

NJ TRANSITGRID

Resilience Program • Building Stronger

Get The Facts



More Resilient Power = More Reliable Train Service

Rail service in New Jersey is vulnerable to commercial grid power outages, which are occurring more frequently due to both the nature of the existing centralized power distribution system and the increasing intensity and frequency of severe weather events. In 2012, Superstorm Sandy caused wide-spread and prolonged power outages that severely affected NJ TRANSIT’s rail service for weeks, challenging all prior expectations of the power system’s resilience. An estimated 2.6 million customers in New Jersey lost power as a result of the storm. Aligning with national and state priorities to modernize the electric grid, the proposed Project would:

- Provide the power to enable safe, reliable, and resilient public transportation during outages of the commercial grid and other emergencies
- Minimize disruptions to the regional workforce and economy
- Provide a cleaner and more efficient source of power

WORKING TOGETHER TO IMPROVE ENERGY RESILIENCE

Following the major power outages caused by Superstorm Sandy in 2012, the U.S. Department of Energy (DOE) partnered with the State of New Jersey to examine the use of microgrids to help supply electricity during future extreme weather events. The NJ TRANSITGRID TRACTION POWER SYSTEM is the result of a partnership between NJ TRANSIT, DOE, the New Jersey Board of Public Utilities, and the Federal Transit Administration (FTA).

What is NJ TRANSITGRID?

NJ TRANSIT is proposing two projects as part of NJ TRANSITGRID: The NJ TRANSITGRID TRACTION POWER SYSTEM, a first-of-its-kind microgrid in the U.S. for mass transit, and DISTRIBUTED GENERATION SOLUTIONS, which would provide resilient power to a number of NJ TRANSIT facilities in northeastern New Jersey. NJ TRANSITGRID has been selected by the FTA as eligible for funding as a public transportation resilience project in response to Superstorm Sandy under the Emergency Relief Program. This Fact Sheet focuses on the NJ TRANSITGRID TRACTION POWER SYSTEM.

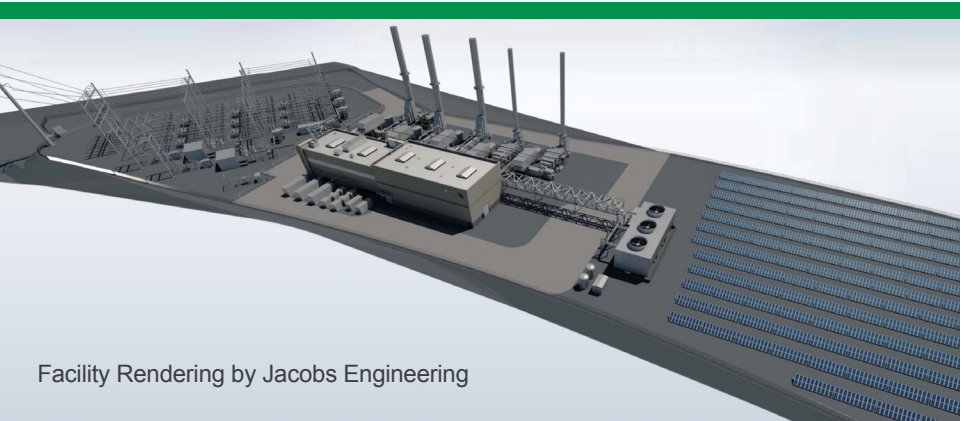
The NJ TRANSITGRID TRACTION POWER SYSTEM would provide highly reliable electric power to support service in a core segment of NJ TRANSIT’s critical service territory. During storms or other times when the commercial grid is compromised, limited service within this territory would be provided. The proposed Project includes construction of:

- Natural gas-fired electric power generating plant (known as the Main Facility);
- Multi-acre solar facility;
- New electrical lines providing power to railroad substations in Kearny and Jersey City, NJ; and
- Electrical substations and other infrastructure supporting the new facility.

