**Town of Manheim Planning Board**

**Site Plan Review Report**

**and**

**Advisory Opinion to the Zoning Board of Appeals**

**on**

**National Grid’s Special Use Permit Application**

**December 5, 2023**

The Planning Board has reviewed the site plans and supporting data (“Site Plans”) submitted by Niagara Mohawk Power Corporation d/b/a National Grid (the “Applicant”) with its application for a special use permit to construct a new substation (“Manheim Substation”) including the installation of three (3) transformers, the associated switches and breakers, as well as the reconnection of 115kV transmission lines, 46kV sub-transmission lines, and the re-routing of distribution lines on approximately 35.6 acres of land owned by National Grid located North of Cemetery Road and East of Snells Bush Road, (Tax Parcel No. 115.2-1-57.4) in the Town of Manheim (the “Project”). Public comments and additional information received by the Planning Board were also reviewed to ensure that the Site Plans for the Project meet the requirements and performance standards of the Town of Manheim Zoning Ordinance (the "Zoning Ordinance").

**PLANNING BOARD AVISORY OPINION AND RECOMMENDATION**

Pursuant to sections 303, 310 and 503 of the Zoning Ordinance, the Planning Board is required to conduct a site plan review of all special use permit applications and to provide the Zoning Board of Appeals with a report containing its advisory opinion and recommendations. The Planning Board conducted several public meetings to review the Site Plans and the proposed use of the subject property as an electrical substation facility and held a Public Hearing on November 28, 2023.

Based on the Site Plans and information received from the Applicant, the analysis and information provided by the Town’s Engineer, the Planning Board members site visit and familiarity with the Project site, public comments received at public meetings and at the Public Hearing, all of which was reviewed by the Planning Board relative to National Grid’s special use permit application, and pursuant to section 501 of the Zoning Ordinance, the Planning Board approved the revised Site Plan dated November 3, 2023 on December 5, 2023.

Accordingly, the Planning Board submits this Site Plan Review Report of its findings, together with its Advisory Opinion and Recommendation that the Zoning Board of Appeals approve National Grid’s application for a special use permit in connection with the proposed use of approximately 35.6 acres of land owned by National Grid located North of Cemetery Road and East of Snells Bush Road (Tax Parcel No. 151.2-1-57.4) in the Town of Manheim (“Project”) for use as an electrical substation facility.

**SUMMARY OF PLANNING BOARD’S REVIEW AND FINDINGS**

A summary of the Planning Board’s review, analysis and conclusions supporting its advisory opinion and recommendation is set forth below.

**Section 503—SITE PLAN APPROVAL**

The Planning Board has taken into consideration the following four criteria set forth in section 503, and has made the following findings:

**Criteria**:

Harmonious relationship between proposed uses and existing adjacent uses.

**Findings:**

The Project is located in an AG – 60 Zoning District. Under section 441 (7) of the Zoning Ordinance, a “public utility facility” is a special permitted use within the AG – 60 Zoning District. When the Town Board adopted the Zoning Ordinance in 1996 it made the legislative determination that a public utility facility is compatible and harmonious with other permitted uses in the AG-60 Zoning District.

The land uses nearby and adjacent to the Project include three private residences, open farmland, a private cemetery and public utility facilities and transmission lines. The Project exceeds all property boundary line setback requirements of the Zoning Ordinance.

The Project covers 12.8 acres of land out of a total parcel size of 35.6 acres. Portions of the substation and ancillary facilities will be visible from nearby residences and intermittently visible by travelers on Cemetery Road, Snells Bush Road, and Rural Park Drive.

The overall height of the substation facility will not exceed sixty (60’) feet inclusive of the lightening mast. The Zoning Ordinance limits the height of a "building" in an AG-60 Zoning District to 30 feet. However, the proposed Manheim Substation facility does not meet the definition of a “building" as defined by the Zoning Regulation. Therefore, the 30-foot height limitation on buildings is not applicable to the Project.

