



Pennsylvania Public Utility Commission Balancing in Natural Gas Markets

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Imbalance Approaches

- Parent Relationship: NGDC performs many balancing functions – retains capacity
- Partner Relationship: NGS performs many balancing functions – assigned capacity
- Hybrid Relationships: NGDC and NGS share in balancing, scheduling and system capacity
- SEARCH – NGSs expressed preference for stronger partnership relationship – want capacity.



SEARCH: Stakeholders Exploring Avenues for Removing Competition Hurdles

Hourly Imbalance Provisions

- General requirement for even hourly deliveries
- Hourly takes only firm for 1/24th of Maximum Daily Quantity (MDQ)
- NGDC can, at its option, provide non-uniform hourly takes on best efforts basis
- SEARCH – Would like NGDCs to adopt NAESB nomination standards – 4 per day.



NAESB: North American Energy Standards Board

Hourly Imbalance Provisions – NAESB Nomination Standards

- Timely Cycle: due 12:30 p.m. prior to day of gas flow
- Evening Cycle: due 7:00 pm prior to day of gas flow
- Intraday 1: due 11:00 am of day of gas flow
- Intraday 2: due 6:00 pm of day of gas flow



Daily Imbalance Provisions

- Roll imbalances to next day – example – Equitable – Daily Delivery Service (DDS) customers
- Cash In (excess supply) or Cash Out (excess takes)
- Imbalance trading between supplier pools
- Penalties and charges for imbalances
- Daily Scheduling Requirements
- Operational Flow Orders (OFOs)
- Curtailment – supply shortages
- SEARCH – NGSs expressed preference for Rolling of imbalances



Monthly Imbalance Provisions

- Roll imbalances to next month – example – Equitable – GDS customers
- Cash In (excess supply) or Cash Out (excess takes)
- Imbalance trading between supply pools
- Penalties and charges for imbalances
- SEARCH – NGSs expressed preference for Rolling of imbalances, but oppose long term annual settlements



Imbalance Provisions – Example: Equitable FDS/FPS

- Daily Cash In (excess supply) at 85% of daily index price up to 3.5%. Over 3.5%, supplier charged \$0.25/Mcf plus paid lowest price gas for NGDC supply.
- Daily Cash out (excess takes) at 125% of Daily Index Price up to 3.5%; Over 3.5%, supplier charged \$0.25/Mcf penalty plus pays 125% of highest priced gas for NGDC supply, including upstream transportation costs to city-gate.
- Imbalance trading permitted between supply pools
- Operational Flow Orders (OFOs) - \$10/Mcf, plus any costs incurred, plus cash-out at 150% highest priced paid at city-gate.
- Curtailment – monthly penalties of \$10/Mcf-\$50/Mcf, daily penalties of \$10/Mcf-\$25/Mcf – varies by season and imbalance level.
- SEARCH – NGSs expressed preference for rolling of imbalances and higher daily imbalance tolerances. General advocacy for cost based charges and penalties during non-OFO situations.



Imbalance Provisions – Responsibility for Balancing

Parent Relationship

1. NGDC retains balancing assets
2. NGDC charges transportation customers for retention of balancing assets
3. Less volatility in NGS scheduled volumes

Partnership Relationship

1. NGSs held to higher standards regarding required seasonal gas storage levels
2. NGSs assigned transportation and storage assets for firm customer loads. Coordination of capacity acquisition.
3. Higher scheduled volume volatility
4. NGDCs provide forecasts for NGS scheduling requirements
5. Higher NGS standards regarding operational and financial capability and high level of NGS/NGDC cooperation



Imbalance Coordination – Storage levels

Example: NFGDC – SATC- Minimum storage fill
Requirements

May 31	29%
June 30	43%
July 31	57%
August 31	72%
September 30	86%
October 31	98%
November 30	92%
December 31	80%
January 31	50%
February 28	22%
March 31	17%



SATC – National Fuel Gas Distribution Company’s Small Aggregation Transportation
Customer Service

References

❑ Pennsylvania NGDC Tariffs:

http://www.puc.state.pa.us/naturalgas/naturalgas_tariffs_list.aspx

❑ Sample Interstate Pipeline Tariff - Transco:

<http://www.1line.williams.com/Files/Transco/TranscoInfoPostingFrameset.html>

