

NEW YORK STATE
PUBLIC SERVICE COMMISSION

Case 13-T-0585 – Application by Cricket Valley Energy Center, LLC for a Certificate of Environmental Compatibility and Public Need Pursuant to Article VII of the Public Service Law For Approval of a New 345 kV Line From the Pleasant Valley Substation to the Cricket Valley Energy Center, LLC, and the Reconductoring of an Existing 345 kV Line

Before the
Honorable Kevin J. Casutto

**INITIAL BRIEF
ON BEHALF OF
CRICKET VALLEY ENERGY CENTER, LLC**

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SUMMARY OF POSITION

Based on the evidentiary record in this proceeding, the Public Service Commission (the “Commission” or the “PSC”) can make the six statutory findings and determinations required pursuant to Section 126.1 of Article VII of the Public Service Law (“PSL”) to certify the captioned Cricket Valley Energy Center, LLC’s (“CVE” or the “Applicant”) proposed transmission line project (the “Proposed Project” or the “Project”). Only one issue is in contention. Alleging there will be adverse visual impacts, the Cricket Valley Improvement Coalition (“CVIC”) argues that if new transmission facilities are to be certified within an existing transmission right-of-way (“ROW”), the addition of the new facilities must be a visual improvement to the existing ROW (Transcript reference (“Tr.”) 409–410).¹ There is, however, no such requirement in the law; PSL § 126.1(c) only requires that adverse impacts have been minimized when balanced against other pertinent considerations. The evidentiary record shows

¹ “Tr.” are citations to transcript references in the July 14, 2015 hearing transcript filed in DMM on August 7, 2015 (Filing No. 127) and the July 15, 2015 hearing transcript filed in DMM on August 7, 2015 (Filing No. 128).

that any incremental visual impacts will be modest or negligible, and that transmission structure heights have been minimized to the maximum extent practicable, considering the state of available technology for the construction, operation, and maintenance of 345 kV transmission lines. CVIC did not dispute in testimony that CVE has in fact minimized the heights of the proposed transmission towers of the Proposed Project consistent with applicable clearance, safety, and electric-magnetic field (“EMF”) standards and guidelines. Rather, CVIC proposes alternatives to the Proposed Project that are unreasonable and inferior to the Proposed Project and would be detrimental to the public interest. As explained herein, the CVIC alternatives either fail to satisfy state and federal reliability requirements, would cause significant environmental impacts, or would saddle ratepayers with unnecessary and excessive costs.

The Department of Public Service Staff (“DPS Staff”) opposes the CVIC alternatives and supports certifying the Proposed Project. The Department of Environmental Conservation (“DEC”) and Department of Agriculture and Markets (“Ag&Mkts”) support certification of the Proposed Project employing the Proposed Certificate Conditions (Exhibit (“Exh.”) 39), Environmental Management and Construction Plan Development Plan (Exh. 40) and Best Management Practices (Exh. 24), with which the Applicant and DPS Staff also concur. Consolidated Edison Company of New York, Inc. (“Con Edison”) also opposes the alternatives presented by CVIC and concurs that the Proposed Project is the System Upgrade Facility (“SUF”) that was required in the 2011 and 2012 interconnection processes, and is expected to be required by the New York Independent System Operator (“NYISO”) in its Class Year 2016 interconnection study to interconnect with Con Edison’s 398 transmission line in order to safeguard the reliability of the bulk transmission system which the NYISO plans and administers

Accordingly, the record evidence demonstrates that the Proposed Project “. . .represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives. . . .” (PSL 126.1(c)). This is the only statutory finding in PSL § 126.1 that CVIC’s opposition allegedly implicates. Any incremental visual impacts will be modest or negligible, and those marginal impacts in no way justify adopting a CVIC alternative that would either be significantly less reliable for the electric system, be substantially more environmentally damaging or impose tens of millions of dollars on Con Edison’s ratepayers. Accordingly, the record evidence squarely supports the Commission making the 126.1(c) finding, as well as the five other findings that are not in dispute in order to certify the Proposed Project forthwith.

I. PROCEDURAL HISTORY

On December 30, 2013, CVE filed an application for the Proposed Project under Article VII of the PSL with the Commission, seeking a certificate of environmental compatibility and public need to:

(1) build a new, approximately 14.6-mile 345 kV transmission line to connect the planned Cricket Valley Energy Center generation facility (the “Energy Center”) in the Town of Dover, New York, to Con Edison’s Pleasant Valley Substation in the Town of Pleasant Valley, New York; and

(2) reconductor an approximately 3.4-mile segment of the existing 345 kV Line 398 in the Town of Dover between the Cricket Valley switchyard and the New York-Connecticut state line. The Proposed Project also includes improvements to the Pleasant Valley Substation – new protection and communication system upgrades will be required within the existing control buildings at the Substation. During the 2011 and 2012 Class Year study processes for the

Energy Center, NYISO determined that the Proposed Project constitutes an SUF necessary to allow the Energy Center to interconnect to the grid without adversely impacting the reliability, stability, operability or transfer limits of the system. Because the Proposed Project will constitute an SUF pursuant to the Open Access Transmission Tariffs (“OATT”) of the NYISO, subsequent to completion of construction, ownership, operation, and maintenance of the Project will be transferred to Con Edison pursuant to the NYISO OATT Attachment X, Sections 5.2 and 11.3 of the NYISO Pro Forma Interconnection Agreement.

Concurrent with the filing, CVE also initiated an extensive public involvement program (“PIP”), which continued throughout the process in order to collect input and provide information to local residents, elected officials, and stakeholders. The PIP includes meetings and advisory working groups, as well as newsletters, a website, and other means of sharing information.

Supplemental information was filed by CVE with the Commission and served on the statutory parties on April 2, 2014, in response to the Secretary’s letter of March 3, 2014. By letter dated May 21, 2014, the Secretary determined that the submitted documents, as supplemented, were filed or otherwise in compliance with the filing requirements of Article VII, as of May 21, 2014. After exploratory discussions between the parties, a Notice of Impending Negotiations was filed with the Commission by CVE on July 3, 2014. A draft Joint Proposal was served on the parties on August 13, 2014. Settlement conferences commenced on September 4, 2014, and additional settlement conferences, by telephone and in person, upon notice to the active parties, were held between September 2014 and March 2015.

During that period, a “Ruling On Schedule” was issued by Administrative Law Judge (“ALJ”) Kevin J. Casutto on November 25, 2014, observing, *inter alia*, that the parties were still

in settlement talks and that the Applicant “. . .is expeditiously processing this application. . . .” In the Ruling On Schedule, the ALJ also set an alternative litigation schedule should a formal settlement not be reached. The ALJ rejected the Applicant’s, DPS Staff’s, and DEC’s proposed respective litigation schedules and instead adopted the schedule advocated by the members of the CVIC.

When the Applicant and parties were informed that a formal settlement would not be reached, on March 21, 2015, CVE filed with the Secretary and served on the parties’ supplemental exhibits and requested that a litigation schedule be established. After competing scheduling proposals were filed with the ALJ, a second “Ruling On Schedule” was issued April 20, 2015. On May 13, 2015, direct testimony was filed by CVIC, DPS Staff, DEC, and Ag & Mkts. On June 19, 2015, rebuttal testimony was filed on behalf of CVE, Con Edison, and DPS Staff. Evidentiary hearings were held on July 14 and 15, 2015, before the ALJ in Albany, New York.

II. THE SIX ARTICLE VII STATUTORY FINDINGS REQUIRED FOR THE PROPOSED PROJECT

The six Article VII statutory findings the Commission is required to make under Section 126.1 of the PSL in order to certify a major electric transmission facility are as follows:

- (a) the basis of the need for the facility;
- (b) the nature of the probable environmental impact;
- (c) that the facility represents the minimum adverse environmental impact, considering the state of available technology and the nature and economics of the various alternatives, and other pertinent considerations including but not limited to, the effect on agricultural lands, wetlands, parklands and river corridors traversed;
- (d) in the case of an electric transmission line, (1) what part, if any, of the line shall be located underground; (2) that such facility conforms to a long-range plan for expansion of the electric power grid of the electric systems

serving this state and interconnected utility systems, which will serve the interests of electric system economy and reliability;

(e) . . .

(f) that the location of the facility as proposed conforms to applicable state and local laws and regulations issued thereunder, all of which shall be binding upon the commission, except that the commission may refuse to apply any local ordinance, law, resolution or other action or any regulation issued thereunder or any local standard or requirement which would be otherwise applicable if it finds that as applied to the proposed facility such is unreasonably restrictive in view of the existing technology, or of factors of cost or economics, or of the needs of consumers whether located inside or outside of such municipality; and

(g) that the facility will serve the public interest, convenience, and necessity

The evidentiary basis for the Commission to make each finding for the Proposed Project is explained below.