The visual impact of the substation on nearby properties is mitigated by a combination of topography, distance, the existing vegetative screening along the Project’s boundary lines and pursuant to a private agreement with the Inghams Mills’ Rural Park Cemetery Association. Visual impact on the Inghams Mills’ Rural Park Cemetery will be mitigated by a private agreement between National Grid and the Inghams Mills’ Rural Park Cemetery Association which will provide compensation to the Association to install appropriate vegetative screening. Some residential property’s view of the Project is screened by existing tree lines and vegetative screening on three sides of the Project and by topography and elevation.

There are approximately 50 public utility facilities within a 1-mile radius of the Project site, many of which are taller than the proposed Manheim Substation. Existing distant views of the Mohawk Valley from adjacent properties include views of numerous existing public facilities, electric transmission towers and high-tension electrical transmission lines. Nearby property owners’ distant views of the Mohawk Valley will not be obstructed by the Project.

The approximately 23 acres of land within the bounds of the Project site but outside of the fence surrounding substation will remain fallow. The Project will not impact the continued use of the 23 acres of land outside of the fenced substation for agriculture. Nor will the Project interfere with the continued use of nearby open and vacant farmland for agricultural purposes or other permitted uses. The Project will result in the irretrievable loss of approximately 11 acres of prime soils or soils of statewide importance for future agricultural use. Herkimer County has 162,747 acres of prime soils or soils of statewide importance. The 11 acres affected by this Project represents .007% of prime farmland in Herkimer County.

The Project landscaping plan includes preserving the existing landscape screening and vegetative coverage to minimize, to the greatest extent possible, off-site views of the facility. National Grid intends to use seed mixes of native grasses, pollinator plants and Monarch butterfly friendly plants for groundcover where land has been disturbed during construction outside of the fenced Project site. This will not only control stormwater runoff and erosion but create butterfly and pollinator habitat on the Project site. Native grasses and vegetation will help improve the health of pollinators which are threatened by habitat loss, pesticide poisoning and a host of other factors. The habitat not only benefits pollinators but also nearby cropland. Pollinating insects will roam beyond the project site to other agricultural fields where they will help increase production. Making the project site pollinator-friendly makes ecological, agricultural, and economic sense.

The Project will incorporate stormwater drainage elements to avoid potential impacts to the site and to adjacent properties. The Project involves the installation of a porous stone cross section and level spreader with vegetated filter strips to treat stormwater and properly capture and manage stormwater to avoid ponding or erosion. This stone section has been reviewed by the DEC and was deemed an approved method of stormwater management.

The Project was designed to avoid construction in the federal wetlands identified as lying within the 35-acre parcel owned by National Grid. As part of the Project, National Grid will need to re-route overhead transmission lines to the east that are within the area of delineated federal wetlands. Temporary construction matting will be installed over these wetlands which do not require a permit from the US Army Corps of Engineers. Upon completion of the portion of project near those wetlands, the matting will be removed, and area re-seeded to promote regrowth. If the new structures for the transmission lines are placed within the wetlands, the impact will be below the 1/10-acre threshold for US Army Corps permitting.

Existing land uses and nearby roads produce intermittent levels of background noise near the Project. The Manheim Substation will produce a low decibel “humming” sound during operation. The noise study provided by the Applicant showed that during operation the sound level at three selected locations at the Project boundary lines closest to nearby residences on the East and West side of the Project averaged 42 to 44 dBA which is substantially below the 70-dBA noise level at the property line standard required by the Zoning Ordinance.

After construction, the operation of the Project will not create notable additional traffic on Cemetery Road or Rural Grove Drive that would negatively affect residential use. After construction is complete, there will only be occasional visits to the site for maintenance of the facility.

The Project will not create a demand for additional public infrastructure (water, sewer, roads, emergency services, or schools) or result in increased property taxes or traffic.

The Project will not create any odors. The Project equipment used does not give off any odor and odors will not affect adjacent open space or residences.

The Project includes only limited illumination and will not emit lighting that spills onto Cemetery Road or neighboring properties.

The Planning Board has determined that the Project, as designed, will have no greater impact on property values of nearby residential or agricultural properties than if other permitted or specially permitted uses were developed on the Project site.

**Criteria:**

Maximum safety for vehicular circulation between the site and street network.

