BEFORE THE
STATE OF NEW YORK
PUBLIC SERVICE COMMISSION

In the Matter of
Niagara Mohawk Power Corporation Amendment to Homer City to Stolle Road 345kV Transmission Facility to Construct a Substation – Formerly Case 26520

Case 13-T-0077

December 10, 2013
Corrected January 6, 2014

Prepared Testimony of:

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BACKGROUND OF WITNESS

Q. Please state your name, place of employment and address.

A. My name is Richard H. Powell and I am employed as a Utility Analyst 3 Environmental by the New York State Department of Public Service in the Office of Energy Efficiency and the Environment at 3 Empire State Plaza, Albany New York, 12223-1350.

Q. Please state your educational background and professional experience.

A. I received a B.S. in Environmental Studies in 1971. In 1972, I received a B.L.A. in Landscape Architecture. Both degrees are from the State University of New York, College of Environmental Science and Forestry, Syracuse. In 1982, I received an M.S. in Urban and Environmental Studies from Rensselaer Polytechnic Institute, Troy, New York. I have completed many professional training courses in topics including remote sensing, traffic and transportation, census data collection, wetland delineation, State Environmental Quality Review Act (SEQRA) and National Environmental Policy Act (NEPA), land use and zoning, quality assurance and environmental auditing. In 1972, I began my employment with the Department of Public Service as a Transmission Facilities Analyst. I prepared and resented testimony in over 30 Article VII proceedings before the Public Service Commission. This work also included the preparation of analyses of numerous natural gas transmission lines throughout Central and Western New York. My work included observation of the construction of transmission facilities to ensure faithful execution of the Commission's Orders throughout

New York State. In October 1987, I transferred to the New York State Office of Parks Recreation, and Historic Preservation, Allegany Region, Salamanca, New York where I was employed as a Landscape Architect at Allegany State Park. My duties included designing maintenance facilities, handicapped access to park facilities, roads, and parking facilities, preparing construction drawings, specifications, cost estimates and contract documents, and performing construction inspections. From November 1989 to June 1990, I was employed as a public participation specialist by Weston, Inc., under contract to the New York State Low-Level Radioactive Waste Siting Commission.

From September 1990 to December 1999, I was employed by URS/Dames & Moore as an Environmental Scientist performing site investigations and preparing low-level radioactive waste management facility licensing documents. My last assignment was at the West Valley Demonstration Project, West Valley, New York, where for nine years, my responsibilities included the revision of safety analysis reports, cultural resource investigations, wetland delineation, preparation of Environmental Information Documents, NEPA and SEQRA documents, high-level and low level radioactive waste transportation studies, Resource Conservation and Recovery Act (RCRA) documentation, and specification preparation, as well as engineering and cost estimates associated with the decommissioning of radioactive waste management facilities. In December 1999, I returned to the New York State Department of Public Service. I managed several

Article X cases. I have testified in Cases 00-F-1356, Kings Park Energy, LLC, 01-F-1276 Trans Gas Energy, 00-F-2057 Empire State Newsprint Project, 08-E-0539 Consolidated Edison Co. Rate Case on contaminated site remediation and the sale of SO_2 allowances and I was the Staff resource person for decommissioning of Article X facilities. I have managed several Article VII proceedings, including: Case 03-T-1385, Rochester Transmission Project; Case 03-T-0515, the Flat Rock Wind Power Project; Case 06-T-1040, NMPC Gardenville-Homer Hill 115 kV; Case 09-T-0870, NMPC Lockport-Mortimer 115 kV; Case 11-T-0534, the Rochester Reliability Project; and numerous petitions for Public Service Law, Part 102 determinations for overhead or underground placement of transmission facilities below the Article VII review threshold. I am the Staff resource person for SEQRA documentation. I am a member of the American Society of Landscape Architects and a member of the American Planning Association.

Q. Please describe your role in this case.

A. My responsibilities in this proceeding primarily focus on the review and analysis of the environmental impacts associated with the siting of the substation proposed by National Grid (National Grid, the Company, or the Applicant). My analysis consists of an interdisciplinary environmental review of the land use, ecosystem and visual and cultural resources that may be affected by the construction and operation of the proposed substation.