III. THE COMMISSION CAN MAKE EACH STATUTORY FINDING AND CERTIFY THE PROPOSED PROJECT

1. The First Statutory Finding: The Project Is Needed

The record evidence shows that the Proposed Project is needed to interconnect and reliably deliver the output of the Energy Center to the bulk transmission system. The Commission certified the construction and operation of the Energy Center under PSL § 68, finding that it would serve the public interest by, *inter alia*, reducing transmission congestion, increasing system reliability, displacing higher air pollutant emissions from less efficient plants, reducing wholesale energy prices and otherwise, adding an efficient, cleaner, economic generating plant in an area of the State where such capacity is needed² (*See* also Exh. 13, p. E-4-

² *See* Case 11-E-0593, *Petition of Cricket Valley Energy Center, LLC for an Original Certificate of Public Convenience and Necessity and for an Order Providing for Lightened Regulation*, Order Granting Certificate of Public Convenience and Necessity and Establishing Lightened Ratemaking Regulation (Feb. 14, 2013).

2; Tr. 60). No evidence was introduced by any party disputing any of these findings. The record also demonstrates that the Proposed Project was selected by the NYISO based on two separate class year studies as the SUF required to be constructed in order to reliably interconnect the CVE Energy Center to the bulk transmission system (Tr. 62–63). DPS Staff and Con Edison concur that the Proposed Project is required to reliably deliver the output of the CVE Energy Center to the bulk transmission system (Tr. 292, 303, 382).

As the DPS Engineering Panel aptly stated it:

[t]he need for the transmission facility is the direct result of the Certificate of Public Convenience and Necessity granted to CV by the Commission on February 14, 2013 to build a combined cycle, natural gas-powered 1,000-megawatt generating facility in Dover, New York. The proposed transmission facility will interconnect the generation facility to the bulk electric system (Tr. 292).

As will be explained below in connection with the statutory finding on “alternatives,” the configuration options proposed by CVIC are unreasonable because they were either rejected by the NYISO in two class year studies because they were not sufficiently reliable, would impose upon ratepayers unnecessary and excessive costs or would create significant environmental impacts. The CVIC options do not in any way detract from the overwhelming record support that the Proposed Project is needed to interconnect and reliably deliver the output of the CVE Energy Center to the NYISO-administered bulk transmission system.

Accordingly, the first Article VII statutory finding is squarely supported by the record and can be made by the Commission.

2. The Second Statutory Finding: The Nature Of The Probable Environmental Impacts Have Been Identified And The Correct Mitigation Measures Have Been Incorporated Into The Project

Introduction

The evidentiary record describes in detail the nature of the probable environmental impacts that the Project is expected to cause (Exhs. 4, 19–23, 29–31, 34–37). In the instant discussion, the Applicant will also summarize the measures to which DPS Staff, DEC, Ag & Mkts and CVE have agreed to avoid or minimize any probable impacts. These measures are contained in the Proposed Certificate Conditions (Exh. 39), the Best Management Practices (Exh. 24), and the Environmental Development and Construction Plan (Exh. 40) to which the Applicant and the three agencies have concurred. Except for the issue of potential visual effects raised by CVIC, which the record evidence shows are modest or negligible, there is no controversy concerning the suitability of these proposed conditions, practices, and measures, and the Applicant respectfully requests that they be incorporated in the Article VII certificate to be issued by the Commission.

The Project has been reviewed with respect to potential impacts to land uses, visual, cultural, terrestrial, wildlife, wetland and water resources, topography and soils, transportation, noise, communications, and EMF (Exh. 4, p. 4-1). The potential environmental impacts will be minimal and virtually all temporary and of short duration, as they are construction related. Use of the existing Con Edison ROW and access points is preferred because they utilize the existing Con Edison Line 398 ROW, a 345 kV transmission line that has been in place for over 50 years; would avoid or minimize the disturbance of natural habitat and agricultural land to the maximum extent practicable; is reasonable in terms of cost; and avoids the disturbance of residential and

commercial properties and activities, traffic, and emergency operations in populated areas (*Id.* at pp. 4-3, 4-4, 4-6, 4-14, 4-15).

Field investigations, literature reviews, and agency consultations were conducted to identify and assess existing environmental conditions within the Project area (*Id.* at p. 4-1). The environmental studies submitted in the Application and in subsequent filings describe existing conditions, methodologies used in the investigations, anticipated environmental effects of the Proposed Project, and recommended mitigation measures to avoid or minimize any adverse impacts to the maximum extent practicable.

A. Construction And Operation Access Roads

Existing access roads used for Con Edison's Line 398 will be employed to the maximum degree practicable to facilitate access to the Proposed Project ROW from local, state, and public roadways and to avoid unnecessary construction of new access roads (*Id.* at p. 4-4). No new permanent access roads at new locations will be built (Exh. 24, p. 6-2). Existing access roads will be extended where necessary to the new structure locations (*Id.*). Improvements to, or extensions of, the existing access roads will generally consist of application of crushed stone to produce stable and level roadway conditions and manage precipitation and runoff without causing erosion or mobilizing sediment that may affect wetlands and waterways (*Id.* at 6-1-6-2).

Well-developed access roads, however, are not available for use in all parts of the Proposed Project ROW and the equipment needed to complete foundation construction and subsequent tower erection could not be safely mobilized to all tower locations using ground access. Several locations have very steep slopes or poor access road conditions so that vehicular access could not be made without significant access road upgrades or construction of new access

roads (*Id.* at p. 1-10). Micropile or rock anchor tower foundation construction work, however, can be efficiently completed using a helicopter outfitted to support construction activities.

Heavy lift air-crane helicopters will be selectively used to erect the steel monopoles, reducing the need for access road construction to support heavy equipment (*Id.*). In addition, rock anchor foundations or rock micropile foundations will be used where suitable for minimizing foundation construction costs and environmental impacts.

Using air cranes for tower construction and cable pulling in select locations avoids bringing in a ground-based, mobile crane to each tower location and grading flat the needed work space (*Id.* at 1-3, 1-10). Ground-based mobile cranes require a relatively level space within which to operate, and the steep slopes and extensive ledge and rock outcrops along the ROW would demand substantial grading to support ground-based cranes.

Accordingly, the three agencies and the Applicant concur that these measures should be implemented to minimize impacts related to construction access.

B. Land Use

Current land uses surrounding the proposed ROW are characterized by a mix of uses including: residential (suburban and rural), agriculture, recreation, commercial, and energy related infrastructure. Stream crossings and less densely populated forested uplands are associated with elevated topography (Exh. 19, Attachment C, p. 12). As the Proposed Project is sited within the existing Con Edison ROW, impacts to current land uses have been minimized.

Recreational land uses along the ROW include a ball park in Pleasant Valley (Cady Recreation Park). The Project is designed to not only comply with the Commission's EMF guidelines but to also minimize EMF levels within the ROW at Cady Recreation Park (Exh. 18).

Nearby residences and drivers on the local highways may experience short-term and temporary disturbance and inconvenience typically associated with construction activities (*e.g.*, noise, dust, minor changes to local traffic patterns). These impacts will be short in duration and will primarily occur only where the Project ROW crosses public highways. Proposed certificate conditions (Exh. 39, p. 5) require CVE to notify adjacent residents regarding planned construction activities and schedule. The Applicant will also coordinate with New York State Department of Transportation (“NYSDOT”), county officials, and local police departments to develop traffic control measures to ensure safe traffic operations along roadways used by construction vehicles.

C. Agricultural Lands

Limited agricultural activities currently take place on Con Edison’s fee-owned ROW and are expected to continue upon the completion of construction. Relatively few structures will be placed in the ROW areas which are used for agricultural activities (Tr. 210). CVE will minimize any short-term disruption to farming activities through scheduling, planning, and the use of the agreed-to BMPs (Exh. 24), EM&CP Development Plan (Exh. 40) and Proposed Certificate Conditions (Exh. 39) prescribed on a site-by-site basis. Access roads through agricultural areas will be temporary and generally employ gravel access fill material placed on geotextile fabric (Exh. 39, p. 23). The gravel access fill material and geotextile fabric will cover subsoil after topsoil is stripped; however, in limited areas close to underground utilities, CVE may elect to cover topsoil directly with these materials (*Id.*). In addition, mats may be installed as an alternative to stripping topsoil, in which case the mats will be removed when access is no longer necessary (*Id.* at p. 24). After construction, the stone and geotextile fabric or mats will be removed and CVE will relieve subsoil compaction with deep tillage as specified in the Certificate Conditions (*Id.*). Finally, topsoil will be replaced, and the area will be restored with a

seed mix approved by the landowner and Ag & Mkts and stabilized with straw mulch (*Id.* at pp. 24, 27–28).