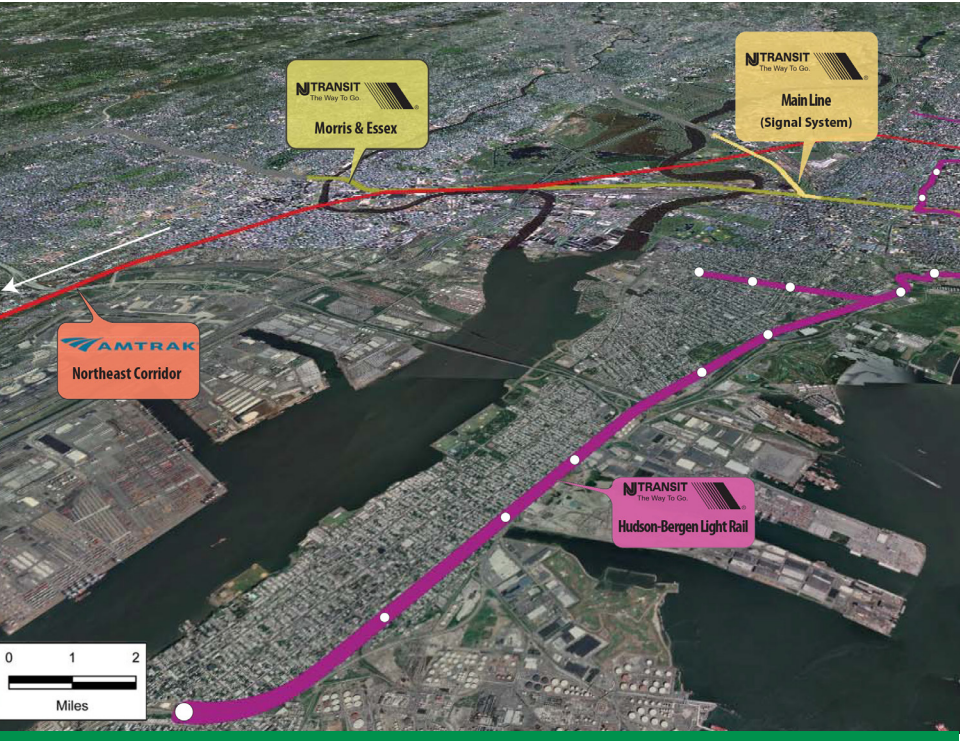
The Main Facility would use combined-cycle natural gas technology and have power generation capacity of up to 140 megawatts (MW). Reliable electrical infrastructure to support immediate and long-term power needs for public transportation in the core service area:

- Northeast Corridor from Penn Station, NY to New Brunswick, NJ
- Morris & Essex Line from Hoboken Terminal, NJ to Maplewood, NJ
- Hudson-Bergen Light Rail from North Bergen, NJ to Bayonne, NJ

An estimated 143,000 daily customers make up the total rail-based market in the Project area, including customers who transfer from NJ TRANSIT rail to other regional public transportation systems. Additionally, in 2016 an average of just under 52,000 daily riders also utilized the NJ TRANSIT operated HBLR.



Facility Rendering by Jacobs Engineering



Finding the Right Location

NJ TRANSIT has conducted comprehensive and expansive siting analyses to determine the optimal location for the Main Facility. Transmission losses of electricity are proportional to distance. To maximize efficiencies, the Main Facility needs to be located close to existing traction power substations. The preferred option for siting of the microgrid in Kearny, NJ would provide for efficient transmission to existing substations along existing NJ TRANSIT and Amtrak rights-of-way. The preferred location in Kearny, NJ is a large tract of undeveloped land in an industrial zone within the Koppers Coke Redevelopment Area. The New Jersey Sports & Exposition Authority (NJSEA) is seeking to encourage brownfield redevelopment on the parcel.

Draft Environmental Impact Statement Now Available

The NJ TRANSITGRID TRACTION POWER SYSTEM is being reviewed for environmental effects through the National Environmental Policy Act (NEPA) of 1969 Environmental Impact Statement (EIS) process. A Draft EIS (DEIS) prepared by NJ TRANSIT is available for public review and comment from May 20, 2019 through July 19, 2019. Upon close of the comment period, NJ TRANSIT will consider all substantive comments and will prepare a Final EIS (FEIS) and Record of Decision (ROD).

The DEIS for the proposed Project analyzes two alternatives: Build Alternative and a No Action Alternative. The Build Alternative includes configuration of the Main Facility, electric line installation, new substations and connection to HBLR, which are all described in the DEIS. Along with operational impacts, the DEIS analyzes temporary impacts related to construction of the Build Alternative. The DEIS is available at [NJTRANSITResilienceProgram.com](https://www.njtransit.com/resilience) along with detailed information on the public comment period for the DEIS.