Q. What is the purpose of your testimony?

A. The purpose of my testimony is to provide results on my review and analysis of National Grid's prime site and alternative locations proposed for the substation. My review of local ordinances, laws or regulations is to assist the Commission in the necessary determination of whether the proposed facility conforms to local legal provisions and if not, whether the Commission should refuse to apply any provision because it is unreasonably restrictive in view of existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such local municipality. My review of the various comprehensive land use plans was to analyze whether the proposed substation complies with or contradicts the overall intent of those plans. Additionally I looked at the visual, ecosystem and cultural resources in proximity of the various substation sites. My review also included consideration of the potential for noise and transportation impacts associated with the construction and operation of the proposed substation, so as to inform the Commission of those impacts and to suggest possible techniques for mitigating them.

In addition, I will make recommendations for the design and preparation of final construction plans for the substation that include mitigation measures to minimize impacts during construction and operation.

Q. How did you conduct your review and analyses?

A. In addition to reviewing the application, I conducted field reviews and consulted a number of Federal, State and local documents and plans .

Q. When were your field reviews and investigations accomplished?

A. I undertook field reviews throughout 2012 and 2013 including: August 24; October 23 and 24, 2012; and August 15 and 29, October 9, 28 and 29, 2013.

Q. What is the National Grid substation proposal ?

A. In addition to the 345 kV- 115 kV transformer and bus work within the proposed station, a control room would be erected consisting of a 2-room pre-engineered building 128-feet long by 34 –feet wide by 20-feet high with beige walls and a grey roof set on a reinforced concrete perimeter wall with a concrete slab on grade floor. There would be a door on either end of the building and a set of double doors on the north side of the structure. National Grid proposes a 300 kW diesel-fired electrical generator with a 600 gallon double walled fuel tank for electrical service in an emergency.

Q. Were any sites considered and eliminated from your review?

A. Yes. I reviewed the Homer Hill substation as a potential site that would be expanded for the 345 kV-115 kV transformer and associated equipment but do not believe that this substation site is a viable alternative.

Q. Why not?

A. In order for the 345 kV-115 kV transformer and associated equipment to be connected to the 345 kV and 115 kV grids, I am informed by my engineering associates that, for reliability reasons, two separate 345 kV transmission lines would be required extending from the Homer City-Stolle Road 345 kV transmission facility to the Homer Hill substation.

It would likely require an additional switchyard for the 345 kV connection in addition to the expansion of the Homer Hill substation. The ease of connections provided by the selection of a substation where the 345 kV and 115 kV transmission facilities are parallel to each other especially between the Five Mile Road and the Ischua Tap reduces the impact upon the environment.

Q. What site did you evaluate for location of the substation?

A. There are three substation sites that warrant consideration for the substation. These are National Grid's primary site at Five Mile Road, the Simmons site located on Cooper Hill Road north of the Five Mile site and the Ischua site at the Ischua 115 kV Tap located north and west of Holland Road in the Town of Franklinville.

Q. In addition to your review of the National Grid Application, what other sources of information did you consult and what were your findings?

A. Information was gained from a review of the 2009 State Outdoor Recreation Plan (SCORP) and the Open Space Conservation Plan, the Federal Flood Insurance Program regulations and maps, county comprehensive land use plans and, if available, local municipal (town, village, and city) land use plans and land use controls and ordinances. I did not find any instances of existing or potential conflicts with recreation activities as set forth in the SCORP and the Open Space Plan. I also reviewed the NYS Department of Environmental Conservation website which contained a map of campsites and hiking and bike trails including the Golden Hill State Forest (Cattaraugus Reforestation Areas

#13 and #16). The Cattaraugus County Enchanted Mountains Website and the Smart Development for Quality Communities Exhibit 3 Regional Trails and Map IV-3 Multi-use Trail Inventory were also reviewed. I did not find any existing or potential conflicts with existing or proposed recreation areas or trails in proximity to the prime or alternate sites.

