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LEVITAN & ASSOCIATES, INC.
MARKET DESIGN, ECONOMICS AND POWER SYSTEMS

October 22, 2019

VIA ELECTRONIC MAIL

Secretary Aida Camacho-Welch
New Jersey Board of Public Utilities
44 South Clinton Avenue, 3rd Floor Suite 314
Post Office Box 350
Trenton, NJ 08625-0350

RE: IN THE MATTER OF THE EXPLORATION OF GAS CAPACITY AND RELATED ISSUES
DOCKET NO. GO19070846

Dear Secretary Camacho-Welch:

On behalf of Levitan & Associates, Inc. (LAI) and New Jersey Natural Gas (NJNG) please accept these comments in response to the New Jersey Board of Public Utilities' ("Board's" or "BPU's" solicitation of comments in response to "The Matter of the Exploration of Gas Capacity and Related Issues." I'd like to thank the Board for the opportunity to comment on issues related to gas pipeline capacity in New Jersey. Specifically, I'll be discussing the first two parts of question #3 from the public notice.

Does sufficient pipeline capacity exist within the New Jersey market to satisfy the total customers' requirements currently served by both TPSs and GDCs? Can additional incremental pipeline capacity be obtained to meet the forecasted customer requirements over the next five years?

Earlier this year, NJNG asked LAI to examine the question of resource adequacy in New Jersey. We were retained to conduct an independent assessment of the pipeline capacity available to the four New Jersey gas distribution companies (GDCs) with the goal of determining whether there

is enough capacity to meet the forecasted Basic Gas Supply Service (BGSS) customer requirements under design day criteria. We therefore identified the surplus or shortfall in each heating season over the forecast period based on New Jersey GDCs' existing entitlements in the broader context of any other pipeline entitlements that could be relied upon to serve peak day design requirements. Our full report has been filed in this docket by NJNG. I will highlight key findings herein.

For purposes of this study, our analysis was focused on the supply side. We did not conduct any analysis on the demand side. Instead, we assumed the BGSS design day demand forecasts as filed in 2018 as an input. We conducted a detailed review of the 2019 first quarter customer indices as filed with the Federal Energy Regulatory Commission (FERC) for the interstate pipelines operating in New Jersey. We determined the locational deliverability of each contract and the corresponding capacity. At first blush there appears to be significantly more physical deliverability in New Jersey than is required to meet the New Jersey GDCs' peak day send out requirements under design criteria. This physical reality has no basis with respect to what is lawful under FERC jurisdiction where downstream entitlement holders enjoy equal access to a pipeline's delivery capability. Downstream entitlement holders' contractual rights are not subordinate to upstream entitlement holders simply because they are further away from the supply source.

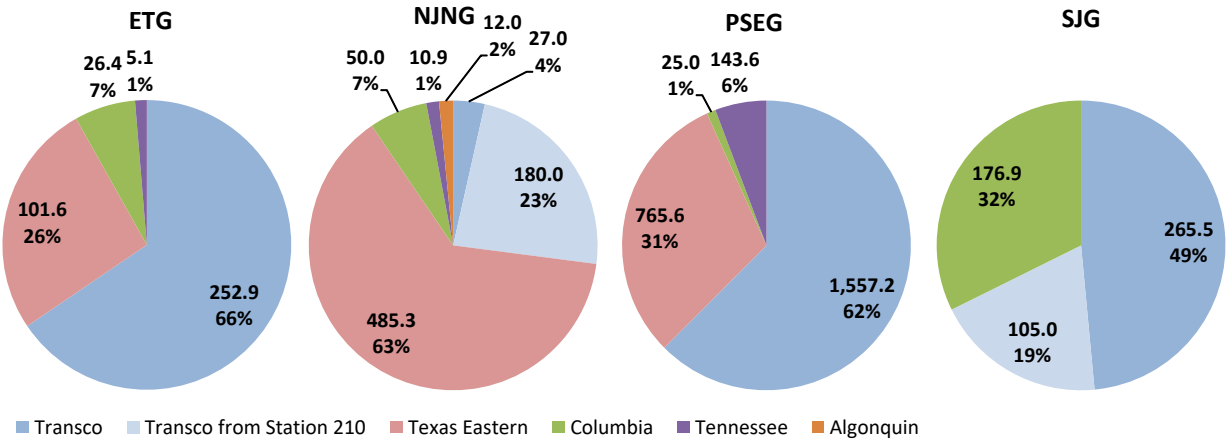
Upon closer inspection, we found that when capacity associated with contracts held by downstream customers, for example, Con Edison or National Grid in downstate New York, or GDCs in New England, is removed from the supply equation, the New Jersey GDCs are able to