According to Ag & Mkts witness Matthew J. Brower, the use of the BMPs, Proposed Certificate Conditions, and the EM&CP Development Plan will provide adequate protection for agricultural resources (Tr. 210).

D. Tree And Vegetative Management

The existing Con Edison Line 398 ROW has been largely cleared of tall woody vegetation; therefore, limited tree clearing activities are anticipated during construction of the Proposed Project (Exh. 4, p. 4-3). Selective vegetation clearing practices will be employed along much of the ROW (*Id.*). At ecologically sensitive locations, such as stream crossings, natural vegetation buffer strips will be maintained using selective tree cutting and trimming techniques (*Id.*). Merchantable wood will be salvaged in the form of logs, pulpwood, and/or wood chips (*Id.* at p. 4-4). Non-merchantable wood and brush located in the selective and non-selective cleared areas of the ROW will be removed, chipped, or piled where permitted by the BMPs and Proposed Certificate Conditions (*Id.*). Certain species known to be potential vectors for pests, such as ash, which may potentially host the emerald ash borer, will be disposed of on the ROW to prevent the spread of invasive species (*Id.*).

As Con Edison will own and operate the Proposed Project, annual and long-term vegetation management, including herbicide use, will be in accordance with the annual ROW management program to be filed by Con Edison with, and approved by, the Commission for Line 398.

E. Wetland And Water Resources

Wetlands and streams exist in various locations along the Line 398 ROW. Transmission towers will not be installed in any wetlands areas (Exh. 24, p. 3-1). Protective measures such as the installation of silt fencing and/or straw bales, and stabilization of exposed soils by planting vegetation, will be used to prevent soil from entering wetlands and surface waters due to runoff (*Id.* at pp. 3-3; Exh. 39, p. 21). Access during construction through wetlands will be performed using temporary timber construction mats and using existing access roads rather than constructing new, permanent access roads (Exh. 24, pp. 3-6, 6-3).

The Project will apply for coverage under the State Pollutant Discharge Elimination System (“SPDES”) General Permit (“GP”) for Stormwater Discharges from Construction Activities (GP-0-10-001), as part of the EM&CP (*Id.* at p. 1-1). A Storm Water Pollution Prevention Plan (“SWPPP”) specific to the Project will be filed with the EM&CP and will contain sufficient erosion control and other measures to prevent discharges of construction-related pollutants to surface waters (*Id.* at 3-1).

Where practicable, construction vehicular access across watercourses will be avoided by prohibiting construction traffic through these areas (*Id.* at pp. 3-1–3-2; Exh. 39, p. 20). These areas will be designated “No Vehicular Access” on plan and profile drawings (Exh. 4, p. 4-66). Existing access roads will be aligned with available existing stream crossings to minimize disturbance (*Id.*). Where necessary, temporary stream crossings, using bridges with swamp mats or other acceptable materials, will be installed during construction (*Id.*). Measures will be put in place to protect stream banks during the installation and removal of crossing materials, and to ensure that stream flow remains unrestricted (Exh. 24, pp. 3-4–3-5).

Potential construction impacts will be short-term and have no long-term effect on the bodies of water (Exh. 4, p. 4-66). With implementation of the BMPs (Exh. 24), Proposed Certificate Conditions (Exh. 39), and EM&CP Development Plan (Exh. 40), the Proposed Project, according to DEC witness Heather Gierloff, will avoid and minimize potential impacts to protected streams and water bodies (Tr. 276–277) and to minimize impacts to wetlands and wetland adjacent areas (Tr. 272–273).

F. Archaeological Resources

The Applicant also conducted Phase 1 (Exh. 19) and 1B archaeological investigations, zeroing in on proposed structures that could be located within or near previously recorded archaeologically sensitive landforms (Exh. 4, pp. 4-21–4-25, Table 4.5-1). These locations within the ROW, accordingly, will be avoided by the Proposed Project. There are no Proposed Project components that would involve ground disturbance at any of these previously recorded archaeological sites. Consultation with the State Historic Preservation Officer (“SHPO”) to date indicates that no additional archaeological study is necessary for the Project at this time. If additional field testing becomes necessary, CVE will conduct such testing during development of the EM&CP (Exh. 39, condition 56). CVE will submit the “No Adverse Effect” letter from SHPO as part of the EM&CP before it commences work in any affected area.

G. Terrestrial Ecology And Wildlife Resources

CVE conducted surveys for state and federally-protected species between April and October 2014, in coordination with the DEC, the United States Fish and Wildlife Service, and DPS Staff. These surveys identified five listed rare, threatened or endangered (“RTE”) species that could be potentially impacted by the Project: Blanding’s turtle; Bog turtle; Timber Rattlesnake; and the Indiana Bat and Northern Long-Eared Bat (Exh. 4, pp. 4-46–4-50; Exh. 16,

p. 3; Exh. 24, p. 8-1). During construction, wildlife species may experience temporary displacement during vegetation clearing and as a result of noise from construction activities (Exh. 4, p. 4-45). These effects will be short-term and limited within and adjacent to the existing ROW (*Id.*). In general, adverse effects to wildlife would be localized to the immediate construction site (*Id.*).

Results of the aforementioned surveys were used to develop detailed measures as specified in Exhibits 24, 39, and 40 designed to avoid or minimize impacts to protected species. CVE, DEC and DPS Staff witnesses agree that implementation of the measures will avoid or minimize adverse impacts to RTE species (Tr. 196, 256, 261; CVE Rebuttal p. 17).³

H. Noise Impacts

Noise levels from overhead transmission line construction were evaluated using a screening level analysis approach (Exh. 4, p. 4-71). This calculation methodology examines the number and type of construction equipment by phase, as well as typical noise source levels associated with that equipment, to determine the composite sound levels for a standard distance of 50 feet and 1,000 feet (*Id.* at pp. 4-71–4-72). Construction sound will be attenuated with increased distance from the source (*Id.* at p. 4-73). Other factors, such as vegetation, terrain, and obstacles such as buildings will act to further limit the impact of construction noise levels (*Id.*). Actual received sound levels would fluctuate, depending on the construction activity, equipment type, and separation distances between source and receiver (*Id.*).

While line construction noise levels are expected to be greater than ambient conditions for some receivers, a significant reduction in the potential impact will result from construction occurring over relatively short, 50–400 foot stretches (*Id.*). Work in the proximity of any single

³ “CVE Rebuttal” are citations to transcript references in the July 24, 2015, CVE Rebuttal Panel Testimony filed in DMM on June 24, 2015 (Filing No. 120).

general location along the transmission lines will likely last no more than a few days to one week, as construction activities move along the corridor (*Id.*). Therefore, no single receptor will be exposed to significant noise levels for an extended period (*Id.*).

Project construction activities to be facilitated by helicopters will include the delivery of construction laborers, equipment, and materials to structure sites; structure placement; hardware installation; and wire-stringing operations (*Id.*). Helicopters generally fly at low altitudes; therefore, potential temporary increases to ambient sound levels will occur in the area where helicopters are operating as well as along their flight path (*Id.*). Helicopter operations would occur for short periods of time during daytime hours, and local residents will be contacted and notified in advance of helicopter operations as they progress along the Project ROW (*Id.*). No issues were identified in the proceeding with respect to the BMPs or Certificate Conditions related to noise.

I. Electrostatic And Electromagnetic Fields

The results of the EMF studies performed by CVE demonstrate that the EMF levels of the Project are well below the maximum levels at the edges of the ROW as recommended by Commission guidelines for electric transmission lines (Exh. 4, p. 4-77).⁴ EMF studies were performed for the cumulative impacts of the Proposed Project and Line 398 and calculations were based on the Electric Power Research Institute (“EPRI”) Red Book methods (2nd Edition, 1982). The calculations were made in accordance with the guidelines contained in the Commission’s Interim Policy Statement, *supra* (Exh. 4, p. 4-77). The EMF calculations for the Proposed Project were originally submitted in the Article VII Application and subsequently

⁴ See Case 26529, *Power Authority of the State of New York – Moses-Massena 230 kV Transmission Line, Massena-Moses 765 kV Transmission Line, and Massena-Quebec 765 kV Transmission Line*, Opinion No. 73-13: Opinion and Order Determining Health and Safety Issues, Imposing Operating Conditions, and Authorizing, in Case 26529, Operation Pursuant to Those Conditions (June 19, 1978).

updated to reflect the Applicant's Visual Mitigation Plan that reduced the average height of the proposed structures along the ROW (*Id.*). Accordingly, compliance with the Commission's EMF guidelines was also demonstrated under the Visual Mitigation Plan.

