

From: [Baker, Liam](#)
To: [Wyatt, Randall D.](#); [Logan, Robert J](#)
Subject: [EXT] Fwd: NYC Proxy Unit - Site Elevation
Date: Tuesday, August 02, 2016 10:44:18 AM
Attachments: [Gowanus SPIP Flood Protection Evaluation.pdf](#)
[ATT00001.htm](#)

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Begin forwarded message:

From: "Baker, Liam" <lbaker@easterngen.com>
To: "Debra Reichert (debra.richert@lummusconsultants.com)" <debra.richert@lummusconsultants.com>
Cc: "Vivenzio, Thomas (Thomas.Vivenzio@lummusconsultants.com)" <Thomas.Vivenzio@lummusconsultants.com>, "rlogan@nyiso.com" <rlogan@nyiso.com>, "Allen, David" <DAllen@nyiso.com>
Subject: NYC Proxy Unit - Site Elevation

Deb,

Thank you for your assistance and cooperation thus far in understanding and discussing various assumptions and cost bases for your estimates. There is one item that I believe warrants further development by Lummus. The plant design basis currently being used contemplates costs to raise the NYC site by 3.5 feet "to satisfy floodplain zoning requirements and New York City building codes to prevent damage to the facility from flooding that occurred as a result of Hurricane Sandy in 2012." During the course of developing estimates for our own South Pier Improvement Project (a LMS100 at the existing Gowanus Gas Turbine Site), we have researched the NYC requirements you referenced. Our research found that in 2013 NYC put into place an "emergency order" which adopted the then new FEMA flood maps as a requirement of the construction code. In 2014 that emergency order was made permanent. While the FEMA flood maps are preliminary, they are expected to be made permanent this year. Please see the link (http://www1.nyc.gov/assets/buildings/apps/pdf_viewer/viewer.html?file=2014CC_BC_Appendix_G_Flood-Resistant_Construction.pdf§ion=conscode_2014) for more detail, particularly page 9 under Definitions which specifically references the FEMA maps in the determination of "Base Flood Elevation." Also, for your ready reference, I have attached our consultant's report on the requisite site elevation/flood protection which contains significant supporting information (while dated May 1, 2013, I think you will find the information within very helpful and relevant to today's requirements). The punchline is

that if we were to have progressed with the project, we would have to raise the elevation to ~14 feet.

In reviewing the FEMA maps associated with existing NYC power plants (link: <https://msc.fema.gov/portal/search?AddressQuery=new%20york%20city#searchresultsanchor>) you will also note that every major power plant in NYC is located on the waterfront. For your ready reference: Plant-Location

Astoria Generating Station-East River and 20th Avenue, Queens

NYP&A 50 MW CCGT- East River and 20th Avenue, Queens

NRG Gas Turbines- East River and 20th Avenue, Queens

Astoria Energy Phases I & II-East River and Steinway street

Ravenswood Facility-East River and Vernon Blvd.

Harlem River & Hellgate GTs: Intersection of Harlem River & East River

Vernon GTs: East River and Vernon Blvd.

Gowanus and Narrows Gas Turbines: floating barges in Gowanus Bay

Gowanus (NYP&A) GTs: Gowanus Bay

ConEd East River Station: East River and FDR Drive

ConEd 59th Street: Hudson River and 59th Street

ConEd 74th Street: East River and 74th Street

Brooklyn Navy Yard: East River & Navy Yard

Arthur Kill Station: Fresh Kill & Victory Blvd.

Pouch Terminal: Edgewater St. and NY Harbor (about 150 foot inland)

Were any of these plants built, rebuilt or repowered today, they would have to comply with the new more stringent site elevation requirements. Importantly, to the best of my knowledge, no major power plant in NYC has ever been built inland. Thus, it would be imprudent to assume that a new power plant in NYC would be constructed anywhere but on the waterfront, given that, based on my research, the last major power plant built more than a block inland in NYC was the Pearl Street Generating Station built by Thomas Edison in 1884 (and even that is only two blocks inland).

While every site is unique, given the history of power plant construction in NYC and the existing requirements as explained above, it is very difficult to imagine a scenario where a newly constructed power plant in NYC would not be obligated to significantly raise the site elevation over and above the 3.5 foot you have contemplated. Thus, we respectfully request that Lummus revisit its assumptions on the necessary minimum site elevation for the Zone J proxy unit so to be consistent with current NYC building codes and good utility construction practice.

Thank you.

PLEASE NOTE NEW EMAIL ADDRESS: lbaker@easterngen.com

Thank you

Liam Baker

USPowergen is now Eastern Generation.

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