**Findings:**

The Project’s plan for access to the site is from Cemetery Road via a twenty-foot-wide gravel access driveway for maintenance and fire, life safety vehicles. The site plans show the internal road is adequate for maintenance and emergency vehicle access.

There will be limited vehicular traffic to and from the site. When maintenance is required at the site, trucks will access the site from Cemetery Road, and a spotter will be used at the station exit to ensure safe egress from the site.

**Criteria:**

Adequacy of interior circulation, parking and loading facilities with particular attention to vehicular and pedestrian safety.

**Findings:**

As this is a locked substation that is only accessible by authorized vehicles and personnel, public vehicular and pedestrian safety is inapplicable. Unlike in a subdivision, the access road is not intended for public use and no pedestrian traffic is anticipated.

The site provides for sufficient interior circulation, parking and loading for National Grid employees and emergency vehicles. The site plan shows an 80-foot-wide parking and loading area adjacent to the substation, and the area allows for a 33.5-foot fire truck to make a three-point turn. Further, all National Grid personnel are trained and required to follow company safety protocols when at the site.

During construction, all components of the Project will be offloaded on the Project site and will not affect traffic or create an obstruction on Cemetery Road.

The Project will not require a loading dock. The gravel driveway as designed and proposed is adequate to support all vehicles that may enter the property.

**Criteria:**

Adequacy of landscaping and setbacks regarding achieving maximum compatibility and protection to adjacent residential districts.

**Findings:**

The Planning Board reviewed the Site Plans which show that the substation will be partially screened from public view by existing hedgerows and trees. Off-site views of the Project will be blocked, in part, by the topography, existing hedgerows, proposed screening along Cemetery Road pursuant to an agreement with the Inghams Mills’ Rural Park Cemetery Association, and distance which will soften the views of the Project from nearby properties, mitigate potential visual impacts, and maximize compatibility with existing adjacent property uses.

National Grid and industry security standards require that views into the substation remain as unobstructed as possible. This allows for routine drive-by visits, and it also deters unauthorized activity at the site. Landscaping barriers around the immediate station fence are discouraged, as they enable human and animal trespassing. Further, tree plantings too close to the station fence can lead to root interference with the ground grid, or branches falling into the station and damaging the electrical assets.

National Grid does not intend to remove the existing vegetative buffers to the west (side) and north (rear) of the proposed station. On Cemetery Road, there will be approximately 150 feet of clearing to allow for the construction of the access drive, however the rest of the natural vegetation is to remain. To the east side yard, National Grid has entered into an agreement with the Inghams Mills’ Rural Park Cemetery Association, whereby the Association will receive compensation to install trees of their choosing along their property line.

The Planning Board was satisfied that the Site Plan adequately screens Project components from off-site views to the extent practicable.

The Planning Board determined that the Project’s Site Plans exceed all set-back requirements of the Zoning Ordinance. The Planning Board has determined that Site Plans’ setback of all Project components from adjacent property boundary lines meets and satisfies the requirements of the Zoning Ordinance and reasonably maximizes the compatibility between the Project, a public utility facility permitted in the AG-60 Zoning District by special use permit, while affording reasonable protection against potential impacts of the Project on adjacent existing residential uses.

**Section 520- LANDSCAPING REQUIREMENTS**

**Applicable requirements:**

Subdivision 2 requires 15-foot strip of landscaping on front, side and rear yards for a non- residential land use… in a residential district.

Subdivision 5 requires landscaping to take the form of trees, well-kept grassed areas and ground cover.

**Findings:**

See the discussion and findings regarding proposed landscaping and setbacks set forth above. The Planning Board has determined that Applicant’s overall landscape plan shown on the Site Plans meets the applicable requirements set forth in section 520.

**Section 530-PERFORMANCE STANDARDS**

1. The Planning Board is required to decide if the special use permit applied for in connection with the Project meets overall New York State air and water pollution standards.

**Findings:**

Based on the Site Plans and information provided by National Grid as well as the SEQRA review conducted by the Planning Board there will be no air or water pollution resulting from the equipment used for this Project.