J. Invasive Species

Certain invasive species named on the Revised Interim List of Invasive Plant Species in New York State (NYSDEC, 2012) were observed in the ROW during the environmental assessment. To manage these potential impacts, CVE will implement the BMPs contained in Exhibit 24.

CVE consulted with DEC and DPS Staff to determine which invasive species are of regional concern, and the fall 2013 field work focused on identification of concentrations of invasive species with the potential to impact the function of wetland systems, potential rare species habitat, and other sensitive receptors (Exh. 24, p. 7-1). This preconstruction baseline survey will be used during the post-construction phase to evaluate invasive species populations (*Id.*). Areas containing an infestation will be clearly identified on construction plans and in the EM&CP (*Id.*). Prior to construction activities, CVE will develop an invasive species management plan that will facilitate the identification, control, and monitoring of invasive vegetation with the objective of preventing its spread (*Id.*). This plan will be submitted as part of the EM&CP and in accordance with the BMPs.

K. Visual Impacts

(i) Potential Project Visibility Will Be Modest or Negligible

CVE conducted an assessment of potential effects on visual resources within the Proposed Project area (the "Visual Resource Assessment" or "VRA") (Exh. 4, p. 4-20; Exh. 19, Attachment C; Exh. 20, Response to DPS Staff No. 1; Exh. 21, Responses to CVIC No. 4,

Dutchess County Nos. 10, 11, 12, and 13; Exhs. 23, 29, 30). Generally included within the assessment was an inventory of aesthetic resources of statewide significance as well as other resources, preparation of a viewshed model to conservatively estimate geographic locations from which Project components may be visible, preparation of visual photographic simulations providing predicted post-construction views from sensitive areas where the Proposed Project components may be visible, collection and presentation of existing views from historic resources of statewide significance, and completion of a historic-archaeological resources report that included an assessment of Project visibility and visual impacts as seen from historic properties in the Project area. Multiple field visits were also made by CVE's visual consultants (Exh. 19, Attachment C, p. 28; Exh. 23; Exh. 30; Tr. 184).

Views of the Project from within the Town of Pleasant Valley will occur at discrete locations, the majority of which already have a view of the existing Line 398 structures (Exh. 19, Attachment C, pp. 10, 34). The Line 398 structures have been a mainstay of the viewshed, having been installed approximately fifty years ago. Views are more common on properties and roadways in close proximity to the Project where localized structures and vegetation are less likely to provide a visual barrier. Open views are found along US Route 44 and Van Wagner Road, as well as Cady Recreation Park and Pleasant Valley Recreation Park.

The Project is consistent in visual character with the existing Con Edison Pleasant Valley Substation, the Central Hudson Gas and Electric Corporation Substation and the transmission structures currently visible in the Town and in the existing ROW (*Id.* at Attachment C, p. 7). Intervening topography, vegetation, and localized structures substantially screen views of proposed structures from other community centers along the ROW. While some open views may exist, they are typically filtered or framed, and generally limited to a few existing and

proposed structures. Where views of the Project and existing structures occur, they are often mitigated by distance, minimizing the perceived scale and visual contrast of the structures (*Id.* at Attachment C, p. 34).

Direct Project visibility will occur at all road crossings including local roadways, the Taconic State Parkway at the Project crossing location, US Route 44, and New York State Route 82. The visibility of the Project from these roads, however, is expected to include a view of existing transmission structures and/or conductors, and will be fleeting (*Id.* at Attachment C, p. 35). Visibility at road crossings is highly variable based upon roadway speeds, topography, and screening vegetation. At the crossing of the Taconic Parkway, the conductors crossing the road would be slightly visible but the towers are not prominent. While visibility is expected to be minimal along the roadways, the impact upon those travelers is significantly mitigated due to the relatively short duration of one's view of the Project while driving.

The Proposed Project will not be visible or will be only partially visible from most local parks. The parks with the greatest potential for visibility include Cady Recreation Park and Pleasant Valley Recreation Park because, like the existing Con Edison Line 398, the proposed transmission structures run adjacent to these parks. Visitors to these two parks, however, already are in close proximity to the existing Con Edison and Central Hudson Gas and Electric Corporation existing transmission structures and, while there will be foreground visibility of the proposed structures, they will not be out of character compared to the transmission structures already in the park (Exh. 19, Attachment C, p. 38). Furthermore, the structures are not the primary visual focal point at the parks but rather watching and participating in activities such as baseball are the central themes (Tr. 151–54).

As explained in the VRA (Exh. 19, Attachment C), the Proposed Project would result in only a modest increase of visibility along the Con Edison Line 398 ROW. Generally where the existing structures are visible, the Proposed Project will also be visible. Similarly, the proposed structures are not likely to be visible where the existing structures are screened. As explained more fully below, by siting the Proposed Project within the existing Con Edison Line 398 ROW and adjacent to the existing transmission towers, the Proposed Project only increases the area from which the new structures could be visible by less than 1% (Tr. 186; CVE Rebuttal p. 15). CVE's visual witness Matthew Allen characterized the difference in viewshed as "negligible" and "virtually identical" (Tr. 186). The Project's slightly taller, yet slender, structures may be visible but present only a modest incremental increase in visibility of transmission structures on the Line 398 ROW (Tr. 67; Exh. 19, Attachment C, pp. 12, 34). Similarly, the historic-architectural resources survey report found that there will be no significant adverse visual impacts to historic-architectural resources as a result of the Proposed Project.

(ii) CVE's Visual Assessment Is Conservative

It is important to highlight the conservative manner in which the visual analysis was conducted, together with the maximum reductions in tower height requested by DPS Staff, considering applicable safety, clearance, and EMF requirements, which culminated in the Applicant's Visual Mitigation Plan (Exh. 32; CVE Rebuttal p. 15).

Viewshed mapping is a process step in visual analysis that over-predicts visibility of the transmission structures and is, therefore, a very conservative representation of the actual visibility of the CVE structures (Tr. 71; Exh. 19, Attachment C, p. 9). The potential screening value of site-specific vegetative cover such as small hedgerows, street trees and individual trees, and other areas of non-forest tree cover are not represented in the viewshed analysis.

Furthermore, the dataset in the model does not include the screening value of existing built structures such as homes, businesses, multi-story residential buildings, and office buildings. The viewshed map in the VRA supplementing the Article VII Application, therefore, conservatively overestimated potential project visibility in areas where the Proposed Project may actually be substantially screened from view (Tr. 71). This site-specific vegetative and “built structure” screening remains effective even though it could not be factored into the viewshed analysis but its mitigative effects were considered in the opinions of CVE’s visual experts (*Id.*; Exh. 19, Attachment C, pp. 12, 40).

Moreover, forested areas were assumed in the VRA to be 40 feet in height (Exh. 19, Attachment C, p. 10). Most trees in forested portions of the Project three-mile study area are significantly taller, generally reaching 70–75 feet tall (Tr. 72–73). This additional 30–35 feet in forest height, therefore, provides substantially more actual vegetative screening of the Proposed Project.

To assess the viewshed with the actual, taller vegetation, CVE performed additional viewshed analysis of the current mitigated design assuming a vegetation height of 75 feet (Tr. 72–73). Based upon the 40 foot height of the forested areas, and ignoring the conservative assumptions explained above (assumptions which excluded the potential screening from building structures and non-forested vegetation such as hedgerows, side walk trees and the like), approximately 19% of the three-mile study area would have views, most partial, of one or more proposed transmission towers. Using an assumed tree height of 75 feet in forested areas, however, reduces the area potentially affected to approximately 12% of the study area; a 37% reduction of the visibility of the Proposed Project in the viewshed area (*Id.*).

Accordingly, no proposed transmission towers will be visible from approximately 88% of the three-mile study area; it will likely be significantly less due to the overestimation of Project visibility predicted by the viewshed analysis (the screening provided by existing buildings and non-forested vegetation). Also, in most cases where the proposed towers will be in view, the existing Line 398 towers are already visible (CVE Rebuttal p. 15). As noted above, viewshed modeling of the existing Con Edison lattice towers compared with the CVE towers shows a difference of less than one (1) percent in the area of potential visibility, meaning that the Proposed Project may increase visibility by no more than 1% of the affected viewshed area (*Id.*). As noted above, this incremental change was described by CVE's visual experts on the witness stand as "negligible" and "virtually identical" (Tr. 186).