A review of the Federal Emergency Management Agency 100-year flood prone area maps shows a portion of the land along the Five Mile Creek north and west of the Five Mile Road site as within the 100-year flood prone area. According to the maps, the Five Mile Road site is not within a 100- year flood prone area. Also the Simmons site and the Ischua site are not within 100-year flood prone areas.

The Cattaraugus County Land Use Plan, prepared in June 1977, was supplemented in December 1982. The County's intent is to present agriculture and forest(ry) as viable land uses rather than undeveloped land and suggests that possible new land uses of all categories be derived from present viable but unproductive land rather than from other land of a viable nature. The County Plan states it is extremely important to make every effort to protect prime agricultural land and not extend public facilities into prime land areas that would cause the erosion of agricultural activity.

I reviewed the draft Cattaraugus County Multi-Jurisdiction Hazard Mitigation Plan (Mitigation Plan). The document notes the severe threat that the Towns of Hinsdale and Humphrey find regarding flash floods.

The document also indicates that, regardless of the specific location, it is an issue for the whole area. The Ischua site and Simmons sites are not susceptible to flooding. The Mitigation Plan also indicates that the Towns of Humphrey, Hinsdale, Ischua and portions of the Town of Franklinville are not considered future growth plan areas.

The Cattaraugus County Agricultural Land Use Plan was prepared in February 2007.

Two of three substation sites considered by National Grid are totally or partially within Cattaraugus County Agricultural District #7. The Ischua Site is not in the Agricultural District. According to the Plan, the placement of farmland in an Agricultural District enables landowners to benefit from limitations to utility ad valorem taxes, protection from local regulations that might impinge on necessary farming practices and limited protection from nuisance suits under right-to-farm legislation.

Q. What is your assessment of the cultural resources associated with each site?

A. In addition to the review undertaken by the company and the request made to the NY State Historic Preservation Office (SHPO) for comments on the primary site, I reviewed the cultural information on the other two alternate sites and requested that the NY State Historic Preservation Office provide comments on those two sites. The SHPO provided a letter that none of the sites proposed affect known cultural resources. I will, however, recommend measures to be taken should

construction activities uncover cultural resources.

Q. What is your assessment of the terrestrial and aquatic ecology potentially affected by the siting of a substation at the prime and alternate sites?

A. There are two federally endangered species found in Cattaraugus County, the Clubshell (Pleurobema clava) and the Rayed bean (Villosa fabalis). The Bald Eagle (Haliaeetus leucocephalus), while delisted, is still protected and recorded as found in the County. Both of the endangered species are mussels preferring gravel or sandy areas in streams and rivers. There are no plans to disturb any waterways. Therefore the two endangered species should not be affected. The Natural Heritage Program within the NYS Department of Environmental Conservation (DEC) replied via letter (found in Appendix A to the application) to the company's consultant who inquired about records of rare or state- listed animals or plants or significant natural communities on or in the immediate vicinity of the Company's proposed site. The letter stated there are no records of rare or state listed animals or plants or significant natural communities on or in the immediate vicinity of the site. I reviewed the DEC Environmental Resource Mapper website for Cattaraugus County and did not in any indications of rare or state listed animals, plants or significant natural community records for the alternate sites considered by the Company.

The Natural Heritage Program verified my findings by letter dated

December 6, 2013.

FIVE MILE ROAD SITE

Q. What is your assessment of the Five Mile Road Site?

A. The Company's prime site is located in the southeastern corner of the Town of Humphrey, adjacent to the Towns of Hinsdale and Ischua. Humphrey does not have a comprehensive land use plan or land use controls but requires an application for a building permit. Hinsdale has a draft Master Plan. Neither Hinsdale nor Ischua have land use controls.

Q. Why do you raise the issue of the prime site's proximity to Cattaraugus County Route 19 also known as Five Mile Road and the boundaries of the towns ?

A. According to NY General Municipal Law, 12-B-§239-M, as this project is proximate to a county road and within 500 feet of the boundaries of The towns of Hinsdale and Ischua, it is a project that would be likely referred to the County Planning Board for its review and recommendations.

