Generation Interconnection
Facilities Study Report

For
PJM Generation Interconnection Request
Queue Position AC1-053
Lanesville – Brokaw 345 kV

Revision 0

April 2022

.

TABLE OF CONTENTS

A. FACILITIES STUDY INTRODUCTION

1. PROJECT DESCRIPTION

The Interconnection Customer, Invenergy Wind Development, LLC. (IC) has proposed the construction and interconnection of Top Hat Wind Energy Center, consisting of 200 MW of wind generation. This proposed wind farm generation facility will be located near Logan County, Illinois, will interconnect with ComEd transmission system and consist of eighty(80) 2.5 MW GE wind turbines.

The Top Hat Wind Energy Center generation facility will be interconnected to 345kV Deer Creek – Mount Pulaski transmission line L18806, via construction of new interconnection substation with three (3) 345kV breakers positioned in a breaker and a half configuration (TSS 987 Beason substation) with future provision to expand.

The construction of the new interconnection substation will result in the splitting of the one existing line into two lines on the transmission system. The new L98704 will connect TSS 987 Beason to TSS 909 Deer Creek and L18806 will connect TSS 987 Beason to TSS 188 Mount Pulaski. The proposed generation interconnection is shown on the planning diagram in attachment #1.

2. AMENDMENTS TO THE IMPACT STUDY DATA OR IMPACT STUDY RESULTS

2.1 Facility Name and In-Service Date

The Customer's facility name is TSS 926 Top Hat Wind Energy Center.

The proposed in-service date is 1065 days after Interconnection Service Agreement (ISA) and Interconnection Construction Service Agreement (CSA) are fully executed. ComEd will work with the IC in good faith in attempt to meet this date.

3. INTERCONNECTION CUSTOMER SCHEDULE TSS 987 Beason

The below schedule provides estimated days, which is based upon the assumption that a CPCN (Certificate of Public Convenience and Necessity), from the ICC (Illinois Commerce Commission) will not be required:

Description	**Schedule**
Notice to Proceed (ISA and CSA signed with security deposit)	Day 1
Construction complete and ready for testing	Day 1000
Testing complete and Back feed Power available	Day 1065
Facility Commercial Operation Date	Day 1065

4. SCOPE OF WORK BY INTERCONNECTION CUSTOMER (IC)

4.1 The IC is responsible for construction of the 200 MW maximum facility out wind generating facility, which includes the following:

4.1.1 Two (2) Step-up transformers 345kV-34.5kV (grounded wye).

4.1.2 Two (2) 345 kV circuit breakers.

4.1.3 Two (2) 345 kV MOD disconnect switches.

4.1.4 Eighty (80) 2.5 MW General Electric Ge wind turbines.

4.1.5 One (1) 345kV line (L98701) terminating at TSS 987 Beason (distance of 0.5 miles)

4.2 The IC may elect the "Option to Build" provision to construct to construct TSS 987 Beason substation and transfer its ownership to ComEd upon energization of TSS 987 Beason.

4.3 The IC will purchase the real estate to accommodate the construction of TSS 987 Beason substation.

4.4 The IC will be responsible for cost to purchase real estate and obtain the necessary right-of-way/easements for this project, including for TSS 987 Beason substation and transmission tie in.

4.5 The IC will be responsible to request and bear the cost of any outages required on existing transmission or distribution lines that may be required for the transport of any large equipment, i.e. turbines, rotors, turbine structures, etc.

4.1 IC will be responsible for installation and ownership of fiber between TSS 926 Top Hat Energy Center and TSS 987 Beason. Fiber connection between stations should include two physically diverse routes.

5. DESCRIPTION OF FACILITIES INCLUDED IN THE FACILITIES STUDY

5.1 TSS 987 Beason (N8013)

5.1.1 If the IC does not elect the "Option to Build", ComEd will perform design, procurement, and construction of TSS 987 Beason substation

5.1.2 If the IC elects the "Option to Build", ComEd will provide engineering and construction oversight of the IC's scope of work to construct TSS 987 Beason substation.

5.2 TSS 188 Mount Pulaski (N8011)

5.2.1 ComEd will be responsible to perform design, procurement, and construction to revise remote terminal to TSS 987 Beason instead of TSS 909 Deer Creek.

5.3 TSS 909 Deer Creek (N8010)

5.3.1 ComEd will be responsible to perform design, procurement, and construction to revise remote terminal to TSS 987 Beason instead of TSS 188 Mount Pulaski.

5.4 ComEd 345 kV L18806 Modification and Cut-In (N8012)

ComEd will be responsible for performing design, procurement and construction to build L18806 and L98704 from the cut-in location to TSS 987 Beason. New conductor will match existing conductor rating.