(iii) The Visual Mitigation Plan

During the proceeding, DPS Staff requested CVE to ascertain whether it was technically feasible to reduce the heights of the Proposed Project transmission structures, from what was originally proposed in the Article VII Application, based upon the NYISO SUF specifications, in order to further minimize any potential visual effects. CVE did so, and it resulted in the Visual Mitigation Plan embodied in Exhibit 32 and upon which the aforementioned less than 1% incremental visibility area was based.

The Visual Mitigation Plan successfully reduced the average height of proposed pole structures along the Line 398 ROW by 14.5 feet (Tr. 117). Within downtown Pleasant Valley, CVE was able to reduce the three proposed structures, that will be co-located near the existing structures, by an average of 43 feet each (Tr. 180).

The proposed pole heights have been minimized and no evidence was introduced contradicting this conclusion. The Proposed Project, which reflects the Visual Mitigation Plan,

was designed to satisfy NYISO interconnection standards and the Commission EMF guidelines. The Proposed Project was also designed in accordance with Con Edison's requirements and standards for clearance, structural integrity, and live-line maintenance features for its workers to maintain system reliability, including employee safety features such as proper arm spacing, distance between the conductor and pole shaft, and federally-required fall protection criteria (worker platforms and ladders) (Tr. 62).

The state-of-the-art transmission line facilities of the Proposed Project were, therefore, carefully designed to satisfy the myriad applicable requirements for reliability, safety and the Commission's EMF guidelines and by necessity must involve complex equipment and structures.

When the Con Edison Line 398 was built, it was located 50 feet north of the 250 foot ROW centerline. This location provided an equal amount of space for a second transmission line, 50 feet off the ROW centerline on the south side, where the CVE line is proposed to be located. The CVE project centerline and edge of ROW distances essentially mirror that for Con Edison's Line 398. Fifty years ago, Con Edison planners very likely laid out this ROW to provide for a symmetrically, co-located transmission line (Tr. 63).

The CVE environmental and engineering witnesses testified that, taken together, these design features minimize visual impacts of the Proposed Project, considering the state of available transmission tower technology, applicable clearance and safety standards, and the nature and economics of the various alternatives (as more fully discussed below in connection with the third statutory finding) (Tr. 65). The Proposed Project design results in an electric transmission line that is aesthetically unified and generally symmetrical with the existing transmission infrastructure within view (*Id.*). The DPS Environmental Panel agreed that the Commission could make this statutory finding as well (Tr. 197).

(iv) CVIC's Objections Are Baseless

CVIC witness Allan Page argued that placing different types of transmission structures in the same ROW creates a “hodgepodge design” and a “confused mixture” of structures, and that the Proposed Project will have a significant impact on the host communities (Tr. 412).

Commission precedent and policy, as explained below, strongly favors co-location of facilities in the same ROW without limitation on the vintages of facilities. Mr. Page, admittedly, is not a visual expert (Tr. 423) and his testimony on potential visual impacts should be given little or no weight.

The only expert sworn, visual testimony in the record, sponsored by witnesses that appeared for cross examination, is presented by CVE and DPS Staff. The CVE Rebuttal Panel refuted the arguments of Mr. Page by explaining that co-location of new transmission infrastructure within an existing ROW with different but visually similar structure styles and heights is common practice and is always the preferred option in order to avoid disturbance in previously undeveloped areas (CVE Rebuttal p. 6).

The CVE Rebuttal Panel testified that both the Line 398 and CVE tower types are large transmission towers, vertical in form, carrying multiple conductors that are connected to the towers by insulators (*Id.*). The Proposed Project is highly consistent in visual character with the existing transmission infrastructure already in view; not incongruous, dissimilar, dissonant or grossly different as claimed by Mr. Page or the CVIC commenters (Tr. 65). The components of the towers are not likely to be dissected by viewers as Mr. Page appears to assume; rather, they are similar in size, scale and function (Tr. 64–66). Except for relatively few roadside close-ups, most views will be at long distances and obstructed to varying degrees by vegetation or buildings (Tr. 73). Any perceived difference in form or height is unlikely (Tr. 112). Almost all of the

proposed structures will be located side-by-side with the existing structures creating a symmetrical visual appearance and avoiding any discordant or random spacing of towers (Tr. 64–65).

It is Commission policy to site new transmission projects in existing ROWs (Tr. 67).⁵ To underscore the preference for using existing ROWs because of fewer expected environmental impacts, the Article VII intervenor fund provisions incentivize an applicant to employ existing ROWs, without any limitation on what structure vintages may be co-located therein. An Article VII applicant's intervenor fund obligation is significantly less when 90% or more of a proposed project (as is the Proposed Project) is to be located in an existing ROW (PSL § 122(5)).

Moreover, the Commission routinely approves proposed Article VII projects where the new structures are different from the existing structures, including projects where monopoles, similar to those proposed by CVE, are to be co-located with existing lattice and H-Frame structures.⁶ Most recently, the Commission encouraged prospective Article VII applicants to co-locate new transmission projects within existing ROWs, again with no limitation on facility vintages, in its recent Order Addressing Public Policy Requirements for Transmission Planning Purposes.⁷

In addition, the CVE visual witnesses explained the Proposed Project's consistency with the DEC Visual Policy as follows:

⁵ See Case 14-T-0017, *Proceeding on Motion of the Commission to Develop an Expedited Process for Siting Transmission on Existing Rights-of-Way*, Order Establishing Policy Statement on Expedited Process for Siting Transmission (Aug. 15, 2014).

⁶ See, e.g., Case 92-T-0114, *Application of Niagara Mohawk Power Corporation for a Certificate of Environmental Compatibility and Public Need for the construction of approximately twenty-eight miles of 345 kV transmission facilities and associated equipment from the Independence Station cogenerating facility located in the Town of Scriba, Oswego County, and the other being Niagara Mohawk's existing Clay Substation in the Town of Clay, Onondaga County*, Opinion and Order Granting Certificates of Environmental Compatibility and Public Need (Aug. 20, 1993), at Appendix A, B-3.

⁷ Case 14-E-0454, *In the Matter of New York Independent System Operator, Inc.'s Proposed Public Policy Transmission Needs for Consideration*, Order Addressing Public Policy Requirements for Transmission Planning Purposes (July 20, 2015), at 29.

As further support, in its definition of visual significance, the New York State Department of Environmental Conservation (“NYSDEC”) Program Policy on Assessing and Mitigating Visual Impacts (DEP 00-2) (“DEC Visual Policy”) states, “Aesthetic impact occurs when there is a detrimental effect on the perceived beauty of a place or structure. Significant aesthetic impacts are those that may cause a diminishment of the public enjoyment and appreciation of an inventoried source, or one that impairs the character or quality of such a place” (DEP 00-02, p. 5). The VRA inventoried and evaluated visual resources of statewide importance as defined by DEC Visual Policy (DEP 00-2, pp. 3–4; Exh. 19, Attachment C, p. 15). Based on the co-location of the project within an existing transmission ROW, the incremental increase in visibility of transmission infrastructure does not constitute a detrimental effect on the perceived beauty of any inventoried resource; nor will the project cause the diminishment of public enjoyment or impair the character or quality of such a place. Based on the DEC Visual Policy definition, the project will not result in a significant visual impact.
(Tr. 68)

(v) Summary

The negligible increase in visibility of the Proposed Project, therefore, will be considered in the next section concerning the third statutory finding the Commission must make where minimized adverse environmental impacts are balanced against other pertinent considerations such as the state of available technology and the nature and economics of the proposed CVIC alternatives.

3. The Third Statutory Finding: The Proposed Project Represents The Minimum Adverse Environmental Impact, Considering The State Of Available Technology And The Nature And Economics Of The Various Alternatives, And Other Pertinent Considerations

Introduction

The preceding section of this brief summarized the record evidence supporting the finding that environmental impacts of the Proposed Project have been minimized considering the state of available technology required to construct and operate a major transmission facility and the mitigation measures technically and reasonably available to minimize impacts.

The only alternative “mitigation measures” proposed by any party were the four options to replace the Proposed Project advocated by CVIC witness Mr. Page, in order to avoid co-locating the Project adjacent to Con Edison’s existing Line 398. As explained *supra*, the record overwhelmingly shows that the Proposed Project’s incremental visual impacts are modest, negligible and insignificant, and wholly consistent with Commission policies so that the further mitigation argued by CVIC is not warranted. Nevertheless, the record shows that each alleged mitigation option proposed by CVIC is patently unreasonable.

A. CVIC Proposed Option 1

Option 1 would involve reconductoring the existing Con Edison 398 Line to accommodate the output of the Energy Center and the existing capacity of Line 398 together with installing a permanent Special Protection Scheme (“SPS”) to trip or isolate the Energy Center in the event of an abnormal electric system condition (Tr. 424–425). Mr. Page, however, acknowledges that this permanent SPS design was rejected by NYISO in two separate class year studies as not being sufficiently reliable (Tr. 425–426).