By letter, I requested information from the County Planning Board about any countywide or intercommunity impacts for all of the sites but especially the Five Mile Road site. Additionally, I asked the County Agricultural and Farmland Protection Board and the Town Supervisors for their Recommendations. The proposed site is located in the southeast corner of the Town of Humphrey on the border of the Towns of Hinsdale and Ischua.

The Five Mile Road is on the easterly property line of the site and is the

boundary of the three Towns. The primary site is in Cattaraugus County Agricultural District #7, located on active agricultural land use with rural residential houses and mobile homes on the southerly and westerly property line site. There is a residence east of the site across the Five Mile Road. There are two additional residences on the south side of the Five Mile Road. A one-story building, (presently vacant), which may have been used for commercial uses is located on the southeast corner of the proposed substation site. This is also the intersection of the Five Mile Road and County Route 26 (Rogers Road). There is a commercial restaurant on the southeast corner of the intersection of Five Mile Road and County Route 26 (Rogers Road) and additional residential houses and mobile homes on both sides of County Route 26 (Rogers Road) to the east.

At the Five Mile site, National Grid proposes to utilize 4.4 acres for the fenced equipment and include another 1/2 acre for the driveway and parking area. Including a 50 foot buffer, there is a need for approximately seven (7) acres. While the Town of Hinsdale has a draft comprehensive land use plan, neither the Town of Humphrey nor the Town of Ischua have plans or land use controls. The substation site is located on land that has been in agricultural use on soils identified as prime farmland soils. The prime site will require grading to prepare the site for the structural foundations, earthen berm construction and site drainage.

Q. Did you review the comments submitted by (DEC)?

A. The DEC Assistant Permit Administrator in the Region 9 Suboffice in Allegany, NY, submitted comments on the Company's Five Mile Road Site.

He indicated the wetland delineation undertaken by the Company's consultant, was verified by the DEC showing the substation to be greater than 100 feet from the wetland boundary. Minor vegetation clearing will be undertaken.

Topsoil removal and site grading will require erosion control measures to be identified and undertaken during construction to prevent disturbance to the wetland. DEC wishes the Environmental Management and Construction Plan (EM&CP) to describe the Best Management Practices (BMPs) to be undertaken to protect the wetland and the 100-foot adjacent area. The proposed substation will disturb more than an acre. Therefore a Stormwater Pollution Prevention Plan (SWPPP) must be prepared and implemented together with the filing of a Notice of Intent (NOI) with the Department. The emergency diesel generator proposed for the substation may require a Minor Facility Registration for Air Emissions. This is a requirement for the Company to address with the DEC. I will have recommendations for the EM&CP and its contents in an exhibit that I prepared.

The Five Mile Road site is mostly flat and visible to the immediate surroundings. In spite of the proposed earthen berms and landscape screen plantings, the substation would be in the immediate visual range of the people who live next to the property and would be in the view

(though somewhat obscured by the exact location) of those living along the Five Mile Road, County Route 26 (Rogers Road) and the travelers on Five Mile Road.

The Cattaraugus County Department of Public Works provided traffic counts for Five Mile Road. The last traffic counts for Five Mile Road were taken in 2009 and indicated there were 509 vehicles passing the site between the Hinsdale town boundary intersection with the Five Mile Road and the end at NY Route 16. As the Five Mile Road is a County Road, it has more traffic than town roads. While this site has frontage on one side of Five Mile Road, it is the site that is most visible of all the sites to the public with the most houses and mobile homes adjacent to the property and in its proximity and travelers on the Five Mile Road which is a County Road. Due to the visibility of the site from viewers located in close proximity to the proposed site location, the number of travelers passing the site, and the removal of land presently in active agricultural use on prime farmland soils and presently in an Agricultural District, I do not advocate the use of the proposed site for the new substation.