6. TOTAL COSTS OF TRANSMISSION OWNER FACILITIES INCLUDE IN FACILITIES STUDY

6.1 ComEd costs with ComEd build option:

NETWORK #	SITE LOCATION	TOTAL PROJECT COST
N8013	TSS 987 Beason	$41,246,308
N8012	Transmission Line (L18806) Cut-in Tap into TSS 987 Beason	$5,418,395
N8011	TSS 188 Mount Pulaski	$306,698

N8010	TSS 909 Deer Creek	$311,146
	Subtotal	47,282,546
	Gross Up Tax	$6,043,355
	Grand Total Including Gross Up Tax	$53,325,901

6.2 ComEd costs with IC build option:

NETWORK #	SITE LOCATION	TOTAL PROJECT COST
None	Engineering and Construction Oversight for TSS 987 Beason	$1,321,571
N8012	Transmission Line (L18806) Cut-in Tap into TSS 987 Beason	$5,561,178
N8011	TSS 188 Mount Pulaski	$313,405
N8010	TSS 909 Deer Creek	$317,941
	Subtotal	7,514,096
	Gross Up Tax	$949,253
	Grand Total Including Gross Up Tax	$8,463,348

7. SUMMARY OF MILESTONE SCHEDULES FOR COMPLETION OF WORK INCLUDED IN FACILITY STUDY

The below Milestone Schedule is based on the Interconnection Services Agreement and the Construction Services Agreement (if applicable) to be executed. The schedules are based upon the assumption that the CPCN from the ICC will not be required. The exact Milestone Schedule will be negotiated and determined upon the execution of Construction Services Agreement. The Milestone schedule dates are dependent on the IC design deliverables and are subject to change

Description	**Schedule**
Notice to Proceed (ISA and CSA signed with security deposit)	Day 1
Construction complete and ready for testing	Day 1000
Testing complete and Back feed Power available	Day 1065
Facility Commercial Operation Date	Day 1065

B. TRANSMISSION OWNER (COMED) FACILITIES STUDY RESULTS

1. NEW SUBSTATION / SWITCHYARD FACILITIES

1.1 TSS 987 Beason (N8013)

If the Interconnection Customer chooses the "Option to Build", ComEd will review and provide oversight of the Interconnection Customer's design, procurement, construction, and testing of ComEd's new 345kV interconnection substation TSS 987 Beason. If the IC does not choose the "Option to Build", ComEd will provide design, procurement, construction, and testing of TSS 987 Beason Substation. TSS 987 Beason will have the following equipment (per ComEd Interconnection Guideline):

1.1.1 Three (3) 345 kV line dead end structures with testing to check proper phase and identification is correct.

1.1.2 Nine (9) 345 kV motor operated disconnect switches (includes three (3) line side and six (6) associated with three (3) circuit breakers).

1.1.3 Three (3) 345kV, 3000A, 63kA 2.0-cycle IPO circuit breakers.

1.1.4 Nine (9) 345 kV CCVTs without carrier accessories.

1.1.5 Four (4) 345kV CCVTs with carrier accessories.

1.1.6 Nine (9) 345 kV Surge Arresters.

1.1.7 Three (3) 345kV Combination CT/PT metering units.

1.1.8 Four (4) 345kV, 3000A Wave Traps (power line carrier).

1.1.9 Foundations and structures for all new equipment.

1.1.10 A 345 kV control building to ComEd specifications to accommodate System 1 and System 2 batteries, battery chargers, AC/DC panels, protective relaying, communication, SCADA, metering equipment, etc. 125 VDC battery system, DC distribution panels, relay panels, marshalling cabinet, aux AC power panels, building HVAC system, fire/security system, SCADA, metering equipment, battery monitoring and carrier communication equipment. All 345 kV circuit breakers are required to have a SEL-2411/3506 relay inside of the breaker control cabinet for monitoring.

1.1.11 An OSE cabinet is required for all fiber run from the yard to the control building. This fiber will be run from a local fiber distribution panel installed at each 345 kV circuit breaker in the yard, through the OSE cabinet, and to a fiber distribution panel installed in a rack inside of the control building. A switch will be installed to collect the status of all equipment. Inside of the control building a Panduit tray shall be installed for local multimode fiber.

1.1.12 Install a SCADA cabinet that consists of a DNP3 RTAC, Engineering Access RTAC, dual HMI RTAC, SDN/Ruggedcom switches with A/B system. For further information reference ComEd Elk Grove Village Substation. A SCADA specification will be issued to further clarify these details.

1.1.13 The IC will be responsible for the maintenance of the two single mode fiber paths between AC1-053 TSS 926 Top Hat Wind Energy Center and TSS 987 Beason, including all terminations in the fiber distribution panels (FDP's). ComEd will own the maintenance for the fiber jumpers from the FDP to the relay panels at TSS 987 Beason.

1.1.14 For Line protection: Protective relaying for 345 kV L18806:

- System 1 Protection: Install SEL-411L relay as DCUB/DUTT via power line carrier.
- System 2 Protection: Install SEL-311C-1 as the DCB with DTT via power line carrier.

1.1.15 For Line protection: Protective relaying for 345 kV L98704:

- System 1 Protection: Install SEL-411L relay as DCUB/DUTT via power line carrier.
- System 2 Protection: Install 11-2/SEL-311C-1 as the DCB with DTT via power line carrier.