The Applicant has submitted documentation demonstrating that the proposed Stormwater Pollution Protection Plan (SWPPP) will integrate a stormwater management system (“System”) that has been previously reviewed by the DEC and deemed compliant with the requirements of the 2015 NYS Stormwater Management Design Manual and the DEC State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges from Construction Activity. The System was also reviewed by the Planning Board’s engineer and found to be acceptable for the Project.

1. The Planning Board is required to ensure that the special use permit applied for in connection with the Project does not exceed any of nine performance standards set forth in Section 530 measured at the property line.

**Standard # 1:**

The proposed use shall not emit noises in excess of 70 decibels, dBA;

**Findings:**

Based on the Sound Level Impact Assessment Report, dated September 20, 2022, and prepared by Epsilon Associates, Inc., it was determined that the loudest sound level due to substation operations at the proposed Manheim Substation will be 48 dBA at the property line, which is well below the ordinance limit of 70 dBA. The sound level of 48 dBA at the property line is equivalent to the sound of a quiet urban environment during daytime. Given the distance from the Project boundary line to nearby residences, the Project will produce virtually no perceptible noise.

Some noise exceeding the 70-dBA standard may be generated during the construction phase by construction vehicles and construction activity.

**Standard # 2:**

The proposed use shall not emit any odor which is considered offensive.

**Findings:**

Pursuant to the information provided by National Grid, no odor will be generated or emitted from the equipment of the Project.

**Standard # 3:**

The proposed use shall not emit dust or dirt which is considered offensive.

**Findings:**

No discharge of dust or dirt is anticipated during operation of the Project.

**Standard # 4:**

The proposed use shall not emit any smoke, in excess of the Ringelmann Chart No. 2;

**Findings:**

Pursuant to the information provided by National Grid, no smoke will be emitted as the equipment is all electrical. The Project does not include construction of a smokestack. As no smoke will be emitted, the Ringelmann chart does not apply.

**Standard # 5:**

The proposed use shall not emit any noxious gases which endanger the health, comfort, safety or welfare of any person, or which have a tendency to cause injury or damage to property, business, or vegetation.

**Findings:**

No noxious gases will be emitted during the operation of the substation. The Project will not significantly increase the presence of exhaust gases. Vehicular access to the Project site may create exhaust gases, but such exhaust gases will be minimal and not produce notable exhaust emissions above those existing along Cemetery Road.

**Standard # 6**:

The proposed use shall not cause, as a result of normal operations, a vibration which creates displacement of 0.003 of 1 inch.

**Findings:**

There will be no vibration displacement created during the normal operation of the substation.

**Standard # 7:**

The proposed use shall not create a glare by lighting or signs which would impair the vision of a driver of any motor vehicle.

**Findings:**

No illuminated signs are being proposed at the substation. Further, the substation is not anticipated to introduce a significant source of lighting into the existing environment. Proposed lighting associated with the site includes motion activated emergency and security lighting located around the station and above the control building door. Security lighting for the substation area will be oriented downward and inward toward the substation equipment, and not to create sky glow or bleed toward neighboring properties. The lighting will provide an illumination level of 20 lux (1,85 foot-candle) around the electrical equipment. No other lights are proposed at the site. On-site operations and maintenance work activity will generally be limited to daylight hours. In the event of an emergency such as power outages, when nighttime maintenance work is required, work lights will be limited to only those work areas and be directed downward and away from off-site receptors, where possible. Temporary work area lights will be shut down at night unless required for security.

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**Standard # 8:**

The proposed use shall not cause a fire, explosion or safety hazard.

**Findings:**

There will be no on-site storage of hazardous materials or petroleum products which could potentially explode or be an accelerant for a fire. The substation is not equipped with any stationary sources of combustion. Safety measurements at the substation include lightning masts and security fencing with barbed wire topping.

The operation of the Project should not cause a fire, explosion or safety hazard.

**Standard # 9:**

The proposed use shall not cause harmful waste to be discharged into the sewer system, streams or other bodies of water.

**Findings:**

The Project will not result in any generated liquid waste and will not be required to connect to wastewater treatment. After construction and during operation, no waste will be generated. During construction, material generated on-site will be re-used as much as possible in accordance with National Grid’s Environmental Guidance document on Spoils Management. Any material unable to be recycled will be hauled off-site and disposed of at a licensed disposal facility.

