

# NJ TRANSITGRID

## Resilience Program • Building Stronger

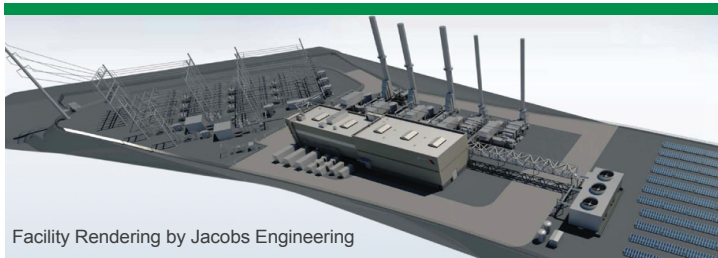
Project Benefits Fact Sheet | June 2019

### What is the NJ TRANSITGRID Project?

New Jersey Transit Corporation (NJ TRANSIT) is proposing two projects that would greatly increase its resiliency to extreme weather events:

- NJ TRANSITGRID TRACTION POWER SYSTEM, a first-of-its-kind microgrid in the U.S. for mass transit
- DISTRIBUTED GENERATION SOLUTIONS, which would provide resilient power to several NJ TRANSIT rail and bus facilities

The Federal Transit Administration (FTA) selected the NJ TRANSITGRID project for a \$546 million grant (including 25% state funding), in response to Superstorm Sandy under the Emergency Relief Program. FTA's selection of the proposed Project makes it potentially eligible for funds made available under the Disaster Relief Appropriations Act of 2013 (Pub. L. 113-2).



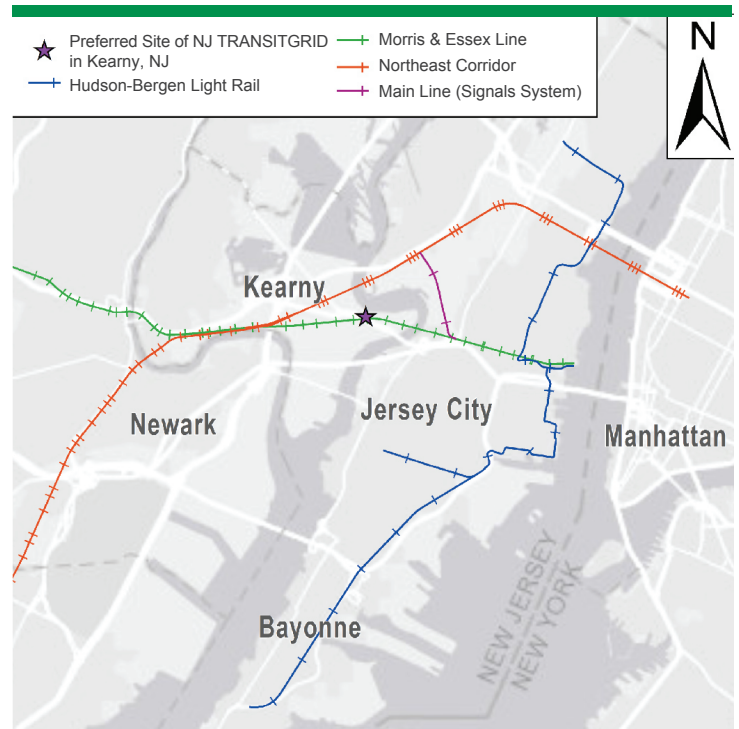
Facility Rendering by Jacobs Engineering

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. The proposed Project includes:

- Construction of a natural gas-fired electric power generating plant
- Multi-acre solar facility
- New electrical lines providing power to railroad substations in Kearny and Jersey City, NJ
- Electrical substations and other infrastructure supporting the new facility

The Main Facility would use combined-cycle natural gas technology, including heat recovery steam generators, and have power generation capacity of up to 140 megawatts (MW). The Project would provide reliable electrical infrastructure to support immediate and long-term power needs for public transportation in the core service area. During storms, or at other times when the commercial grid is compromised, limited service would be provided along the following rail lines:

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



### 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 nearly a week, challenging all prior expectations of the power system's resilience. It resulted in power outages to 8 million customers on the East Coast and approximately 2.6 million regional utility customers over a period of 15 days (with some outages lasting much longer) and caused an estimated \$50 billion in damage and an even greater impact to the economy. In the project area, during Superstorm Sandy, PSE&G customers lost power for up to 8 days. The NJ TRANSITGRID proposed Project would:

- Provide stable and resilient power to enable safe and reliable 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

## Regional Project Benefits

- The NJ TRANSITGRID would ensure that during emergency conditions, when the commercial power grid is not functioning at capacity, NJ TRANSIT can continue to provide reliable rail service to many local communities within the project area, allowing residents to travel to work, to school, and to other essential locations that would otherwise be inaccessible during a commercial grid outage.
- The NJ TRANSITGRID would allow NJ TRANSIT to continue to provide safe and reliable transportation to evacuate the public and for first responders to assist during emergencies.
- By continuing to provide mass transit service during emergency conditions, commuters would not need to resort to using their cars resulting in less congestion on roadways.
- The Project would create full-time employment opportunities in Main Facility operations, maintenance and ancillary services.

Further information available at  
[http://njtransitresilienceprogram.com/  
nj-transitgrid-overview/](http://njtransitresilienceprogram.com/nj-transitgrid-overview/)

## Environmental Benefits

- A vacant brownfield site that has laid dormant for 40 years would be returned to beneficial use. 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 while providing a larger public benefit.
- The proposed site currently contains degraded and isolated wetlands of which approximately two acres would be filled in for construction. To compensate for the loss of these wetlands, a larger contiguous wetland area in the Meadowlands would be restored through mitigation, improving ecological function and value. Mitigation achieved would support bird species that migrate to the Meadowlands via the Atlantic Flyway for foraging, shelter, and breeding.
- Development of the un-vegetated site would eliminate fugitive dust and risk of erosion into the Hackensack River once the Main Facility is built.



## State of the Art Technology to Minimize Impacts

The Main Facility would utilize a variety of resilient technologies to generate and store power and mitigate air emissions including combustion technology and non-combustion technology such as flywheels and solar panels.

State of the art emissions controls and resilient equipment would be used to maintain and monitor air quality. Emissions controls would meet or exceed industry standards.

While combustion technology does produce CO<sub>2</sub>, the microgrid would be able to produce power at greater efficiencies compared to existing facilities that currently serve the mass transit grid.

During emergency conditions, the availability of public transportation would reduce the need for less efficient transportation modes, which could result in reduced Greenhouse Gas (GhG) emissions during those periods. Additionally, the energized assets of the project corridor would no longer use electricity from the commercial power grid, further reducing commercial demand and potentially offsetting some additional GhG emissions.

## Project Contacts

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