1.1.16 For Line protection: Protective relaying for 345 kV L98701:

- Install standard ComEd 345kV IPP interface relaying consisting of a primary 87L-1 SEL-411L current differential scheme and a secondary 87L-2 SEL-311L-1 current differential scheme. Primary and Secondary Current Differential relay communications to be over single mode fiber, with Primary and Secondary cables diversely routed. IPP Fiber Demarcation will be FDP within TSS 987 control building. Referring to GDD 2302 modified for direct fiber connection to SEL-311L-1. In addition, install load rejection logic utilizing SEL-2411, to monitor "a" and "b" contacts on all three (3) breakers. The SEL-2411 will be sending DTT to IPP.

1.1.17 For each 345 kV circuit breaker:

- Breaker Failure Protection install SEL-451 Relay with Goose tripping.

1.1.18 For each 345 kV line motor operated disconnect switch:

- Install SEL 2411 at MOD to remote trip, close, switch status.

1.1.19 Install PDC (Phasor Data Concentrator) cabinet for all new 400 series relays.

1.1.20 The System 1 and System 2 communication system shall be designed per ComEd fiber requirements. It shall include two separate fiber paths utilizing diverse fiber routes between TSS 987 Beason and AC1-053 TSS 926 Top Hat Wind Energy Center. Including one OPGW fiber line for L98701.

1.1.21 The security system will need to be installed to meet ComEd standards.

1.1.22 Witness testing by ComEd is required.

1.1.23 IC is responsible for installation of normal and emergency source of three (3) phase auxiliary power through local service request process. The normal and emergency sources shall be supplied from diverse 12kV or 34kV sources and approved by local utilities planning group.

1.1.24 IC will be responsible for obtaining telephone/data circuits from the local telecommunications provider for 911 emergency locating, circuits required to be leased per local ordinances, and/or other circuits that cannot be provided via other means of communication (fire/security alarm notification, SCADA, and revenue metering).

1.1.25 For any new equipment connected to the Bulk Electric System, rated at 100kV or above, ComEd requires the associated primary and secondary protective schemes to have a minimum redundant; connected CTs, PT secondary control circuits, auxiliary trip relays, and circuit breaker trip coils.

1.1.26 IC shall provide and install metering equipment including 345kV Combination CT/PT and bi-directional revenue grade meter, on ComEd side of the Point-of-Interconnection at TSS 987 Beason substation for 345 kV line L98701.

The metering equipment shall be designed to measure both wholesale energy (high KWH and KVARH readings) and retail energy (low KWH and KVARH readings) and meet metering requirements stated in 'ComEd Interconnection Guidelines for Generators Greater than 20MW'.

ComEd will own and maintain the metering equipment. The metering equipment shall provide the following data:

Instantaneous net KW and KVAR values TO and FROM the generator.
Instantaneous Voltage value and circuit breaker status.
Hourly compensated KWH and KVARH values TO and FROM the generator.

The metering equipment shall be capable to transmit the real-time data to ComEd and the PJM via a SCADA RTU. The metering equipment shall comply with PJM Manuals M-01 & M-14D, and PJM tariff.

1.1.27 TSS 926 Top Hat Wind Energy Center switchyard ground grid can be tied to TSS 987 Beason ground grid through static wire. However, Top Hat Wind Energy Center switchyard shall be designed not to use split factor or TSS 987 ground grid. Model shall be shared with ComEd for coordination purposes.

1.1.28 Dedicated site drainage pond shall be provided for the new TSS 987 substation in addition to the substation footprint and to be exclusively used by ComEd.

1.1.29 Drainage pond property and storm water piping system shall be conveyed in fee to ComEd.

1.1.30 The IC will be responsible for the cost of security system design and installation. Substation security level and requirements shall be assigned/determined by Exelon Security Operations. All fencing and security design shall be coordinated with and approved by Exelon Security team.

1.2 AC1-053 TSS 926 Top Hat Wind Energy Center

IC will design, construct, and test the new substation AC1-053 TSS 926 Top Hat Energy Center having the following equipment (per ComEd Interconnection Guideline):

1.2.1 ComEd Relay and Protection Engineering will review all customer relay protection design drawings and relay settings.

1.2.2 Customer equipment impedance and test data must be provided to ComEd Relay and Protection Engineering for all lines, transformers, and generators.

1.2.3 A SCADA interface over fiber must be included to provide ComEd with customer BES (Bulk Electric System) equipment status. This will be done through serial protocol between TSS 987 Beason and AC1-053 TSS 926 Top Hat Wind Energy Center.

1.2.4 The System 1 and System 2 communication system shall be designed per ComEd fiber requirements. The System 1 and System 2 fiber connections from TSS 987 Beason to AC1-053 TSS 926 Top Hat Wind Energy Center are two different single mode fiber cables that are routed in physically diverse paths. At a minimum, 48 single mode fibers will be required for each cable.

