



Lysander Data Center Advisory Committee Meeting

October 9th, 2026

National Grid Update

Call with National Grid 10/2/2026

- New Substation for Micron
 - We asked about reports of a new substation being built near the data center site
 - NG confirms they're looking to add a new substation in the area (between Church Rd and Emerick Rd)
 - This will be paid for by Micron and exclusively for their use. It's been part of the Micron plan all along
 - It's proximity to the proposed data center is coincidental
- We also asked about the situation near Lake Tahoe, NV where residents were told their power was being diverted to support regional data centers
 - NG assured us they are aware of no such plans here
 - They went on to say that their charter from the PSC requires them to deliver power to all customers approved by NYISO. They cannot, and would not, do anything like what is being done in Nevada



Call with National Grid 10/2/2026

- We asked if grid changes for a data center would result in higher costs for local residents
 - They assured us that a data center would be required to pay for their own upgrades to the grid (just like the substation that's being paid for by Micron)
 - On follow-up we asked if increased regional demand would result in higher usage costs for everyone.
 - They explained that “large load” users like a data center would be in their own rate group for pricing and it should not result in increased prices for other rate groups.
- We asked if grid changes for a data center would affect local service
 - They assured us that brown outs would not occur because NYISO won't approve new large users without a plan to provide the power required
 - They told us that upgrades to the grid for a data center would likely result in improved reliability for all customers in the area



Call with National Grid 10/2/2026

- We asked if a data center would be asked to switch to generators during high usage periods
 - They responded that they do have what they call “Curtailment Customers” who receive a discounted rate in exchange for agreeing to curtailing usage when requested
 - This is a voluntary program, large load customers are not required to participate
- We asked about historical electricity usage in the area to provide more context about possible grid load
 - They will put something together and get back to us
- We asked about limiting Lithium Ion Batteries for BESS
 - They responded that they didn’t have any problems with that



Environmental Concerns

Environmental Concerns from the spreadsheet

- Environmental 2.5
 - Light Pollution 2.3
 - Heat Dissipation 2.8
 - Wildlife Impact 2.6
 - Three Rivers Impact 2.6
 - Seneca River/waterways impact 2.4
 - Will there be an environmental impact study? 2.7
 - Is there a decommissioning plan? 1.9



Background:

- Town NRBD code requires site lighting be shielded so the light source is not visible from the property line, but the town's Industrial code does not
- For a project of this size, the planning board typically requires a full SEQRA review
 - NY State DEC will/must provide feedback during this process
 - The town can also include County Health, OCWA, and WEP
 - This is the town's opportunity to require an environmental impact study
- The town routinely requires decommissioning plans and bonds for industrial and commercial projects
- The town's noise ordinance is already being rewritten per previous discussions



Town vs Others Responsibilities

- As previously noted:
 - NY State DEC is responsible for water and air quality regulations and monitoring
 - NY State DEC is responsible for protecting the Three Rivers WMA
 - DEC holds primary responsibility for protecting the Seneca River
 - OCWA manages water to the site
 - WEP manages wastewater from the site
- The town can manage noise, light pollution, runoff, and some heat discharge



Heat Dissipation

Heat Dissipation



Image source: magnific.com

- Background**

- Heated water discharged to local wetlands or waterways is regulated by the DEC
- Heated water discharged to the sewer system is regulated by WEP
- If evaporative cooling towers are used, County Health monitors for health risks
- The EPA has stated they will not issue regulations for data center heat dissipation to the air, they prefer state and local regulation
- The FAA is interested in any continuous heat plumes that may affect air traffic
- The town can regulate some heat discharge to the ground and to the air
- We've already recommended against open loop evaporative cooling systems



Heat Dissipation



Image source: magnific.com

- **Heat Dissipation to the Air from Generators**

- Natural gas generators are only about 40% efficient, meaning 60% of the fuel energy they use goes directly to waste heat.
- Because of this inefficiency, they need to consume 150% more fuel energy than the electricity they output.
- This results in 150% more heat from the generators alone, which—when added to the heat already emitted by the data center—results in a total site heat increase of 250% over normal operating conditions
 - Thermal plumes may increase to about 1/2 mile downwind when the generators are running at 100%
 - Sustained full generator usage can create a localized heat island effect raising temperatures by an average of 3-6 degrees within the 1/2 mile downwind corridor



Heat Dissipation

- Heat Dissipation to the Air

- Prevailing wind

- The prevailing wind at the site blows to the East and Northeast

- Given the distances involved, the WMA east of Highway 690 won't be significantly affected by Data Center or Generator heat dissipation to the air.