meet their current obligations, but only with a tight margin. We found that capacity deficits will soon materialize, particularly in light of the need to compete for capacity held by third-party marketers and suppliers to meet incremental customer requirements. This analysis accounts for pipeline entitlements held by third party marketers who have primary delivery points downstream of New Jersey. In my experience, marketers systematically move natural gas to the highest and best use. This is in accord with how markets are supposed to work. Marketers are not required or even tempted to allocate capacity flowing through New Jersey to the New Jersey GDCs just because the GDCs' respective gate stations are closer to the supply source or storage centers.

For purposes of this analysis, capacity contracts with delivery points at pipeline interconnections or market pooling points were consolidated with the contracts receiving gas at these points in order to form complete supply to demand paths. Of the approximately 10.2 Bcf/d of pipeline capacity flowing through New Jersey identified through this path consolidation, under one-half - approximately 4.7 Bcf/d – has primary firm delivery points in New Jersey. In contrast, over one-half – about 5.5 Bcf/d – has primary firm delivery points in New York and/or New England.

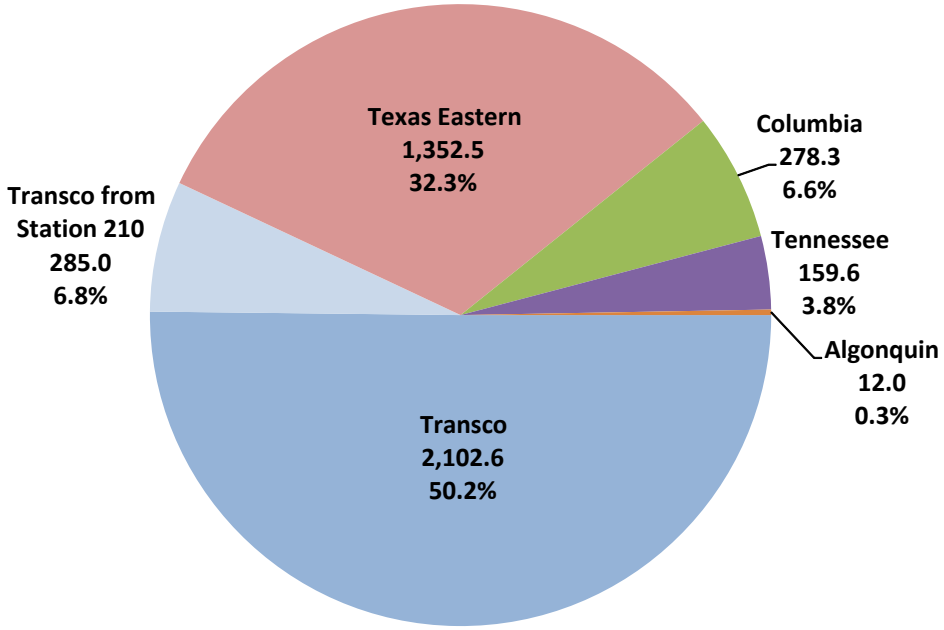
Additionally, I note that although five interstate pipelines serve New Jersey, each New Jersey GDC's service territory is dependent on a single pipeline for approximately two-thirds of its respective supply.

Figure 1. GDC Portfolios of Contracted Pipeline Capacity



The New Jersey GDCs as a whole rely on Transco and Texas Eastern for nearly 90% of their pipeline capacity. This dependence means that the GDCs, and their customers, are potentially susceptible to a pipeline *force majeure* event that reduces system capacity.