1.2.5 The IC will be responsible for the maintenance of the two single mode fiber paths between AC1-053 TSS 926 Top Hat Wind Energy Center and TSS 987 Beason, including all terminations in the fiber distribution panels (FDP's). ComEd will own the maintenance for the fiber jumpers from the FDP to the relay panels at TSS 987 Beason.

1.2.6 Witness testing by ComEd is required.

1.2.7 Protective relaying for 345 kV L98701:

- Install 87L-1 SEL-411L current differential scheme and a secondary 87L-2 SEL-311L-1 current differential scheme over direct fiber with DTT.

1.2.8 For each 345 kV circuit breaker:

- Breaker Failure Protection: Install breaker failure protection, manual close supervision, and critical gas conditions.

1.2.9 For any new equipment connected to the Bulk Electric System, rated at 100 kV or above, ComEd requires the associated primary and secondary protective schemes to have a minimum redundant; connected CTs, PT secondary control circuits, auxiliary trip relays, and circuit breaker trip coils.

2. UPGRADES TO EXISTING SUBSTATION / SWITCHYARD FACILITIES AT CUSTOMER EXPENSE

2.1 TSS 188 Mount Pulaski (N8011)

2.1.1 ComEd will be responsible to perform design, procurement, and construction to modify the relays and communication equipment to revise remote terminal to TSS 987 Beason instead of TSS 909 Deer Creek.

2.2 TSS 909 Deer Creek (N8010)

2.2.1 ComEd will be responsible to perform design, procurement, and construction to modify the relays and communication equipment to revise remote terminal to TSS 987 Beason instead of TSS 188 Mount Pulaski.

3. TRANMISSION LINES - NEW

3.1 IC will design and construct and own 345 kV L98701 up to new dead-end structures at TSS 987 Beason. For the purpose of coordination, the IC will provide design drawings of their proposed generator lead lines, 345kV L98701, to ComEd for review prior to construction.

4. TRANSMISSION LINES - UPGRADES

4.1 ComEd 345 kV L18806 Cut-In (N8012)

4.1.1 ComEd will be performing the design, procurement, and construction of the new structures required to cut over to new TSS 987 Beason.

4.1.2 The new conductor type will be 2-1277.2 kcmil ACAR (54/7) Bundled. The new shield wire will be 7#6 Alumoweld.

4.1.3 Approximately 0.26 new circuit miles of conductor and shield wire will be installed.

4.1.4 The following structure replacements and installations are required for the 345 kV L18806 cutover work.

Structure #	**Line**	**Existing Structure Type**	**Comments**
400	L18806	LSV+0	Replace with new single-circuit horizontal configuration deadend steel pole
400D	L18806	N/A	Install new single-circuit horizontal configuration deadend steel pole
401	L98704	LSV+15	Replace with new single-circuit horizontal configuration deadend steel pole

5. METERING

5.1 For PJM:

The IC will be required to install equipment necessary to provide Revenue Metering (kWH, kVARH) and real time data (kW, kVAR) for interconnection customer's generating resource at ComEd side of Point-of-interconnect (POI) at TSS 987 Beason. See PJM Manuals M-01 & M-14D, and PJM tariff.

5.2 For IC:

The IC is required to submit new customer request 18 months prior to the project completion.

5.3 For ComEd:

The IC will be required to install equipment necessary to provide bi-directional revenue metering (kWH, kVARH) and real time data (kW, kVAR, and circuit breaker status and 345kV voltage) for IC's generating resource, at ComEd side of POI at TSS 987 Beason. See ComEd applicable standards available on the PJM website (TO Standards). Metering will be installed. Metering has the ability to record both the large outflow of power generation and the small inflow of auxiliary power requirements. It is assumed that required analog and digital communication circuits will be available and obtainable from the Local Telecommunication Provider to meet the Milestone Schedule.

5.4 For ComEd:

ComEd will procure, install, own and maintain the AMI meter at ComEd side of POI at Beason TSS 987 for retail metering. IC will reimburse ComEd for the cost.

6. ENVIRONMENTAL, REAL ESTATE, AND PERMITING

6.1 IC will be responsible to obtain all environmental approvals and permitting required for the construction of 345kV TSS 987 Beason and L98701.

6.2 ComEd will be responsible for all environmental approvals and permitting required for L18806 & L98704 work. This includes any endangered species studies and monitoring, as required. Costs associated with this permitting are at the expense of the IC.

6.3 IC will be responsible for site restoration required for substation and transmission upgrades. This includes, but is not limited to road restoration/improvements, wetland restoration, and farm field restoration/crop damage. Costs associated with this are at the expense of the IC.

6.4 The IC will be responsible for the cost to purchase real estate or obtain the necessary right-of-way easement for all upgrades associated with this project. These associated upgrades are not included in the costs listed in this study.

6.5 The IC will purchase the real estate for TSS987 Beason and conveyed in fee to ComEd

6.6 IC will be responsible for remediation costs for locations found to have environmental contaminations and remediation. This may require contaminated soil disposal as well as lead paint removal for existing structure work.

6.7 It is assumed that all necessary permits will be obtained in a timely manner to allow engineering and construction to proceed according to the Milestone Schedule.