THE SIMMONS SITE

Q. What is your assessment of the Simmons site?

A. Located on Cooper Hill Road and comprising 74 acres, the site is contiguous to two houses and in active agriculture use. This site is located in the Town of Humphrey. The town does not have a comprehensive land use plan and there are no land use controls. A

portion of the site is in Cattaraugus County Agricultural District #7 and soils on half of the site are classified as prime farmland. The site topography would require vegetation clearing, timber removal and site grading to accommodate the substation. As I indicated, the Simmons site would require site grading and earth movement to prepare a level pad or pads at more than one elevation to accommodate the substation. The site is in a rural agricultural and forested area with low numbers of people living proximate to the site. It is situated with road frontage at the top of a hill with views to the south, south east and east from the site. The ability to see from the site provides for views of the site from a distance. The use of earthen berms with landscape screen planting would alleviate some of the visual intrusion but it is not likely all of the substation components would be screened given the heights. I do not believe the Simmons site provides any advantages that warrant consideration for the substation site. Moreover, as part of the site is presently used for active agriculture on prime farmland soils, and development of the site would be visible over a large area, I do not advocate the use of this site.

THE ISCHUA SITE

Q. What is your assessment of the Ischua Site?

A. The Ischua site is located north of Holland Road in the Town of Franklinville. It is approximately 17.5 acres of vacant land owned by Columbia Gas Transmission Corporation. The site is covered with brush, mixed

hardwoods and a conifer plantation. The 345 kV Homer City – Stolle Road #37 transmission circuit, the 115 kV Gardenville-Homer Hill #152, and the 115 kV Arcade –Homer Hill # 167 transmission circuits form the easterly boundary of the site that also includes the present approximate 300 foot access drive to the Ischua Tap. There are two residences proximate to the site. One is a house on the south side of the site of the 115 kV Tap with a southerly orientation. The other residence appears to be a recreational mobile home located on the west site of the site. There are other residences located to the east along Holland Road. The Ischua Site would require vegetation grubbing, timber removal and site grading.

Q. What are the land use controls for this property?

A. The land is zoned by the Town of Franklinville as Agricultural Residential District. The purpose of the AR District is to preserve and protect existing agricultural uses and to encourage new agricultural uses and provide for single family residential development with development of tourist-oriented land uses compatible with agriculture and residential uses. ~~A public utility use, which would include the substation, is not specifically permitted in this district and would likely require a special use permit.~~The substation land use in the Agriculture Residential Land Use District should be considered an "essential service" requiring a special use permit. Special Use Permits are usually allowed when the proposed land use can meet requirements that allow the Special Land Use to be compatible with the surrounding land uses. The Special Use

Permit standard and conditions are intended to ensure the land use will not adversely affect the public health, safety and welfare.

I did not find any zoning or land use controls for a utility substation that provided guidance to aid in ensuring compatible adjoining land uses, regulating the height, bulk, and location of facilities and providing for the convenience of access while protecting the public's health safety and welfare. Often zoning or land use controls do not contemplate a major utility facility and if the ordinances do, restrictions can be considered unreasonable if a genuine need for the facility is demonstrated. While Section 130 of the Public Service Law supplants the Town of Franklinville's Special Use Permit, the Commission steps into the shoes of the Town in applying the pertinent criteria as set forth in the zoning ordinance, so these criteria are addressed in my recommended requirements for the EM&CP.

Q. What is your assessment of the use of the Ischua Site on the recreation uses of the Golden Hill State Forest?

A The Golden Hill State Forest is comprised of Cattaraugus Reforestation Areas #13 and #16 in the Towns of Humphrey and Franklinville. The Forest is located south and west of the Ischua site. A portion of the forest is adjacent to the 115kV transmission line from the Ischua 115 kV Tap to Ellicottville, NY. According to the DEC Maps of Golden Hill, there are no camping areas or riding trails in this segment. The Forest is used for hiking, mountain biking and there are four sites for camping. Three of the campsites and the mountain bike trail system are located

along the western end of Cattaraugus Reforestation Area #16 on either side of Fire Lane Road. The nearest point of access for the hiking and mountain biking trail begins at the Reforestation area property line crossing of Fire Lane Road. This is a mile from the center of the Ischua substation site. The nearest campsite of the four sites is 1.6 miles from the center of the Ischua site. National Grid contacted the DEC Division of Lands and Forest Ranger in charge of Golden Hill for any usage numbers and none are maintained. There is intervening topography and mixed (conifer and hardwood) forest cover between the center of the proposed site and the majority of the recreational activity within Golden Hill State Forest. When my recommendations for sound level abatement are applied to the substation transformer, the associated equipment, and the emergency transformer, I do not believe location of the substation at the Ischua site would affect recreation activities within Golden Hill State Forest.

