

III-i | UTILITY POWER TECHNICAL SUMMARY

The project requires a connection to the utility power grid. GCEDC has obtained approval from the New York Independent System Operator (NYISO) for a 300MW substation with an expected expansion to 600MW. The project is projected to require approximately 500MW of utility power to adequately support critical IT and cooling capacity. The North Campus will receive power from the existing substation; transmission and distribution straight north to south into the North Campus interconnection point. The South Campus will receive power from the existing substation located directly north. The North and South Campuses are connected through an existing right-of-way owned and maintained by National Grid, looping westward away from Crosby Road then back towards the same roadway. Power draw is influenced by several factors, most notably the Critical IT capacity loads, associated losses from cooling and environmental systems, and local climatic conditions.

South Campus:

The project's development on the South Campus will be powered directly from an existing Stream-owned substation on-site. This is an existing high voltage electrical substation located near GPS 43.083791, -78.406254 in Genesee County, NY served by National Grid utility from the New York Power Authority STAMP substation. To ensure reliable power during maintenance or unforeseen events, Stream's on-site substation will receive a secondary feed from the main STAMP substation and will be modified to enable a highly reliable and resilient design as required for critical high performance computing data center operations. When complete, this station will have the ability to continue to support data center operations even after the loss of a source from the incoming utility, the loss of one or more substation transformers, or the loss of certain equipment within the substation which might otherwise result in an extended outage to the data center. The station design includes the following major equipment:

Existing:

- 1ea. 115kV point-of-interconnection (with National Grid utility)
- 1ea. 115kV HV circuit breaker
- 4ea. 115:34.5 kV main power transformers rated at 45/60/75 MVA (with on-load tap changers)
- 4ea. 115 kV HV circuit switchers
- 1ea. 115 kV HV transmission strain bus with associated engineered steel structures, insulators, switches, and appurtenances
- 1ea. complete substation package including 115kV and 34.5kV bus work, structural steel, switches, arresters, and appurtenances.
- 1ea. complete control enclosure including relay panels, SCADA and telecommunications equipment, backup batteries, and associated protection and control devices.

To be installed:

- 1ea. 115kV HV transmission point-of-interconnection (w/National Grid)
- 1ea. 115kV HV circuit breaker
- 1ea. 115 kV HV transmission strain bus with associated engineered steel structures, insulators, switches, and appurtenances
- 4ea. 34.5kV MV main distribution breakers with associated relay panels, MV bus work, and appurtenances.
- 1ea. engineered electrical grounding grid system

North Campus:

The project's development on the North Campus will be powered via a new Stream-owned Substation. This is a new high voltage electrical substation which will be located near GPS 43.094727, -78.410585 in Genesee County, NY served by National Grid utility from the New York Power Authority STAMP substation. It will be designed and constructed to be highly reliable and resilient as required for critical high performance computing data center operations. When complete, this station will have the ability to continue to support data center operations even after the loss of a source from the incoming utility, the loss of one or more substation transformers, or the loss of certain equipment within the substation which might otherwise result in an extended outage to the data center. The station design includes the following major equipment:

To be installed:

- 2ea. 115kV HV transmission points-of-interconnection (w/National Grid)
- 10ea. 115kV HV circuit breakers (2ea for POIs, and 8ea for transformer protection)
- 2ea. 115kV HV transmission strain bus with associated engineered steel structures, insulators, switches, and appurtenances.
- 8ea. 115:34.5kV main power transformers rated at 60/80/100 MVA (with on-load tap changers)
- 8ea. 34.5kV MV main distribution breakers
- 1ea complete substation package including 115kV and 34.5kV bus work, static masts, lighting, structural steel, switches, arresters, and appurtenances.
- 1ea. complete control enclosure including relay panels, SCADA and telecommunications equipment, backup batteries, and associated protection and control devices
- 1ea. engineered electrical grounding grid system