used to inject gas as needed to support additional withdrawals from LG&E's on-system storage.
- Some pool managers serving large end-use customers underdelivered to LG&E's system during the storm and incurred Operational Flow Order (OFO) penalty charges.