

## Retrofit Success On Time and On Budget Despite Global Pandemic

**Client** | Municipal and Cooperative Electric Utility

**Location** | Long Island, New York USA

### Project Summary

Catalytic Combustion Corporation (CCC) was approached by a municipal cooperative electric utility to create a retrofit emission control system for their natural gas power generation plant in time for the summer peak demand.

The power plant supplies low-cost electricity to residents. When power supplied to residents and businesses exceeds the import capacity, the municipality operates this 4MW natural gas engine with NOx and CO emission control system to meet local, state, and federal guidelines. They also use this natural gas engine to provide power during electric system emergencies and storms when one or more transmission lines are out of service. There are 50 municipal and cooperative electric utilities in the State of New York.

Not only did the new system have to fit the physical space limitations of the existing structure, but it also had to perform and meet strict air emission and sound attenuation standards. The planning stages took place in the first months of 2020 with installation by summer. The most significant work on the project took place in the midst of the COVID-19 pandemic and during a nearly nationwide quarantine which lasted 8-12 weeks during the most intensive working period of the project.

The Electric Utility needed a replacement hospital-grade silencer, a replacement SCR reactor housing with much better performance than the existing SCR reactor, as well as better exhaust mixing and ammonia to NOx distribution without increasing the pressure

Catalytic Combustion Corporation has successfully developed emission control equipment for a wide range of new product developments.

drop in the exhaust train. In addition to meeting a very tight emissions and exhaust mixing specification on an existing installation, Catalytic Combustion Corporation was challenged to deliver all this equipment and technology on a very prompt timeline.

### CCC Equipment and Technology Utilized in this Project

SILENT NOx SCR stainless steel reactor housing
Stainless steel hospital-grade silencer
Stainless steel engineered exhaust mixer, low DP technology
Engineered exhaust blankets for safety and performance



### Results

The project was completed on time and within budget. The replacement equipment fit the original space and provides better performance for exhaust and sound.

Photo captions: (top) Re-engineered SCR reactor housing for better NOx and CO destruction and NH3 slip control; (bottom left) New exhaust piping/stack & maintenance platform; (bottom right) Hospital grade silencer for ocean air environment (train station in background requires guaranteed sound levels for public safety).

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