Q. What is your assessment of National Grid's proposed plans for the Ischua site assuming that the substation were to be located there?

A. According to the grading plan shown in Exhibit 3 figure 3-11, the finished grade elevation of the substation site is approximately 20 feet below the existing grade. The control building is estimated to be 20 feet high, so none or just a portion of the control building should be visible as shown in Exhibit 3, Figures 1a and 2a. The applicant did not provide a simulated landscape screen planting that could have taken into consideration the change in elevation that would obscure the majority of

the substation site from the location used for the simulations. The text at Exhibit 3, page 4 states that a new access road would be necessary from the west on Holland Road.

However, the existing 300-foot long south to north access to the Ischua Tap shown on Figure 3-11 is extended and connects to the proposed station. The proposed grading plan would call for the cutting of an earthen layer approximately 25 feet thick and moving it towards the northwest portion of the site to provide a level area for the substation equipment.

Q. What is your assessment of the visibility of the Ischua site?

A. The Ischua site is located about 300 feet north and west of Holland Road. The distance reduces the site visibility to travelers and residents on Holland Road. The site does not have road frontage like the Five Mile Road and Simmons Sites. The combination of existing 115 kV Tap equipment with the proposed new substation equipment provides an improvement to the present situation. The site would be slightly larger than the Five Mile Substation site to provide for a new 115 kV breaker bay for Line 158 (to Ellicottville) and allow the removal of the existing Ischua Tap. Site grading that provides a lowered station elevation together with earthen berms and landscape screen plantings would reduce the visibility of the substation site to a larger degree than either of the two other sites being considered. The Ischua site would be the expansion of an existing utility use in a rural agricultural and forested landscape. While the site is located on soils

considered Famland of Statewide Importance, the site is vacant land that is not in an agricultural district, not presently in agricultural use and would not be a new utility land use in a rural residential agricultural area on prime farmland soils as is the Five Mile Site.

Q. What are your conclusions about the Ischua site?

A. I believe the Ischua site, due to its setback location from Holland Road, is superior to the Prime site because development would not be as visually intrusive as the Five Mile Road or Simmons sites. The Ishua site is also vacant land that is not in agricultural use. Lastly, it provides for the combination of an existing utility land use with a new utility use and an increase in reliability for electrical service to the Ellicottville area, as suggested by Witnesses Schrom and Quimby.

Q. What is your assessment of the noise associated with the siting and operation of the substation?

A. In my review of the local laws for the proposed and alternative sites, I did not find any that addressed noise and its control. Sound level issues should be addressed regardless of the site selected for the substation because of the proximity of residences and other structures adjacent to the site. At the Five Mile site, there are seven (7) mobile homes on the west side of the substation property that are within 1000 feet of the center of the substation site, two (2) houses and three (3) mobile homes on the south side of the Five Mile Road, three (3) houses and one possible commercial structure adjacent to the southerly property substation and one house situated on a plateau/bluff on the east across

the Five Mile Road from the site. At the Simmons site, there are two houses within 1500-feet of the site center. At the Ischua Site, there is a house within 800 feet and a mobile home within 700 feet of the center of the proposed site. Ambient sound level measurements are necessary to determine the potential increase in sound levels at the noise receptors especially at the Five Mile Road site. National Grid did not address the presence of pure tones – the tones most likely to result in noise complaints in the relevant settings. As pure tones can be extremely annoying, these impacts can be reduced by the use of a low noise transformer, a sound barrier or a noise enclosure around the transformer and other noise emitting sources. At the Five Mile Road site, there are two houses on the southerly property boundary with second stories. The DEC noise policy does not regulate the sound levels of individual pieces of equipment. While the sound levels of the individual pieces of equipment (the substation transformer, reactors, and emergency generator) are within the DEC's noise policy limit of 6 dB(A) above the ambient level. The sound levels are specified as 66 db(A) at 50 feet from the emergency generator equipped with a sound attenuated enclosure. With simultaneous operation of the equipment, the limit is exceeded. At the Five Mile site, the limit is exceeded by 5.4 dB(A), the Simmons site by 3 dB(A) and at the Ischua site the limit is exceeded by 7 dB(A) with only the transformers (ONAF2). Exhibit 4 §4.8.2.2 page 34 states the diesel powered emergency generator will be operating during the testing and commissioning phase of the project for a limited