The Project will not create hazardous waste which will be discharged into streams, aquifers, or other bodies of water.

**Section 546- STANDARDS FOR PUBLIC UTILITY STRUCTURES**

Section 546 applies to “public utility substations and similar utility structures” and sets forth

standards and requirements for such facilities.

**Standard # 1:**

The facility shall be surrounded by a fence setback from property lines in conformance with district regulations for front (50 ft.), side (30 ft.) and rear yards (50ft); See section 432.

**Findings:**

The station is surrounded by a barbed wire topped security fence, setback 125 feet from the front property line, 56.5 feet and 109.78 feet from the side property lines and 337.88 feet from the rear property line.

The Site Plan includes an anchor wire fence completely around the substation which complies with the Zoning Ordinance, and the Project setbacks exceed the setback requirements for a public utility. None of the electrical components of the substation would be exposed or present a danger to the public.

Accordingly, the Planning Board has determined that the proposed fencing is sufficient to protect the public and satisfies the perimeter fencing requirement.

**Standard # 2:**

A landscaped area at least 15 feet wide, shall be maintained in front, rear and side yards;

**Findings:**

See the discussion and findings regarding proposed landscaping and setbacks set forth above in connection with Section 520. The Planning Board has determined that the Applicant’s overall landscape plan shown on the Site Plans meets the applicable requirements of Section 546.

**Standard # 3:** There shall be no open equipment visible from surrounding property.

**Findings:**

Equipment visibility has been minimized to the greatest extent possible, however given the height (and necessity) of the 60-foot lightning masts (the tallest structures being proposed at the site) and the relevant station security policies, there is no practical way to completely block or mitigate the visibility of the station equipment when viewed from surrounding properties. Further, although the substation will be a new addition to the site, there are existing transmission and distribution structures within the immediate vicinity of the site which already impact the surrounding properties’ viewshed. Within a 1-mile radius of the new station, there are over 50 existing utility structures—many being taller than the proposed lightning masts. The existing transmission structures to the north, east and south of the new station start at a height of 60-feet and go as high as 200-feet tall. The average height for the existing structures to the north and east is 75 feet tall. For the existing structures to the south, the average height is around 190 feet.

The Town’s Engineer advises that the industry standard is that transformers be “open” or “non-enclosed” because they generate heat as electricity passes through them. Accordingly, an “enclosed” transformer does not meet the industry standard, is not available, and therefore is not practical.

However, as noted above this equipment will be partially screened from off-site views by the Site Plan’s proposed landscaping plan.

**Standard # 4:**

Where practical, low-profile equipment shall be used.

**Findings:**

Aside from the lightning masts, which are narrow poles, the remainder of the substation equipment will be under 60 feet and will have a lower profile than the existing nearby transmission steel structures.

**Section 312** –**STANDARDS FOR SPECIAL USES**

Section 312 of the Zoning Ordinance provides that the Planning Board may recommend additional standards be imposed.

**Standard # 1:**

To protect health, safety, morals or general welfare of the public;

**Recommendation and Findings:**

The existing substation at Inghams Mills, which services the entire Manheim community, is located within a FEMA 100-year flood zone and is prone to and has a history of flooding which has interrupted the delivery of electricity to the community. Substations are a necessary component to distributing electricity to the Town and greater community.

The Manheim Substation will replace the existing Inghams Mills substation. The Project location was chosen because of its elevation (outside of the floodplain), and its proximity to existing transmission and distribution assets to allow the new substation to tap into existing transmission lines with minimal off-site disturbance.

The new Manheim Substation will be elevated to higher ground to avoid the risk of flooding and ultimately provide safer and more reliable electricity to the Manheim community, which in turn would protect the health, safety, morals, and general welfare of the public.

The project site and its component equipment will be enclosed within an 8-foot-high chain-link fence topped by 1-foot of barbed wire which will protect the public against accidental contact with electrical components of the Project. Access to the substation is restricted, gated, and locked.

