



Kettle Lakes Association

Position Paper

Why 650-Foot Industrial Wind Turbines Are Not Appropriate for the Tully Valley – Kettle Lakes

Prepared by the Kettle Lakes Association
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Position Paper: Why 650-Foot Industrial Wind Turbines Are Not Appropriate for the Tully Valley–Kettle Lakes

Executive Summary

New York State’s transition to clean energy is an important and widely supported goal, and the Kettle Lakes Association (KLA) strongly endorses the move toward renewable resources. At the same time, clean energy projects must be sited responsibly. The current proposal to construct multiple industrial-scale wind turbines—each approximately 650 feet (200 meters) tall—above specific kettle lakes, including Crooked Lake, and within the Tully Valley corridor above Onondaga Creek and several tributaries - raises substantial environmental, geological, and community concerns that warrant broad public attention.

KLA was established in 2009 as the Cortland–Onondaga Federation of Kettle Lakes Associations and represents residents and stakeholders from Crooked Lake, Little York Lake, Song Lake, Tully Lake, and Tully Green Lake. Although each lake is distinct, all share a common glacial origin and face similar watershed challenges. KLA’s mission is to protect these interconnected water resources and promote informed, responsible decisions about activities that may affect them.

This position paper reviews aspects of the Maple Harvest project, proposed by Palmer Capital, which proposes the installation of large industrial wind turbines on the hills above **Crooked Lake** and across the Tully Valley. The Tully Valley is a uniquely sensitive landscape characterized by steep slopes, active groundwater systems, unstable soils, landslide history, significant ecological habitats, and a longstanding reputation for distinctly scenic qualities. These factors make the placement of extremely tall, industrial structures especially complex and potentially hazardous.

Based on the current level of information available, KLA concludes that industrial turbines of this scale should not be sited within or above the Tully Valley corridor unless and until comprehensive, independent, site-specific studies confirm that the project will not harm groundwater, surface waters, wildlife, or surrounding communities. Any future consideration must also include enforceable protections, transparent public review, and full participation by municipal governments, who are best positioned to identify local risks and represent community interests.

A cautious, evidence-based approach will help ensure that New York's clean-energy goals are met without compromising public safety, environmental integrity, or the long-term health of our lakes and watersheds.

Disproportionate and Avoidable Risks

Placing turbines of this size above the valley presents significant risks to residents, wildlife, and geological stability. The Kettle Lakes include Song, Crooked, Tully, and Little York and smaller kettle ponds—recognized for their ecological sensitivity and dependence on groundwater-fed glacial systems. Of these lakes, Crooked Lake and some of the smaller kettle ponds are directly below turbines proposed at the southern end of the project.

The Tully Valley lies along a major segment of the Atlantic Flyway, one of North America's primary migratory bird routes (US Fish and Wildlife, n.d.). The Kettle Lakes region sits within the Atlantic Flyway's inland portion, meaning it is part of the migratory corridor for many bird species.

Environmental Vulnerabilities

The Tully Valley is historically known for landslides, mudboils, rock fissures, and land-surface subsidence related to glacial lake clays and artesian pressures (U.S. Geological Survey [USGS], 1993). The **1993 Bare Mountain landslide**, in which three homes were fully destroyed and along with approximately 50 acres of farmland, remains a cautionary example of the region's instability (NYSGA, 1993).

Excavating turbine foundations, crane pads, and access roads may destabilize slopes and raise sediment levels in nearby waterways. Added sediment and phosphorus loading promote cyanobacterial - **harmful algal blooms (CyanoHABs)**—already a documented problem in small lakes throughout upstate New York (NYS DEC 2012 - 2019).

Incompatibility with Pastoral Character

The Tully Valley region is valued for its tranquility and scenic landscape. Turbine operation noise and shadow flicker would disrupt the area's soundscape, while Federal Aviation Administration (FAA) lighting on 650-foot towers would dominate the night sky also interfering with Darling Hill Observatory, run by Syracuse Astronomical Society, which is in close proximity to several proposed turbines.

Local Context and Constraints

A Landslide-Prone Valley and Lakes at Risk

Subsurface conditions beneath the Tully Valley consist of sensitive glacial clays, highly prone to slope movement when disturbed (USGS, 1993). Foundation excavation, drainage alteration, and heavy equipment loading can reduce slope stability factors, triggering reactivation of ancient landslides or creating new slope failures.

The freshwater systems situated immediately downstream of these slopes, including the tributaries associated with Crooked Lake and Onondaga Creek, may experience elevated turbidity and increased nutrient loading. Such disturbances threaten water quality, aquatic ecosystems, and local recreation economies.

Migration Corridor within the Atlantic Flyway

The Kettle Lakes form an important resting and feeding corridor for migratory birds, including waterfowl, raptors, and songbirds. Industrial-scale turbines positioned along ridgelines above these lakes would substantially increase the risk of bird and bat mortality.