6.8 It is assumed that conveyance of property and rights will be obtained to support the PJM Transmission Outage Schedule.

6.9 All real estate needs to meet residential standard.

6.10 It is assumed that the required Environmental Study will yield no impediments to the development of the site.

7. SUMMARY OF RESULTS OF STUDY

7.1 ComEd costs with ComEd build option:

NETWORK #	SITE LOCATION	Direct Material	Indirect Material	Direct Labor	Indirect Labor	TOTAL PROJECT COST
N8013	TSS 987 Beason	$9,876,506	$674,385	$25,837,856	$4,857,561	$41,246,308
N8012	Transmission Line (L18806) Cut-in Tap into TSS 987 Beason	$1,712,920	$116,961	$3,020,630	$567,884	$5,418,395
N8011	TSS 188 Mount Pulaski	$28,181	$1,924	$232,821	$43,771	$306,698
N8010	TSS 909 Deer Creek	$28,181	$1,924	$236,565	$44,475	$311,146
	Subtotal					47,282,546
	Gross Up Tax					$6,043,355
	Total Cost of ComEd Work					$53,325,901

7.2 ComEd costs with IC build option:

NETWORK #	SITE LOCATION	Direct Material	Indirect Material	Direct Labor	Indirect Labor	TOTAL PROJECT COST
None	Engineering and Construction Oversight for TSS 987 Beason	$0	$0	$1,113,498	$208,073	$1,321,571
N8012	Transmission Line (L18806) Cut-in Tap into TSS 987 Beason	$1,786,293	$114,491	$3,084,087	$576,306	$5,561,178
N8011	TSS 188 Mount Pulaski	$29,389	$1,884	$237,713	$44,420	$313,405
N8010	TSS 909 Deer Creek	$29,389	$1,884	$241,535	$45,134	$317,941
	Subtotal					$7,514,096
	Gross Up Tax					$949,253

	Total Cost of ComEd Work	$8,463,348

Note:

1. Carrying charges are anticipated to be zero.

7.3 Milestone Schedule

Description	**Schedule**
Notice to Proceed (ISA and CSA signed with security deposit)	Day 1
Construction complete and ready for testing	Day 1000
Testing complete and Back feed Power available	Day 1065
Facility Commercial Operation Date	Day 1065

8. ASSUMPTIONS IN DEVELOPING COSTS AND SCHEDULES

8.1 ComEd estimate does not include costs of design and construction of AC1-053 TSS 926 Top Hat Wind Energy Center substation, and transmission in IC scope of work. ComEd estimated schedule is based on ISA/ICSA contract being executed by all parties.

8.2 ComEd estimate assumes that TSS 909 Deer Creek is built prior to construction of new TSS 987 Beason.

8.3 ComEd estimate assumes that new TSS 987 Beason is low impact site (low security requirements). Chain linked fencing, non-motorized gate and no cameras.

8.4 This cost estimate assumes that all work will be performed during normal weekdays and with no overtime.

8.5 ComEd cost estimate is valid for one (1) year after Facilities Study release by PJM.

8.6 Costs are based on 2021 rates and do not reflect potential increase of Labor or Material costs.

8.7 Transmission line outages for construction have not been identified, but generally are available from September to May. These outages are controlled by PJM.

8.8 Foundation design assumes typical soil conditions at locations and will be subject to change after soil boring tests.

8.9 The IC will be responsible to request and bear the cost for relocation of existing transmission or distribution lines (including structures and other facilities) that may be required for transmission line crossings, the transport of any large equipment, such as turbines, rotors, turbine structures, cranes, etc.

8.10 Formal submittal of this request to ComEd's TSO for ultimate review by PJM can be made 7 months prior to backfeed request date.

8.11 This study assumes that there will be no additional right-of-way and/or easement work required.

8.12 This Facility Study is time dependent. If the project is not into construction within one year of the issuance, the FS will be void and the project re-studied, requiring completion of a new FS.

8.13 All upgrades to facilities included in this document will be required to meet latest ComEd standards.

8.14 Upgrades are subject to change based on detailed design development.

8.15 It is assumed that ComEd facilities included in this document will not require a sound study or flood mitigation.

8.16 ComEd will complete pre-design and post construction survey for the transmission and substation upgrades, as required. This includes, but is not limited to, the LIDAR survey and video imaging for transmission lines. Costs associated with this are at the expense of the IC.

8.17 ComEd will complete geotechnical soil borings, resistivity study, and analysis for substation and transmission upgrades. Costs associated with this are at the expense of the IC.

8.18 This study is based on the 'System Impact Study Report for PJM Generation Interconnection Request Queue Position AC1-053 TSS 926 Top Hat Wind Energy Center per PJM impact study issued June 2020.

8.19 This document assumes that IC customer has completed, tested, and conveyed in fee to ComEd the new TSS 987 substation (per ComEd guidelines) and transmission line tie-in up to the existing ComEd right of way to allow for the 345kv line energization and back feed.