The access road to the Project provides all season access to the Project. This should protect the health and safety of emergency responders which may be required to access the Project site.

The Planning Board has reviewed the Site Plans and determined that no additional standards or conditions to protect the health and safety of the public are required.

**Standard # 2**:

For preservation of the general character of the neighborhood in which the proposed special use is proposed to be placed**.**

**Recommendation and Findings:**

Based on the Planning Board’s site plan review and its findings relative thereto summarized above, the Planning Board has determined that the Site Plans address and preserve the character of the nearby neighborhood and no additional standards or conditions to preserve the general character of the neighborhood are necessary.

**Standard # 3:**

To minimize possible detrimental effects of the proposed special use on adjacent property.

**Recommendation and Findings:**

Based on the Planning Board’s site plan review and its findings relative thereto summarized above, the Planning Board determined that the Site Plans sufficiently addressed and mitigated any potential detrimental effects on adjacent properties.

In particular, National Grid has entered into an agreement with the Inghams Mills’ Rural Park Cemetery Association regarding funds for Association to install vegetative screening as it deems appropriate, is working with the Town on a Memorandum of Understanding regarding National Grid’s obligations for road restoration after construction pursuant to existing franchise agreements, and the transfer of maintenance responsibility for, or retirement and decommissioning of, the existing Inghams Mills substation.

Accordingly, the Planning Board has determined that no additional standards or conditions to minimize potential detrimental effects of the Project on the adjacent properties are necessary.

**ZONING ORDINANCE SECTIONS 510, 511 AND 512.**

The Planning Board has reviewed requirements of Sections 510, 511, and 512 and has determined that these sections of the Zoning Ordinance are not applicable to National Grid’s proposed Manheim Substation Project.

**RECOMMENDED CONDITIONS:**

1. Memorandum of Understanding- Road Restoration

As a condition for issuance of the special use permit, the Planning Board recommends that:

1. The ZBA request the Town Board to enter a Memorandum of Understanding (“MOU”) with National Grid whereby all terms, covenants, and conditions of the existing franchise agreements, including National Grid’s obligation to restore any impacted Town roads, shall be extended to include the Manheim Substation construction project; and,
2. Prior to and after completion of construction of the Manheim Substation, National Grid and the Town Engineer will traverse, evaluate, and document with photographs the condition of Cemetery Road. Where post construction road restoration related to the Manheim Substation project is determined necessary, National Grid will, in accordance with the terms of the MOU, restore Cemetery Road to its pre-construction condition.
3. The Planning Board recommends the ZBA request the Town Highway Department to monitor and document any damage to Cemetery Road during the construction of the Manheim Substation caused by third parties unaffiliated with National Grid and/or the Project construction, and provide that information to the ZBA, Town Board, and National Grid.
4. Transfer or Retirement of Inghams Mills Substation.

The Planning Board recommends that the ZBA require the Applicant to develop, adopt and notify the Town of the proposed implementation of any facility retirement/decommissioning plan and/or an ownership transfer plan (to hydroelectric plant owner-Brookfield), regarding the National Grid-owned electrical assets and structures at the existing Inghams Mills Substation located on Powerhouse Road, by January 1, 2028, as a condition for issuance of the special use permit.

1. Filing of Notice of Intent-Storm Water Pollution Prevention Plan.

The Planning Board recommends that the ZBA require the Applicant to provide the Town with a copy of the Stormwater Pollution Prevention Plan (“SWPPP”) and Notice of Intent (“NOI”) that is submitted to and accepted by the New York State Department of Environmental Conservation (“NYSDEC”), as a condition for issuance of the special use permit.

**SUMMARY AND RECOMMENDATION**

The Project balances the visual, setback and environmental impacts of the proposed National Grid Substation facility on neighboring properties with the construction and installation of the new Manheim Substation which is necessary to provide safer and more reliable electricity to the Manheim community.

Based on its site plan review of the Project and its findings, the Planning Board recommends that the Zoning Board of Appeals grant the special use permit applied for by National Grid based on the Site Plans dated November 3, 3023 and approved by the Planning Board on December 5, 2023 subject to the recommended terms and conditions described above.