- Roughly 20% of the time, the wind blows to the North or Northwest

- Given the distances involved, the WMA west of Highway 690 is at risk during these times, particularly when the generators are running

- To mitigate the risk to the Three Rivers Wildlife Management Area, we can require earthen berms be installed at the North and Northwest borders of the site



Image source: magnific.com



Recommendations

Recommendations

- Require a heat dissipation study specific to the type of cooling system proposed. Fluid dynamic, subsurface heat distribution, etc
- Mandate green roofing or high-albedo roofing materials to minimize overall heat dissipation
- Mandate strict cooling system setbacks from the property line and wetland boundaries
- Establish heat differential and related standards; require periodic monitoring for compliance
- For geothermal systems, mandate deep, bedrock level cooling loops
- For Air cooled systems, mandate rooftop parapet thermal screening walls to direct heat (and noise) directly upward
- Reiterate the recommendation that generator use be restricted to emergency use and testing only
- Reiterate the need for BESS to minimize generator usage
- Mandate an L shaped earthen berm at the northwest corner of the site to protect the Three Rivers Wildlife Management Area west of Highway 690
- Mandate an earthen berm between the generator farm and any adjacent wetlands



Wildlife Impact

Wildlife

SECRETIVE MARSH BIRDS

- Species: ***Pied-billed Grebe*** (NYS Threatened), ***Least Bittern*** (NYS Threatened), ***American Bittern*** (NYS Special Concern)
- Habitat Vector: Shallow emergent cattail marshes and inland wetland pools positioned directly along the southern WMA boundary line at Kellogg Road.
- *Thermal Desiccation*: A sustained horizontal blast of dry, warm radiator air that travels unhindered across the continuous land buffer, accelerates water evaporation in shallow micro-pools and directly threatens egg thermoregulation.
- *Algae Suffocation*: Clouds of Nitrogen Oxides (NO_x) may deposit directly into stagnant marsh waters. The resulting nitrogen spike can trigger rapid algae blooms; as the algae decomposes, it strips the water of dissolved oxygen, suffocating the small fish and tadpoles these birds hunt.



Wildlife

FOREST-DWELLING MAMMALS

- Species: **Indiana Bat** (Federally & NYS Endangered), **Northern Long-eared Bat** (Federally & NYS Endangered)
- Habitat Vector: Woodlot canopies and the loose bark of mature trees running continuously along the Kellogg Road property margins, used heavily for summer maternal roosting.
- *Tree-Canopy Overheating*: Combustion exhaust and high-velocity radiator air blasts can push straight into the adjacent tree lines. This sudden thermal wave may degrade the delicate canopy microclimate, threatening non-volant (unable to fly) bat pups.
- *Echolocation Blinding*: Loud continuous mechanical hums and high-frequency radiator fan whines may create an acoustic barrier, physically jamming the ultrasonic clicks bats rely on to hunt insects over the woods.
- *Insect Light Baiting*: Nighttime building lights can draw insects away from wetlands and the WMA, making it more difficult for bats to find prey



Image source: batweek.org



Wildlife

AMPHIBIANS & REPTILES (HERPTILES)

- Species: **Gray Treefrog, Northern Leopard Frog, Pickerel Frog, Painted Turtle, Snapping Turtle** (All NYS Species of Greatest Conservation Need)
- Habitat Vector: Moisture-dependent forest floors, seasonal vernal ponds, and slow-moving wetland margins directly adjacent to the industrial site boundary.
- *Cutaneous Drying*: Cold blooded frogs rely on stable ambient temperatures and breathe through permeable skin. A sustained blast of 3°F to 6°F warmer air moving over dry ground causes rapid cutaneous desiccation (skin drying).
- *Egg & Prey Failure*: Gelatinous frog egg masses have no shell barrier to filter out NOx precipitation. For semi-aquatic turtles, the subsequent oxygen depletion from algae blooms decimates the aquatic insect populations required by juveniles for food.
- *Mating behavior*: Continuous nighttime illumination stifles male calling patterns, as frogs perceive the artificial brightness as daytime, forcing them to remain silent and hidden from potential mates



Image source: wonderlab.org



Wildlife

GRASSLAND & SHRUBLAND BIRDS

- Species: ***Henslow's Sparrow*** (NYS Threatened), ***Northern Harrier*** (NYS Threatened)
- Habitat Vector: Open, early-successional shrub fields and managed grassland plots situated just north of the Kellogg Road line.
- *Acoustic Masking*: These species rely entirely on distinct vocal frequencies for territory defense and attracting mates. Because the noise travels over a continuous land mass without water-surface deflection, the sound from the generator farm may create a sonic wall that could overpower their calls and rendering the fields functionally unusable.



Image source: fws.gov



Wildlife Recommendations

- Luckily, the heat effects can likely be mitigated with strategically placed earthen berms to divert the heat up and away from the Three Rivers Wildlife Management area, mandate these berms
- Mandate that the environmental impact study specifically examine the heat, emissions, and noise effects of the data center and its backup generators on the WMA and adjacent wetlands
- Reiterate the need for an updated town noise ordinance with pre and post implementation monitoring of low frequency sound, infrasound, and 1/3 octave bands, plus a penalty for impulsive sound
- Reiterate the need to dim or completely turn off exterior lights at night, particularly those with white-blue color frequencies
- Reiterate our recommendations for a closed loop system and proper waste water management



Next Steps



Next Steps

- Continue talking about Environmental Concerns
 - What did we miss?
 - What needs clarification?



Thank You