8.20 Fiber is needed between TSS 987 Beason and AC1-053 TSS 926 Top Hat Wind Energy Center. It shall include two separate fiber paths utilizing diverse fiber routes between TSS 987 Beason and AC1-053 TSS 926 Top Hat Wind Energy Center.

C. APPENDIX

Attachment #1: High Level Planning Diagram Depicting Interconnection Facilities and Points of Ownership/Demarcation

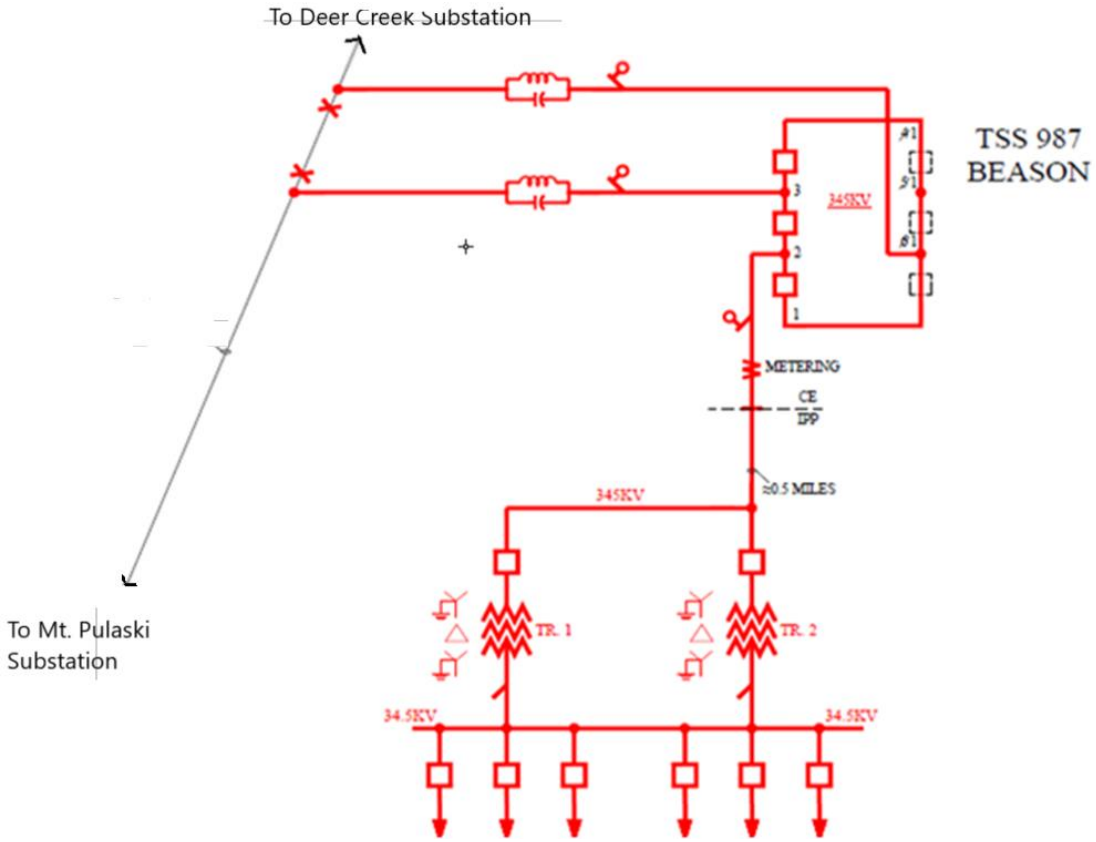
Attachment #2: General Arrangement, TSS 987 Beason