time (approximately two months, 60 hours per week). This would be 480 hours during the 8 weeks. Pure tones are expected from operation of the emergency generator.

To account for pure tones, the engine and generator should be enclosed with a higher performance sound attenuated enclosure and equipped with a "critical" or "hospital" grade muffler to ensure the generator sound levels will not increase the ambient noise levels above what is recommended in the DEC Policy. The exhaust should also be oriented to the least noise sensitive direction. During the substation construction, there will be noise from diesel and gas powered engines, trucks, cranes, excavators, and air compressors. I recommend the applicant ensure that functioning mufflers be maintained on all transportation and construction machinery, to limit idling construction equipment and to maintain sound deadening enclosures on construction equipment and present as part of the EM&CP, a plan for dealing with potential noise complaints from construction, substation testing and commissioning. I will recommend these measures be included in the EM&CP. Where construction activities must be continuous to completion in spite of the time of day, I further recommend the applicant schedule the activities to be undertaken to begin early in the day where feasible, provide notification to the affected residents and Town Supervisors of the plans and need to complete construction, and take reasonable measures to control the construction sound levels.

Should electrical generators be required for electrical power during

substation construction, these generators should meet the same sound levels as the emergency generator proposed for the substation. Additional guidance and information is available in the Federal Highway Administration (FHWA) Highway Construction Noise Handbook (August 2006) and a FHWA Roadway Construction Noise Model (FHWA-HEP-06-015, DOT-VNTSC-FHWA_06-02, NTIS No. PB2006-10912. As a component of the EM&CP submitted for review and Commission approval, I recommend the applicant undertake a revised preconstruction assessment for the authorized substation site that includes measuring the ambient sound levels, combined with the equipment sound level information, proposed substation design with the necessary acoustical mitigation and appropriate enclosures (if any) to demonstrate that all efforts were made to minimize the increase in sound levels above a preexisting ambient levels. The specifics of the revised noise assessment are in the recommended components of the EM&CP.

Q. What are your recommendations to the Commission relative to National Grid's local law waiver requests?

A. I have concluded that the Commission should refuse to apply the local laws from which National Grid has sought waivers because those laws as applied to the proposed project are unreasonably restrictive in view of existing technology, or factors of cost, or economics, or the needs of consumers. While I recommend the Commission refuse to apply those local laws and ordinances, I do not mean to suggest that the design and

operation of the substation be unregulated. Assuming the Commission authorizes the substation to be constructed, the Article VII process requires the applicant to prepare and present an Environmental Management and Construction Plan (EM&CP) for the substation. The plans and specifications show where and how the proposed substation will be constructed, restored and maintained. The EM&CP is available for review and comment in advance of construction. The comments presented are considered by the Commission at the time of the EM&CP approval.

Q. What other equipment will be required at other locations in addition to the proposed substation?

A. Work will be required at several other substations throughout western New York and Pennsylvania. The work is explained in the Article VII ApplicationExhibit E-2: Other Facilities. Most of this work will be limited to protective relay modifications and settings found inside the individual control buildings within the substations. At the Homer Hill Station just north of the City of Olean, the work will include protective line relay replacement and the installation of a new 100-foot tall microwave tower for communications associated with the protective line relay. The company proposes a 60-foot tall microwave tower within the proposed Five Mile Road Substation for communication with the Homer Hill Substation. Table E-2-1 identifies four existing microwave towers on which new microwave antennas will be installed. My evaluation included an assessment of the new towers needed for

communications. Depending on the new substation location, the height of the new microwave tower may change depending on the lines of sight between the new towers and the existing microwave stations. As the new antennas will be located within the substations, I believe the monopoles will blend in with the other transmission structures in and around the Homer Hill substation and within the new substation.