Analyzing and Mitigating Potential Impacts

The DEIS analyzes potential environmental impacts for the Build Alternative and the No Action Alternative and details mitigation measures to minimize any anticipated impacts. Below is a brief overview of anticipated Build Alternative impacts and mitigation measures, which are detailed fully in the DEIS.

Land Use, Zoning, and Public Policy: A vacant brownfield site that has laid dormant for 40 years would be returned to beneficial use.

Community Facilities: Commuters needing to evacuate during emergencies would have access to designated central meeting points; first responders and NJ TRANSIT employees using public transportation would be able to travel the system and assist in directing the public as needed.

Socioeconomic Conditions and Environmental Justice: Proposed Project would create fulltime employment opportunities in Main Facility operations, maintenance, and ancillary services. Project would provide a resilient transportation resource serving many environmental justice communities within the project area, allowing community members to travel locally to work, to school, and to other resources that would otherwise be inaccessible during a transportation grid outage.

Air Quality: State of the art emissions controls and resilient equipment would be used to maintain and monitor air quality. The Main Facility would utilize a variety of resilient technologies to generate and store power including combustion, flywheels, and solar panels. Emissions controls will meet or exceed industry standards. These controls include Selective Catalytic Reduction (SCR) and oxidation catalyst systems. This modern facility would reduce our reliance on older less efficient power generation facilities that currently provide power to the regional electric grid.

Greenhouse Gas (GhG) Emissions: While combustion technology does produce CO₂ the microgrid would be able to produce power at greater efficiencies (lower emissions) compared to existing facilities that currently serve the transportation grid. Additionally, the microgrid would employ non-combustion technologies to support resilience and generation such as fly wheels and a solar array. Finally, during emergencies, the availability of public transportation would reduce the need for less efficient transportation modes, which would reduce GhG emissions during those periods.

Visual Quality: An adverse visual effect to some areas of the existing railroad right-of-way would result from the addition of monopoles that are a few feet taller than existing infrastructure.

Historic Resources: Per the opinion of the NJ State Historic Preservation Office (NJ HPO) the addition of new monopoles would result in an adverse visual effect on certain locations within the project footprint. However, several mitigation measures are proposed in the draft Programmatic Agreement (PA) between FTA, NJ HPO, and NJ TRANSIT to minimize impact. These include monitoring during construction to ensure that no significant adverse impacts occur to historic or archaeological resources during construction. Additionally recordation of affected historic assets would provide an historical record of the area which would be available to the public.

Traffic and Transportation: During emergency conditions, rail commuters would have access to reliable, limited transit service resulting in less congestion on roadways.

Noise and Vibration: Once operational, ambient noise from the proposed Project would be minimal in surrounding areas.

Natural Resources: Approximately 2 acres of degraded wetlands would be impacted. Mitigation would restore effected wetlands and improve ecological value. Mitigation would support bird species that migrate to the Meadowlands via the Atlantic Flyway.

Soils and Geology: Development of the un-vegetated site would eliminate fugitive dust once the Main Facility is built.

Contaminated Materials: The Main Facility preferred site is a former industrial site that is currently a brownfield location. The construction of the facility would utilize a property that is otherwise limited in use and allow that area to once again serve a productive purpose. The existing site has a soil cap preventing interaction with contaminated media below and any and all construction methods would employ the best techniques for reducing the possibility of spreading site contamination. Any contaminated materials encountered during construction would be properly managed per existing safety and environmental regulations.

Utilities: The Build Alternative would provide resilient and reliable electrical infrastructure to support immediate and long-term needs for public transportation in this critical region.

Safety and Security: The microgrid would allow NJ TRANSIT to continue to provide safe and reliable transportation during emergency conditions.

GET INVOLVED!

Input from the public, interest groups, and government agencies is vital to the proposed Project and your feedback is encouraged. Visit NJTRANSITResilienceProgram.com often for important announcements about upcoming meetings, hearings, and Project progress. Email us your questions, comments or concerns at NJTRANSITGRID@njtransitresilienceprogram.com.

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