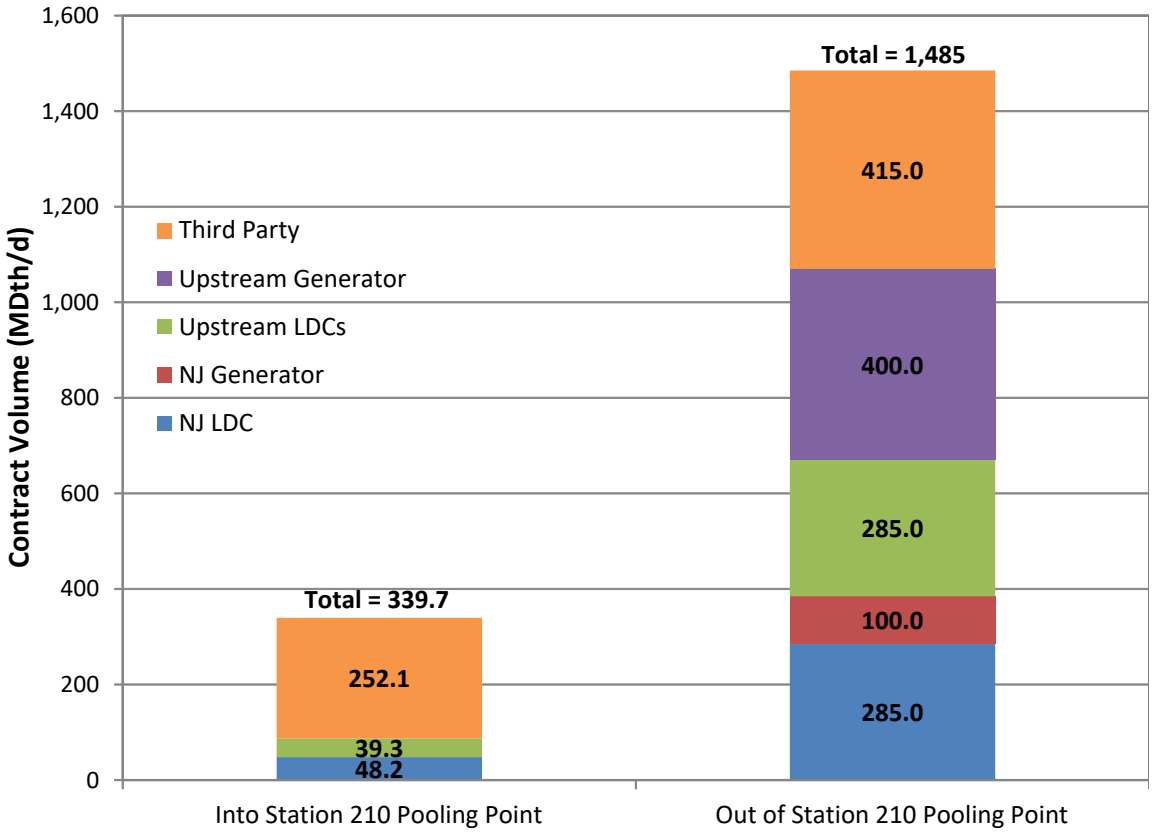
Figure 2. New Jersey GDCs' Portfolio of Contracted Pipeline Capacity



Access to gas supply, in addition to transportation, is a critical component of the supply picture. Pooling points on the Transco system represent locations where gas is aggregated and