In the “Class Year 2011 Facilities Studies System Upgrade Facilities Study” the NYISO required a second set of transmission structures (Exh. 13, p. E-4-6):

[u]nder the system condition where the Pleasant Valley-to-Cricket Valley segment of Line 398 has been lost or is otherwise out of service, the entirety of the Generation Facility's output would be forced onto the ISO-NE system. In this scenario, the NY-NE import capability is adversely impacted due to overloading of the Norwalk Northport Cable ("NNC") across Long Island Sound. This condition is of particular concern to ISO-NE because they have no direct operational dispatch control over the Generation Facility as it is part of the NYISO system.

E-4.3.2.2 – NYISO System Upgrade Facilities Determination Based on the unacceptable degradation of thermal transfer limits and the cross-ISO reliability concerns described above, NYISO initially identified two potential solutions to address the impacts:

Option 1: Reconductoring of Pleasant Valley to Cricket Valley to Long Mountain, along with upgrading the NNC Path elements (i.e., the Northport PAR, the Norwalk autotransformer, and the three 138 kV Norwalk CT to Northport Long Island NY submarine cables).

Option 2: Adding a second Pleasant Valley to Cricket Valley 345 kV line, while reconductoring the Cricket Valley to Long Mountain 345 kV segment (the Project proposed here).

Based on the subsequent feedback received from the Long Island Power Authority ("LIPA") ISONE, NU, and Con Edison, NYISO concluded that Option 1 is unacceptable. Without a second tie line, the Generation Facility will continue to be isolated into ISO-NE's system for a single contingency (i.e., loss of the segment of Line 398 between Pleasant Valley and the Generation Facility), with 40% of the flow being picked up by LIPA (via Connecticut and the NNC Path), while ISONE has no operational control over the Generation Facility. After rejection of Option 1, NYISO concluded that Option 2 was the only viable method to properly mitigate the operability and reliability concerns identified. As such, the Project is required by NYISO as a SUF for the Generation Facility, as it mitigates the effects of isolating the project into ISO-NE territory and restores the NE to NY interface thermal limits to an acceptable level (SUF Report, Section 2.1.2.1, pp. 27-28).

Subsequently, the NYISO specified the CVE Project as the required SUF in the 2012 Facilities Study. Moreover, NYISO in its draft 2015 CVE SRIS is also including the Proposed Project as the SUF for Class Year 2016 (CVE Rebuttal p. 21).

On the other hand, as explained by the CVE Rebuttal Panel, a permanent SPS reduces system reliability because the period when the SPS would be operated is when an abnormal

event has disrupted the transmission system and the NYISO is compelled to operate the electric system in a manner that deviates from its reliability rules and practices (*Id.* at pp. 18–19). An SPS requires a complex automatic system of metering devices, relays, and communications that act to take off-line or decrease the output of, a generator at the time some other electric system element has suffered a fault or outage (*Id.* at 19). Taking operating generation off a system that has already suffered a major fault or outage occurs at a very poor time for the system dispatchers because they may not be able to dispatch other generation sources to replace the generation lost due to the fault or outage, as well as the Energy Center that had been tripped by the permanent SPS. The permanent SPS would compound problems for system dispatchers, rather than facilitate system solutions.

Con Edison witness Michael Forte agreed that a permanent SPS would reduce system reliability because of its complicated operational requirements (Tr. 354). According to Mr. Forte, a permanent SPS “. . . imposes another contingency (*e.g.*, trip of a transmission line or runback of generation) on the electric system in order to address the overload created by the initial contingency” (Tr. 354).

Using a permanent SPS creates the risk of shedding customer loads as well as widespread outages (Tr. 375); for example, if the SPS tripped the Energy Center at a peak day delivery during the summer (Tr. 376). As support for his opinion, Mr. Forte testified that an SPS operated as expected in another region of the country but tripped generation that was needed. The tripped generation was required because of other, unexpected system events that were occurring at the same time. The result was a blackout (Tr. 376–377). This example was not refuted or tested during cross-examination by CVIC. In the same vein, DPS witness Edward

Schrom emphasized that an SPS could lead to blackouts and price spikes for consumers (Tr. 305, 332).

CVIC appears to argue that the Applicant or Con Edison should again voluntarily request the NYISO to authorize a permanent SPS (Tr. 84–85). The NYISO, the Independent System Operator of New England (“ISO NE”), the New York State Reliability Council (“NYSRC”), and the Northeast Power Coordinating Council (“NPCC”) would all need to approve a permanent SPS (Tr. 325) but NYISO and ISO NE have already rejected a permanent SPS twice for the CVE Energy Center (Tr. 305). Based upon their respective presentations in this proceeding, DPS and Con Edison would oppose another request for a permanent SPS. In addition, the NPCC would look to NYISO for a recommendation, and NYISO has already twice rejected an SPS (Tr. 324–327, 381–387).

Mr. Forte also explained that the Proposed Project is the “poster child” for a case against a permanent SPS because of the interregional flows, overloads, facility damage and degraded transfer limits that could occur to facilities in ISO NE and the Norwalk-Northport Cable to Long Island (Tr. 401). Mr. Forte, therefore, considered the SPS option “dead in the water” (Tr. 387).

Accordingly, an SPS cannot be considered an “available technology” or reasonable alternative that could credibly be compared to the Proposed Project.

B. CVIC Proposed Option 2

Mr. Page’s proposed Option 2 would involve building a new set of monopole structures on the south side of the ROW, as CVE proposes, but Mr. Page would install two circuits on this new line (a double circuit line) (Tr. 424). The Con Edison 398 towers would be removed, at ratepayers’ expense. Mr. Page acknowledges that the NYISO rejected for reliability reasons this double circuit design (Tr. 428–429). He also agrees that a double circuit “. . . on separate and

distinct towers is more reliable than a double circuit on a single set of towers” (Tr. 421). While Mr. Page may believe the NYISO’s planning is very conservative (Tr. 429–430), the fact remains that the option is prohibited because it would violate the NERC and NYSRC reliability standard that an outage of a double circuit tower is considered a single, standard design contingency (the “N-1” standard) and, therefore, is a non-starter (Tr. 389). NERC and NYSRC criteria and standards consider the loss of a double circuit line (a/k/a tower contingency) as a single “event” and as a standard design contingency (Tr. 155–156). The system could not withstand the loss of both circuits; therefore, CVIC’s Proposed Option 2 fails the N-1 standard. From a reliability perspective, NYISO, once again, would conclude that a double circuit line is less reliable than two circuits on two separate lines and would not approve CVIC’s Proposed Option 12.

As explained, *supra*, the NYISO rejected the single-line, double circuit arrangement to avoid overloading the NY-NE import capability and the Norwalk-Northport Cable across Long Island Sound. ISO NE, the Long Island Power Authority, Northeast Utilities, and Con Edison opposed the double circuit configuration and NYISO subsequently rejected it (Tr. 163–164).

It is not surprising that a single set of transmission towers carrying a double circuit line is less reliable than two separate line structures. The CVE Rebuttal Panel explained that certain events could affect two circuits on a single transmission line and are less likely to affect two single circuit transmission lines (CVE Rebuttal p. 22). These include back flash from lightning hits, wind damage, damage from smoke, fire and pollution, damage from vehicle, or farm equipment collisions and tree fall-in events. Similarly, DPS witness Schrom also opposed a double circuit configuration because of the risk of loss of both circuits from a lightning strike,

causing the electrical overload to Connecticut and on the NNC Cable to Long Island (Tr. 312–315). According to Mr. Schrom:

If both line 398 and the Cricket Valley Line were placed on one structure, and a lightning strike were to hit one circuit, the air would ionize the circuit and it would fault the second circuit also. (Tr. 302)

Mr. Schrom also reviewed two instances where this occurred, both widespread outages, including the 1977 New York City Blackout (*Id.*).

Con Edison witness Forte also opposed the double circuit arrangement. He too agreed that NYISO previously rejected it as violation of the N-1 standard (Tr. 355). Mr. Page acknowledged that the NYISO would need to seek some sort of exemption from applicable reliability standards for this option to be even considered feasible (Tr. 431). But an exemption from a fundamental reliability criteria is wishful thinking at best; Mr. Forte testified that there are no exemptions to the NYSRC criteria for alleged visual impacts (Tr. 389). Mr. Forte also argued alleged alternatives cannot be considered in an Article VII proceeding if they fail reliability criteria (Tr. 356). CVE concurs with this interpretation of Article VII; an unreliable alternative could under no circumstance be considered “available technology” under the third statutory finding the Commission must make.