Attachment #3: Transmission Cut-In Plan

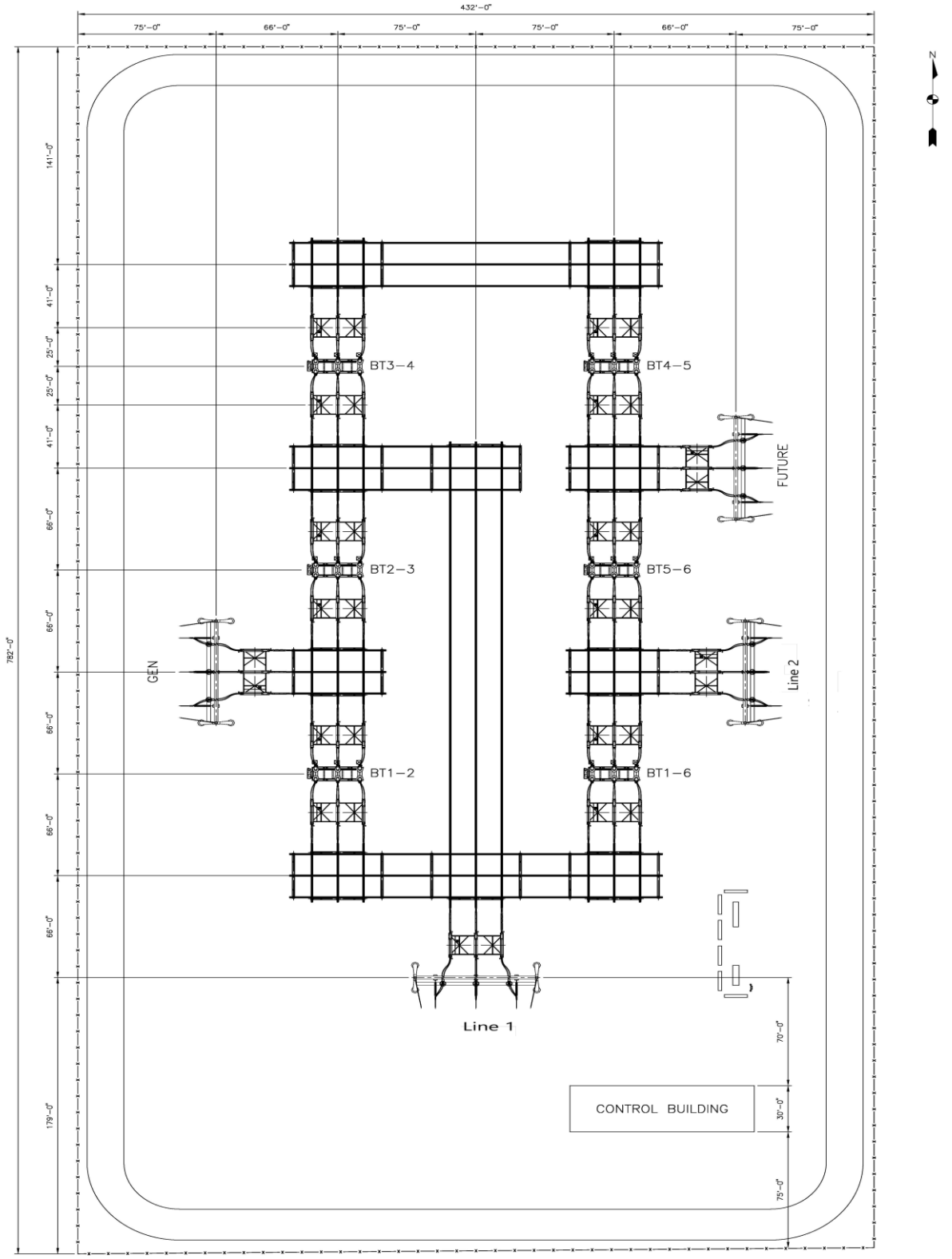
Attachment #4: Real Estate Requirements (IC)