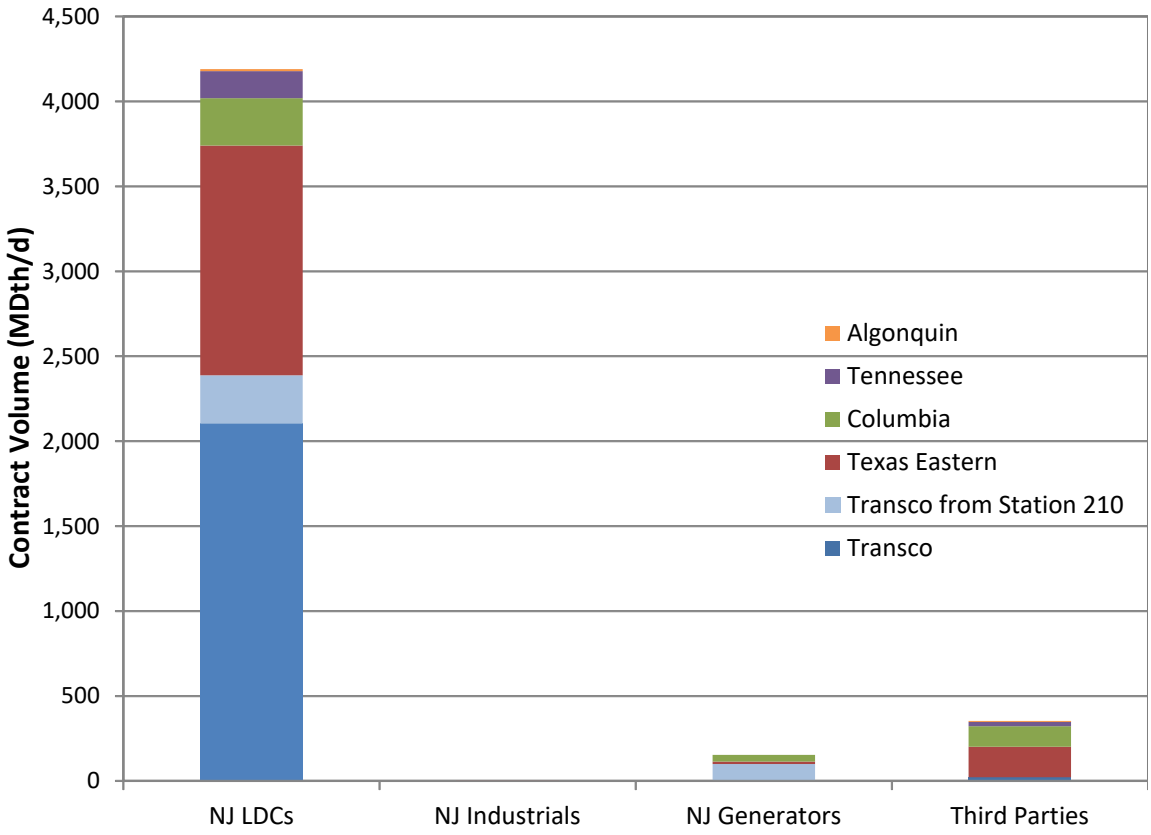
disaggregated between shippers. The 4.7 Bcf/d of capacity with primary firm delivery in New Jersey includes around 0.3 Bcf/d (285 MDth/d) of capacity sourced from the Transco Station 210 pooling point at the intersection of Transco's Leidy Line and Zone 6 mainline. Because there is no production or other local supply associated with the pooling point, all gas contractually received at Station 210 must be transported from elsewhere on the Transco system. There are far more contracts contractually receiving gas at Station 210 (1.5 Bcf/d) than contractually delivering gas to Station 210 (0.34 Bcf/d). There is therefore high demand for these resources, and the New Jersey GDCs that include Station 210-sourced capacity in their supply portfolio must vigorously compete for the linked supply.

Figure 3. Transco Station 210 Pooling Point Contracts



The New Jersey GDCs hold 89% of the capacity with ultimate primary firm delivery points in New Jersey. This capacity represents that majority of the GDCs' supply portfolios.

Figure 4. Total Contracts with Primary Firm Delivery in New Jersey



The pipeline capacity is supplemented by around 0.5 Bcf/d of on-system LNG and, to a much lesser extent, propane peaking resources.

Table 1. New Jersey GDC On-System Peaking Facilities

GDC	Facility	Facility Type	Daily Sendout Capability (MDth/d)
ETG	Erie Street	LNG	25
NJNG	Howell	LNG	150
NJNG	Stafford	LNG	20
PSEG	Burlington	LNG	67.4
PSEG	Camden	LPG	197.4
PSEG	Central	LPG	
PSEG	Harrison	LPG	
PSEG	Linden	LPG	
SJG	McKee City	LNG	75[1]
		Total	534.8

The GDCs additionally rely on supplies delivered by third parties to supplement their contracted pipeline capacity, including contractual arrangements between the GDCs and third parties to meet their BGSS sales obligations and third-party supplier (TPS) firm transportation customers.

In order to contract with third parties on the firm basis required for reliability to meet BGSS sales obligations, the New Jersey GDCs must compete for supply deals with other market participants within the path of a given capacity contract. This can include GDCs and generators in both upstream and downstream markets. Even for capacity with primary delivery points in New Jersey, the New Jersey GDCs face competition from in-state market participants, such as gas-fired generators that do not have their own firm capacity entitlements. Market rule changes promulgated by PJM have heightened gas-fired generators' performance requirements during the peak heating season, thereby raising gas-fired generators' willingness to pay. While this is an enviable attribute in furtherance of electric grid reliability objectives, I mention this dynamic because it raises additional concerns over the availability of short-term supply deals during the