Furthermore, the CVE Rebuttal Panel explained, without challenge, that a double circuit on a single set of monopoles would be taller than the CVE Project, not shorter, due to line clearance requirements. On average, the double circuit poles would be 32 feet taller than what is currently proposed by CVE (CVE Rebuttal p. 23). Reducing structure spacing to decrease structure height, as Mr. Page seems to suggest, is also impractical for the hilly terrain in Dutchess County and on the Line 398 ROW where the structures are located (*e.g.*, long spans) to take advantage of the rolling terrain, (*Id.* at p. 23–24). Hypothetically setting aside the failure to

satisfy reliability criteria, and also assuming hypothetically that shorter structure spans could be realistically built in the Dutchess County hilly terrain, the CVIC Option 2 would result in structures that are taller than the Proposed Project and double the number of structures, with increased environmental effects to wetlands, rare, threatened and endangered species and/or their habitat (CVE Rebuttal p. 24).

Finally, both the Con Edison and DPS Staff witnesses were emphatic that Line 398 still has a long service life ahead of it. Mr. Forte stated that Line 398 had at least 40 more years of a useful service life (Tr. 394, 398), it would be irresponsible to replace Line 398 and it would make no sense to saddle ratepayers with this additional expense (Tr. 358). Mr. Schrom stated that the line was in good condition and “[e]very day that a facility like line 398 operates beyond its depreciated life as determined by the applicable depreciation schedule is a benefit for ratepayers” (Tr. 307). Accordingly, Option 2 is not a reasonable or available alternative.

C. CVIC Proposed Option 3

Option 3 would also entail completely removing Line 398 between Pleasant Valley and the Energy Center and building essentially two CVE Projects: two separate circuits on two new sets of monopole structures. Mr. Page incorrectly states the structural heights would be reduced; they would be the same as the Proposed Project’s structure heights, since the voltage and design criteria for the circuit replacing the Con Edison 398 line would be the same as for the Proposed Project (CVE Rebuttal pp. 25–26).

Both the NYISO and Article VII processes would need to be repeated to review this option. The cost of the project would more than double as not only would a second CVE project be required (*Id.*), but the cost of removing Line 398 would also be incurred. Con Edison ratepayers would be asked to shoulder this unnecessary expense. As explained *supra*, it is

unrefuted that Line 398 is functioning properly and is in good stead for approximately the next 40 years.

Option 3 would also increase the potential for environmental impact. Additional access roads and foundations would be required for the second set of monopoles, construction of which would likely subject more acreage, containing threatened or endangered species and/or their habitat to disturbance (Tr. 211–212). While the Project BMP’s would be applied to minimize impacts, the fact remains that more acreage would be exposed and there would be greater environmental impacts.

Mr. Schrom (Tr. 327) and Mr. Forte (Tr. 357) also oppose the adoption of CVIC’s Option 3 because removing Line 398 and building a new, unnecessary second line would impose additional costs on consumers. Accordingly, the increased costs to ratepayers, increased environmental impacts, project delays and lack of any visual benefits soundly warrant rejection of this option.

D. CVIC Proposed Option 4

As to CVIC proposed Option 4, Mr. Page argues that undergrounding is the least preferable option (Tr. 432). He agrees that undergrounding requires “two imposing transition stations being added,” in the Town of Pleasant Valley, to transition from underground to overhead at the Con Edison substation (Tr. 432).

In the Article VII Application, CVE presented an analysis of undergrounding the 2.7 miles of the Proposed Project in the Town of Pleasant Valley (Exh. 3, pp. 3–5). Undergrounding that segment would increase environmental impacts significantly, and increase costs by about eight-fold, from \$7 million to \$55 million for only 3 miles of 14.6 mile new transmission line to Pleasant Valley (*Id.* at pp. 3–8).

Undergrounding the entire 14.6 mile line was then evaluated in response to DPS Interrogatory 45 (Exh. 20). Construction of an underground 345 kV transmission line would involve significant permanent environmental impacts, including irreparable damage to threatened and endangered species habitat as well as impacts to freshwater wetlands than would be caused by the Proposed Project. Installation of a 14.6 mile underground 345 kV transmission line would involve displacement/removal of tons of rock and soil to accommodate a trench five (5) feet wide and seven (7) to ten (10) feet deep in which the conductors would be installed. Furthermore, substantial additional excavation of rock and soil would be required every 1,500 feet or so along the transmission line to accommodate multiple, ten (10) foot by thirty (30) foot wide vaults, which are required to allow access to the transmission lines' conductors.

The existing ROW contains considerable bedrock near or at the surface, much of which is habitat for the endangered timber rattlesnake. This habitat would be lost if the transmission line were installed underground. Furthermore, underground construction would involve permanent impacts to freshwater wetlands, much of which are habitat of the endangered Blanding's and Bog turtles.

The cost for undergrounding the entire transmission line would be many times higher than the estimated cost for the proposed Project—approximately \$270,000,000 vs. approximately \$56,000,000 (CVE Rebuttal p. 27; Exh. 21, Response to CVIC No. 2).

DPS witnesses all oppose undergrounding due to these potential environmental impacts (Tr. 197–198), as well as potential construction problems requiring rock blasting, and the excessive costs (Tr. 294, 308). Mr. Forte of Con Edison also opposed undergrounding, agreeing with CVE that the NYISO studies would need to be restarted; additional routing studies would need to be performed to ascertain if segments would need to be placed aboveground, requiring

additional transition stations (Tr. 358); and, Con Edison would be required to position material, equipment and qualified personnel “. . .to operate and maintain the new underground feeder at significant cost” (Tr. 359).

Accordingly, the record evidence overwhelmingly supports the Commission making the third statutory finding that the Proposed Project represents the minimum adverse environmental impact, considering: (1) the very modest incremental or negligible visibility of the Proposed Project; (2) the technology available to construct and operate transmission lines, taking into consideration security, maintenance, EMF and clearance requirements to which these lines must adhere, (3) the inferior electric system reliability provided by CVIC Options 1 and 2, making them unavailable; (4) the excessive costs to ratepayers created by CVIC Options 2, 3, and 4; (5) the increased environmental impacts that would be caused by CVIC Options 3 and 4; and (6), the permitting delays associated with all of the CVIC options. The very modest incremental visual visibility of the Proposed Project simply does not justify imposing these unnecessary and detrimental impacts on ratepayers.

4. The Fourth Statutory Finding: (1) No Part Of The Proposed Project Should Be Located Underground; And (2) The Proposed Project Conforms To A Long-Range Plan For Expansion Of The Electric Power Grid Of The Electric Systems Serving This State And Interconnected Utility Systems, Which Will Serve The Interests Of Electric System Economy And Reliability

A. Undergrounding Is Opposed By The DPS Staff, Con Edison, And The Applicant

As explained, *supra*, the record evidence demonstrates that undergrounding the Proposed Project would cause unnecessary and significant adverse environmental impacts (CVE Rebuttal p. 26; Tr. 197–198; Exh. 3, Exh. 20, Response to DPS Staff No. 45), quadruple the capital costs of the Project (CVE Rebuttal p. 27; Exh. 21, Response to CVIC No. 2), create logistical operation and maintenance issues for Con Edison, significantly raise costs to Con Edison’s

ratepayers and require permitting to be restarted at both the PSC and the NYISO (CVE Rebuttal p. 18; Tr. 352–353). No party introduced any evidence challenging or refuting the facts presented by the CVE, DPS (Tr. 200–201), and Con Edison (Tr. 358–359) as to why undergrounding should be summarily rejected. Accordingly, the record supports the Commission making this finding (Tr. 197, 295).

B. The Proposed Project Conforms To Long Range Plans

There is no dispute in the record that NYISO determined in two separate Class Year’s interconnection studies (2011, 2012) that the Proposed Project conforms to the NYISO’s planning requirements for projects seeking to interconnect with, including expanding, the New York State (“NYS”) bulk electric transmission system (CVE Rebuttal pp. 20–21; Tr. 292–293; Exh. 13). The NYISO twice has required in these studies that the Proposed Project be constructed as the SUF to protect the electric power grid from adverse reliability impacts and to otherwise enhance system reliability, not only for NYS but for the ISO-NE interconnected utility system (Tr. 305). The record evidence is uncontroverted that the Proposed Project will again be required by the NYISO in the upcoming 2016 Class Year Facility Study determinations (CVE Rebuttal pp. 20–21). The NYISO CVE SRIS for Class Year 2016 already assumes the Proposed Project will be the required SUF for the CVE Energy Center (*Id.*). The proposed certificate conditions also include a requirement that CVE obtain all necessary NYISO approvals before operation may commence (Exh. 39, pp. 31, 36, 39).