Attachment #5: Property Location

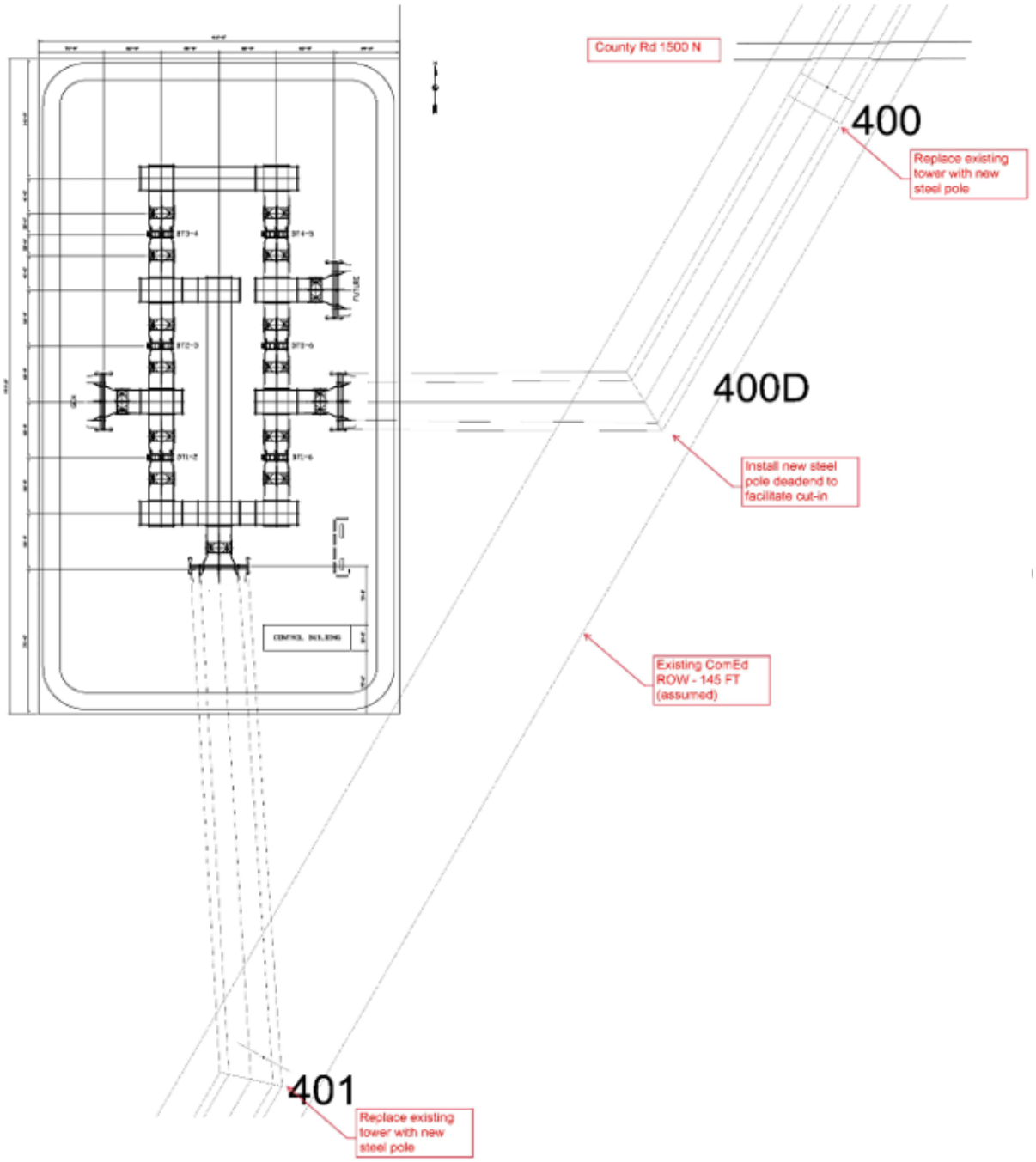
Attachment #1



Attachment #2



Attachment #3



Attachment #4 Real Estate Requirements (IC)

It is the IC's responsibility to purchase property, acquire rights, and obtain any required permits for the transmission, distribution, and or communication lines required to interconnect its generation. In addition, the IC will grant to COMED such rights and interests as may be reasonably necessary to interconnect the generation facilities and associated network upgrades to the COMED system. Real estate transactions will be determined by the type of interconnection configuration employed, which may include:

Conveyance of fee simple ownership to COMED for a switchyard.

Conveyance of perpetual easements (exclusive and nonexclusive) associated with the switchyard including, but not limited to, access, drainage, and such overhead and underground facilities as COMED may reasonably require for the construction, use, maintenance, and operation of the switchyard.

Conveyance and or acquisition of perpetual easements (exclusive and nonexclusive) and or other property rights for all purposes of interconnecting the generation facilities and associated network upgrades with the COMED transmission, distribution and communication systems, including such overhead and underground electrical and related communications, transmission and distribution facilities.

In each of the three transaction scenarios outlined above, or any combination thereof, the IC will be responsible for executing and delivering all documentation requested by ComEd, which may include deeds, easements, purchase agreements, assignments, affidavits, certifications, statements and releases, and for providing a title policy, with the appropriate endorsements, covering the rights and interests conveyed.

ComEd will grant to the IC, subject to engineering review and approval, easement rights or consents, as applicable, for:

Perpendicular crossings of ComEd transmission / distribution right of way to accommodate facilities such as roadways and various utilities.

ComEd Scope

ComEd will provide the following:

Real estate forms of agreement, which incorporate terms and conditions that reflect ComEd's standard business practices.

Engineering review of proposed IC facilities that involve real estate and/or right of way in which ComEd has an interest.

IC Scope

It is imperative, when the IC is required by the scope of a project to provide information, that the deliverables itemized below be received by COMED as soon as possible. This will facilitate a timely review and will allow COMED to address the real estate aspects of the project in a timely manner.

The IC is responsible for providing the following:

The following current information covering all interests and rights to be conveyed to COMED:

- Title Policy/Commitment.
- Copies of all recorded documents listed in above-mentioned Title Policy/Commitment.
- ALTA/ACSM Land Title Survey, which will include adjoining Exelon property, if applicable.
- Phase I Environmental Assessment Report (Phase 2 also if there is a fee conveyance to COMED) and any other environmental reports, notifications and documents as required. IC to utilize only contractors approved by ComEd Environmental department for this work.
- Wetland Delineation reports. IC to utilize only contractors approved by ComEd Environmental department for this work
- Annexation Agreement(s), zoning changes or other governmental agreements or approvals entered into or proposed for the Project.
- All jurisdictional permits, such as special use and building permits, that have been issued for the project or copies of pending applications that relate to or affect property in which COMED has or will have a right or interest.
- Detailed civil engineering drawings showing the proposed site plan, layout, drainage, access and facilities.

Additional information may also be required, depending on specific project requirements. Requests for such information will be transmitted to the IC during project development.

Attachment #5

230 0 230
Feet

Legend

- Expansion Area (450'x850')
- ComEd Switchyard (450'x850')
- Invenergy Logan Wind Project Substation (350'x350')
- Property Boundary
- Township/Range Boundary
- Section Line
- Landowner Parcel

Transmission Line

- 345 - 500 kV

Road Classification

- County Road
- Local Road

Logan Wind ComEd 345 kV Substation Siteplan

Logan Wind Energy Center | Logan County, Illinois

Rev. 00
October 30, 2020

Invenergy