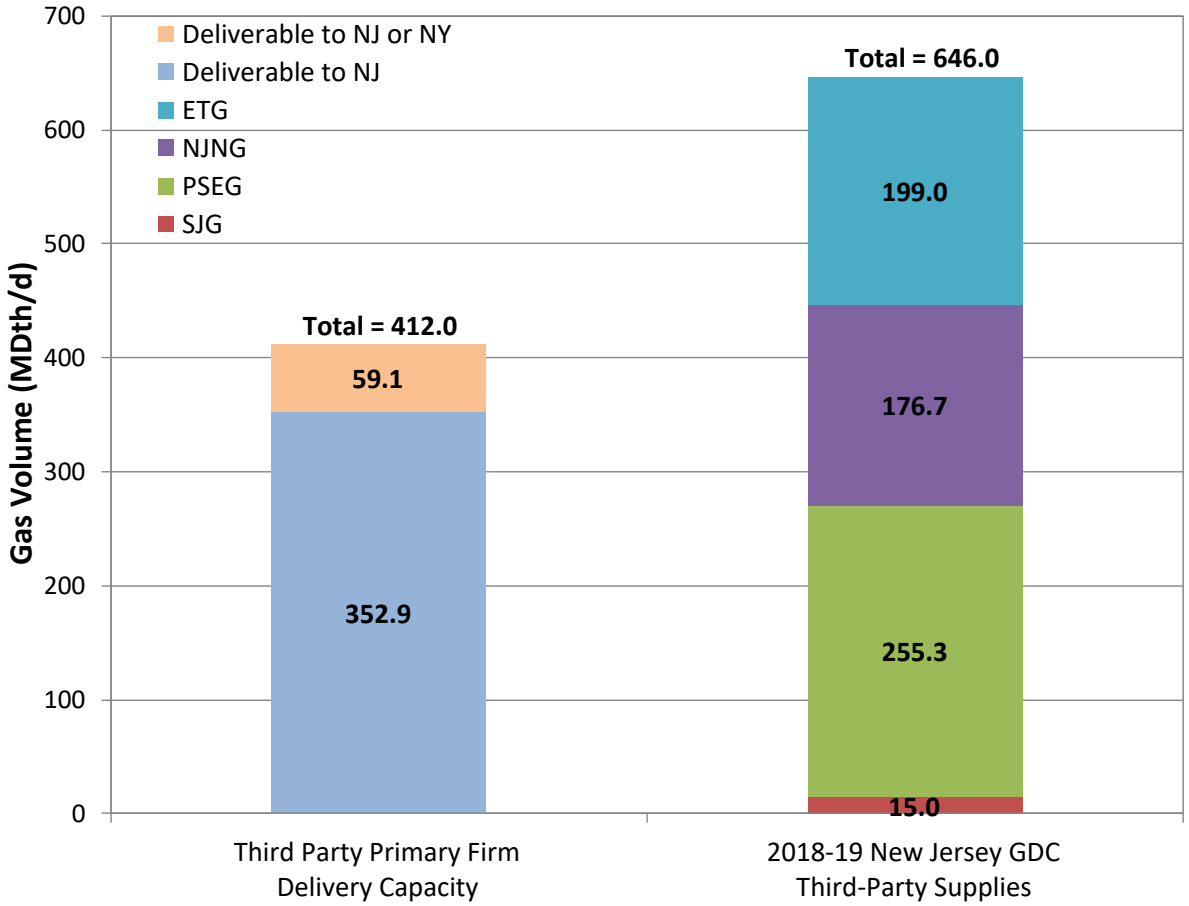
[1] Corresponds to 110 MMcf/d prorated to 20 hours of sendout.

peak heating season regardless of an GDC's willingness to pay for discretionary supply arrangements.

The supply portfolios included in the GDCs' 2018 BGSS filings include 646 MDth/d of third-party supplies to meet the 2018-19 peak day supply requirements, including 451 MDth/d for TPS firm transportation customer requirements.[2] Third parties hold 412 MDth/d of capacity with primary firm delivery points in New Jersey, indicating that the New Jersey GDCs are already competing for and utilizing capacity that is also deliverable to downstream markets. Just as with the supply for capacity sourced from Transco Station 210, it is important to note that the GDCs cannot rely on being able to contract for third-party held capacity, whether primarily deliverable to New Jersey or downstream points, unless and until a deal has been struck. Under extreme temperature conditions, deals may or may NOT be struck. In contrast to primary firm delivery entitlements held by New Jersey GDCs, the outcome of such competition cannot be known *a priori* regardless of willingness to pay.