The record also demonstrates, without challenge, that the CV Energy Center promotes objectives in the 2009 State Energy Plan (“2009 SEP”) (Exh. 13, p. E-4-2). The following five 2009 SEP objectives will be satisfied by the Proposed Project interconnecting the Energy Center to the bulk power grid: maintain electric system reliability, reduce greenhouse gas emissions

(“GHG”); stabilize energy costs and improve economic competitiveness; and, reduce public health and environmental risks. The Commission also certified the Energy Center to be built and operated under Section 68 of the PSL, finding, *inter alia*, that the Energy Center is in the public interest and “. . . is necessary and convenient for the public service,”⁸ because it would reduce transmission congestion, increase system reliability, displace higher air pollutant emissions from less efficient plants, reduce wholesale energy prices and otherwise add an efficient, cleaner, economic generating plant in an area of the State where such capacity is needed (Exh. 13, p. E-4-2; Tr. 60). Accordingly, the Proposed Project conforms to the 2009 SEP. No testimony was filed disputing any of this evidence in the instant Article VII proceeding.

In addition, the Proposed Project is consistent with the goals and strategies in the recently-issued NYS 2015 Energy Plan (“2015 SEP”).⁹ According to the 2015 SEP, “[c]entral power plants and the transmission network are, and will remain, the backbone of our electric system.”¹⁰ In this regard, the 2015 SEP states that:

[r]eliability is a central objective of the State’s energy system. Power outages across the country are lasting longer, resulting in greater economic losses each year. The growth of the digital economy means that even momentary blackouts can have significant impacts on businesses and residents.

New York’s energy delivery infrastructure demands attention, as evidenced by the projected \$30 billion investment required over the coming decade to maintain reliability. Continued investment to upgrade and modernize the existing transmission and distribution system is critical to REV’s success.¹¹

⁸ Case 11-E-0593, *supra*, Order Granting Certificate of Public Convenience and Necessity and Establishing Lightened Ratemaking Regulation (Feb. 14, 2013), at 18, 20.

⁹ New York State Energy Planning Board, The Energy to Lead – 2015 New York State Energy Plan Volume 1, available at <http://energyplan.ny.gov/Plans/2015>.

¹⁰ *Id.* at 14.

¹¹ *Id.* at 12 (footnotes omitted).

As detailed *supra*, the record evidence squarely demonstrates that the Proposed Project is required by the NYISO, and supported by DPS and Con Edison, to maintain and enhance the reliability of the bulk transmission system in order to interconnect the CVE Energy Center.

Similarly, the 2015 SEP articulates other objectives that are promoted by the Proposed Project:

[c]ontinued investment in the maintenance, repair, and upgrade of the State's generation and transmission systems is an essential component in improving New York's infrastructure reliability and resiliency. While investment in the transmission infrastructure will indeed be necessary, those investments should be optimized through innovative strategies that eliminate waste, improve overall system efficiency, and include private capital investment where practical.¹²

The Proposed Project will make use of empty space on an existing ROW that, fifty years ago, was laid out to host a second transmission line, thus optimizing the natural resources of the State's electric system. The Proposed Project will interconnect the CVE Energy Center, which the Commission found will promote electric system efficiency by adding a new, highly efficient, combined cycle generating facility in an area of the State that could benefit from lower energy prices (Exh. 13, p. E-4-1; Tr. 60). Moreover, the Proposed Project will be financed through private capital investment.

The 2015 SEP also provides that an environmental imperative of the State is the reduction in air pollutant emissions. According to the SEP:

[c]lean air and clean water are essential to New Yorkers' health and quality of life as well as the State's growing tourism business and other economic development opportunities. The State is also very focused on reducing its GHG emissions, 89% of which stem from New York's energy sector.¹³

One of the targets established in the SEP is:

¹² *Id.* at 13.

¹³ *Id.* at 11.

40% REDUCTION IN GHG EMISSIONS FROM 1990 LEVELS

Reducing GHG emissions from the energy sector – power generation, industry, buildings, and transportation – is critical to protecting the health and welfare of New Yorkers.¹⁴

The modeling submitted by CVE and cited by the Commission in the CPCN Order predicts that the Energy Center’s highly efficient operation will reduce regional air pollutant emissions by displacing less efficient power plants, including a reduction in greenhouse gas emissions on a regional basis (Tr. 61; Exh. 13, p. E-4-2).¹⁵

Lastly, the 2015 SEP cites energy affordability as an objective for the State. According to the 2015 SEP:

[t]he State needs to maintain its focus on affordability, so energy bills for the State’s residential customers constitute a declining percentage of their disposable income, and more competitive industrial rates contribute to the growing mix of attributes that will attract new businesses to, and retain existing businesses in, New York. More needs to be done to lower rates given utility costs are frequently cited as barriers to business relocation or expansion across the State. [footnote omitted]¹⁶

The Commission found that the Energy Center “. . . is expected to provide cost effective electricity with lower emissions than most existing generating facilities.”¹⁷ In this regard, Exhibit 13 (p. E-4-4) in the instant Article VII Application explains that the Energy Center is predicted to create production cost savings over a ten year horizon of approximately \$231 million to \$330 million due to the reduction in congestion costs.

¹⁴ *Id.* at 45.

¹⁵ Case 11-E-0593, *supra*, Order Granting Certificate of Public Convenience and Necessity and Establishing Lightened Ratemaking Regulation (Feb. 14, 2013), at 15.

¹⁶ New York State Energy Planning Board, The Energy to Lead – 2015 New York State Energy Plan Volume 1, at 9–10, available at <http://energyplan.ny.gov/Plans/2015>.

¹⁷ Case 11-E-0593, *supra*, Order Granting Certificate of Public Convenience and Necessity and Establishing Lightened Ratemaking Regulation (Feb. 14, 2013), at 1.

For all of these uncontroverted reasons, there is ample basis for the Commission to make the fourth Article VII statutory finding. DPS Staff also supports the Commission making this finding (Tr. 295).

5. The Fifth Statutory Finding: The Proposed Project Conforms To Applicable State And Local Laws Except Where The Applicant Requests That The Commission Refuse To Apply Certain Local Requirements

No party disputed the Applicant's detailed demonstration that the Proposed Project will conform to applicable state and local requirements (Exh. 7; Exh. 20, Responses to DPS Staff Nos. 28–31). Nor did any party oppose CVE's request to have the Commission refuse to apply certain local requirements. The local requirements for which CVE requests waiver are listed in Proposed Certificate Condition C.9 (Exh. 39, pp. 2–3). The detailed justification, for each request, explaining why each local requirement 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 such municipality” (PSL § 126.1(f)), was first addressed in Exhibit 7, but updated extensively in Exhibit 20 (Responses to DPS Staff Nos. 28–31). The DPS Environmental Panel testified, unchallenged, that the Commission can make the finding that applicable State and local substantive requirements will be met and that “. . .it should refuse to apply the local substantive requirements specified by the applicant” (Tr. 197).

Accordingly, the Commission can make the fifth Article VII Statutory Finding.

6. The Sixth Statutory Finding: The Proposed Project Will Serve The Public Interest, Convenience And Necessity

As noted, *supra*, with respect to the Energy Center, the Commission found that: “[t]he Cricket Valley project is in the public interest” and that “. . .the Cricket Valley Project is necessary and convenient for the public service.”¹⁸ The CPCN Order describes the multiple state, regional and local affordability, reliability, environmental, employment and economic growth benefits that the Energy Center promises the citizens of the State. The record evidence in the instant Article VII proceeding demonstrates that the Proposed Project is the choice of the NYISO for the safe and reliable interconnection of the Energy Center and the alternative configurations proposed by CVIC are unreasonable, as explained above. This conclusion is supported by DPS Staff and Con Edison; DEC and Ag & Mkts also support, respectively, the environmental and agricultural certificate conditions (Exh. 39), BMPs (Exh. 24) and EM&CP Development Plan (Exh. 40) for the construction and operation of the Proposed Project.

Accordingly, the Commission can make the sixth, and final, statutory finding that the Proposed Project will serve the public interest, convenience and necessity.

¹⁸ *Id.* at 18, 20.

CONCLUSION

For the reasons stated herein, the Commission should issue forthwith a certificate of environmental compatibility and public need for the Proposed Project, adopting the Proposed Certificate Conditions (Exh. 39), the BMPs (Exh. 24) and EM&CP Development Plan (Exh. 40). In addition, the Section 401 Water Quality Certification should be issued upon issuance of the Article VII certificate by the DPS Chief of the Environmental Certification and Compliance Section, as recommended by DPS (Tr. 197).

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Respectfully submitted,

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