Q. During the public statement hearings held in Olean, several individuals raised the issue of the real property tax assessment benefits that would accrue to the Town of Humphrey from the taxes to be paid by National Grid for the site and the substation equipment. What are the estimated real property tax revenues that would accrue to each municipality assuming the proposed substation were located at each of the three sites evaluated by the company?

A. Staff requested that National Grid provide the estimated real property tax revenues that would accrue to each municipality assuming the site was selected.

The estimated amounts for each site are:

1. The Five Mile Road Site in the Town of Humphrey - $1,740,000;
2. The Ischua Site in the Town of Franklinville - $ 1,970,000; and
3. The Simmons Site in the Town of Humphrey - $1,910,000.

I did not request the estimated tax revenues for the Homer Hill Station site because I do not consider that site to be a realistic alternative.

Q. What are your recommendations for the roads upon which there will be travel during construction and operation of the proposed substation?

A. During our field investigations, we noted that the town roads in proximity to all of the proposed substation sites are school bus routes that require access during all weather conditions. I am not aware of any town roads being plowed any later and less frequently than other roads. There is no reason to believe there would be potentially any delays in gaining access to any substation sites in the area. Further, National Grid has the responsibility to gain access in all weather conditions to the present Ischua 115 kV Tap and to maintain the Homer City-Stolle Road 345 kV transmission facility in Allegany, Cattaraugus and Erie Counties that crosses the same terrain as the three substation sites. I believe the company has the equipment and trained personnel to gain access to this and other transmission facilities and substations facilities in all weather throughout Western New York.

The company provided an initial assessment of the roads proximate to each site identifying pavement types, if any, the bridges/culvert types and sizes and the slope percent for steep road segments. In all instances, none of the road slopes were such that they could not be traversed by a personal vehicle or a school bus. The proposed site is located on the west side of Five Mile Road, which traverses in a north-south direction: the Village and Town of Allegany, through the towns of Humphrey, Hinsdale and Ischua before intersecting with New York State Route 16 in the town of Franklinville. Most of the Five Mile Road is asphalt paved with the remainder appearing to be oil and chip stone. The roads proximate to the Simmons and Ischua sites appear to be

comprised of gravel with some portions comprised of oil and chip stone. While all of these roads have weight limits and may be posted with weight restrictions from November through May, the most important issues are the carrying capacity of the road, the ability of the bridges and culverts not only to carry the weight of moving a substation transformer into place but to handle the daily truck and worker vehicle traffic associated with transport of workers, materials and equipment for substation construction. There may be instances where the use of a town road may be necessary during the time of load limiting posting of the roads. I recommend that in advance of construction, the Company work with the New York State Department of Transportation, the Cattaraugus County Department of Public Works, and the respective municipalities to evaluate the appropriate roads to be used to move the manpower, equipment and materials to the substation site authorized by the Commission. This evaluation should include identifying the access route(s) to be used daily for all construction workers, construction equipment and delivery vehicles. The evaluation should identify the pavement condition and ability to support the traffic and loads, any measures to improve identified weaknesses, the present conditions of bridges and culverts to support the vehicle loads envisioned, any locations where pavement, culvert or bridges may require modification or replacement, the estimated costs and party responsible for those costs, documentation of the road, culvert and bridge conditions before, during and after substation completion. Plans should be discussed for

repairs if necessary during the substation construction phase. The Company should apply for all highway permits as these serve as records for the County and municipalities.

Q. What are your recommendations for the Environmental Management and Construction Plan (EM&CP)?

A. As a separate exhibit included with my testimony, are my recommendations for the specific construction plans for the substation construction operation and maintenance. A review of the Commission's Order in Case 26520 indicates these recommended conditions for the siting and construction of the authorized substation would be in addition to the Commission's Certificate Conditions in the earlier case and would not in any way supercede those original conditions. These recommendations and conditions of certification are the information necessary for a review of the specifics for the substation site selected by the Commission.

Q. Does this complete your testimony?

A. Yes