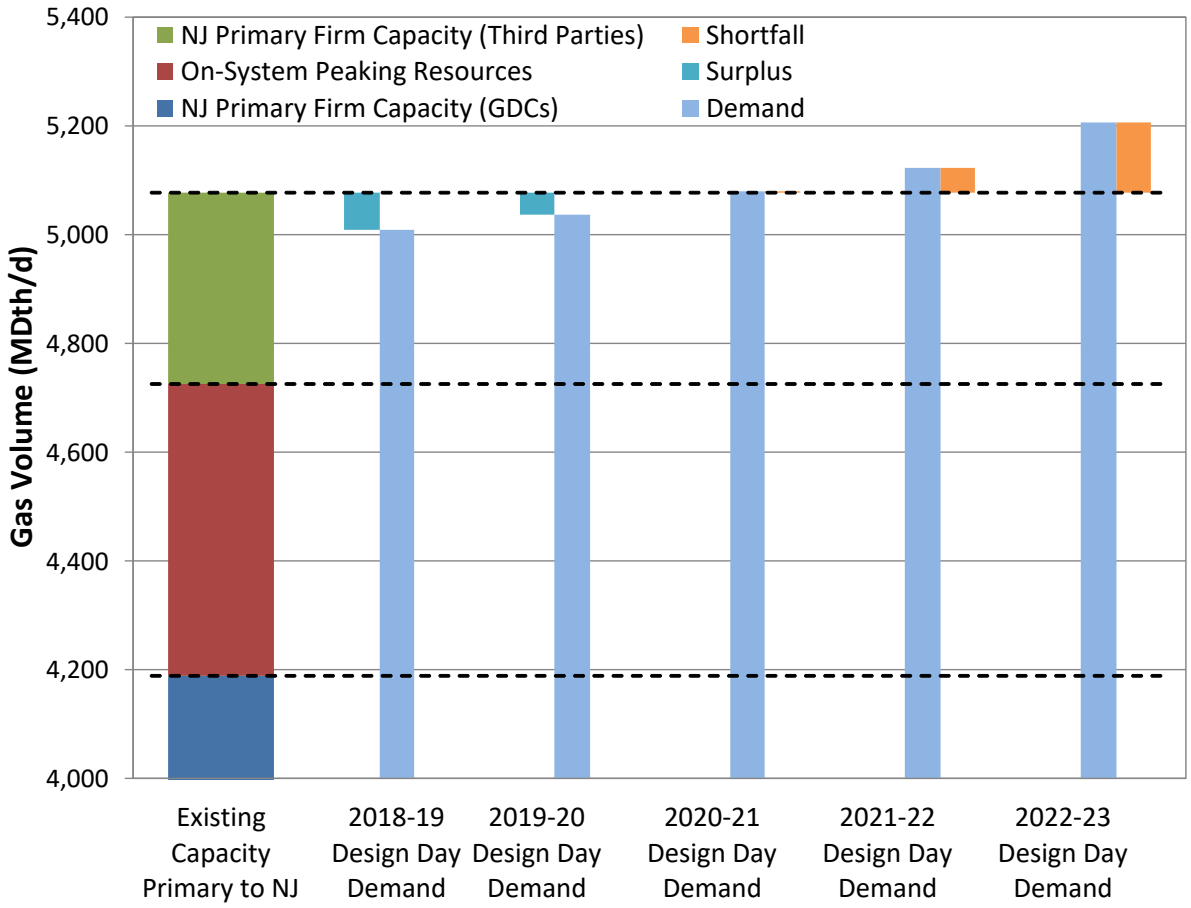
[2] In Figure 2, TPS firm transportation customer requirements are including in the respective GDC third-party supply volumes where they are delivered.

Figure 5. New Jersey GDC Third-Party Supply Portfolio



In conclusion, LAI's analysis found that pipeline capacity with primary delivery in New Jersey, in addition to the on-system peaking resources, will be sufficient to meet forecasted demand levels in the 2018 BGSS filings through the winter of 2019-20, with a capacity deficit first appearing on the 2020-21 peak day and growing in subsequent years to 45 MDth/d in 2021-22 and 127 MDth/d in 2022-23 (~2.5% of demand). As a result, competition for in-demand resources in the larger Northeast market will increasingly be required, without certainty that entitlements can be reliably arranged, and likely increasing costs where the GDCs are able to make deals.

Figure 6. Supply/Demand Comparison for New Jersey GDCs



Very truly yours,

Richard Levitan
President