The **U.S. Fish and Wildlife Service (USFWS)** has documented that wind energy facilities cause significant fatalities among migratory birds and bats, especially in the eastern United States, where mortality rates are higher (USFWS, 2023). Bats foraging over water bodies are particularly vulnerable.

Studies show that operational curtailment—such as raising turbine cut-in speeds—can reduce bat deaths by 33% to 80% with minimal power loss (The Guardian, 2021). However, such measures must be mandatory, seasonal, and independently verified to be effective.

Impact of Turbine Scale on Local Airspace

Modern U.S. onshore wind turbines typically reach about 339 feet to the hub, but newer models extend up to 650 feet (U.S. Department of Energy [DOE], 2023). The expansion of rotor-swept zones dramatically increases the airspace occupied by turbine blades, directly encroaching on migratory flyways and further elevating wildlife collision risks.

Rural Noise and Lighting Conflicts

Ambient nighttime noise around the Kettle Lakes averages 25–30 dBA, consistent with quiet rural soundscapes. In contrast, New York’s Office of Renewable Energy Siting (ORES) allows turbine noise levels up to 45 dBA (Leq-8hr) (Westlaw, 2024). This regulatory

threshold could double or triple existing ambient levels, disrupting both residents and wildlife.

Water surface reflection / mirror effect: Moving turbine blades and water/air interface interaction cause heightened visual cues. (Williamson et al. 2024). In addition, FAA red safety beacons on turbine nacelles would introduce artificial light pollution, eroding the area's dark-sky character. Over open water, these lights—and the moving shadows from turbine blades—may be highly visible, intensifying both visual and sensory disturbances.

Geotechnical Hazards Associated with Turbine Construction

Excavation, regrading, and heavy equipment loading during turbine construction can reduce slope stability and alter groundwater flow. The USGS Hydrogeologic Synthesis (1992–2012) links groundwater changes in the Tully Valley directly to mudboil activity and slope movement (USGS, 2012).

Such disruptions risk reactivating landslides, damaging property and infrastructure, and releasing sediment into Onondaga Creek and downstream lakes. Without site-specific slope and groundwater modeling, these hazards remain unquantified and unmitigated.

Policy and Regulatory Framework in New York

Local Law Overrides

Under New York's Renewable Energy Acceleration and Community Benefit Act (RAPID Act), major renewable energy projects (≥ 25 MW) fall under ORES jurisdiction. ORES may override local zoning, if deemed "unreasonably burdensome" to project siting (NYS Department of Public Service [DPS], 2024).

However, ORES may not waive local protections unless it first establishes, on the full administrative record, that protective design measures have been incorporated and are scientifically and technically justified. A waiver requires clear, record-based findings—not assumptions.

Noise and Setback Standards

ORES mandates a uniform noise limit of 45 dBA (Leq-8hr) and minimum setbacks of approximately 1,300 feet from turbines to non-participating properties (EDF Renewables North America, 2023). These standards fail to account for lake acoustics, where open

water amplifies sound propagation, and therefore may inadequately protect lakeshore communities.

Cumulative Impacts

Multiple turbines along the ridgelines surrounding the Kettle Lakes would cause overlapping effects on wildlife, groundwater, and slope stability. Yet ORES Part 900 regulations do not require cumulative impact analysis specific to lake systems (DPS, 2024), leaving significant regional vulnerabilities unaddressed.

Thresholds and Alternatives for Responsible Development

Community Requirements

If renewable development is ever considered for this region, it must include:

- Independent geotechnical modeling and slope-stability and stormwater runoff analysis for all ridge sites.
- Multi-season avian and bat migration studies tailored to the Kettle Lakes corridor.
- Stricter nighttime noise limits and greater setbacks adjacent to lakeshores.
- Aviation Detection Lighting Systems (ADLS) to reduce nighttime light pollution.
- Full decommissioning bonds ensuring restoration of slopes and water quality.
- A cumulative impact assessment encompassing the entire Tully Valley–Kettle Lakes system.
- Enforcement of local zoning and community standing to oversee project compliance.

Cleaner, Lower-Impact Alternatives

The community supports:

- Community-scale solar or agrivoltaic projects on previously disturbed land.
 - Enhanced energy efficiency and demand management programs to reduce grid stress.
 - Repowering existing wind farms in geologically stable areas rather than constructing new turbines above sensitive lakes (DOE, 2023).
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Conclusion: Safeguarding the Tully Valley- Kettle Lakes

The natural resources in our region are irreplaceable natural treasures that define the region's ecology and identity. Installing any large scale, industrial wind turbines on the

surrounding ridges introduces the potential for unacceptable risks: landslides, groundwater disruption, wildlife loss, and diminished community well-being.

New York's clean-energy future must be pursued wisely and locally, balancing renewable development with sound environmental stewardship. The Tully Valley–Kettle Lakes watersheds deserve protection through rigorous, site-specific science and respect for local governance.

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