Facilities Study Report

For

Physical Interconnection of

PJM Generation Interconnection Request

Project ID AG2-061

POWERTON-NEVADA 345KV

Introduction

This Facilities Study has been prepared in accordance with the PJM Open Access Transmission Tariff, as well as the Application and Studies Agreement between the Project Developer and PJM Interconnection, LLC (PJM or Transmission Provider (TP)). The Transmission Owner (TO) is ComEd.

This Facility Study was performed to satisfy the Phase 2 Facility Study requirement of the PJM Tariff. The Facility Study is intended to provide scope, cost and schedule estimates for the project as currently defined and approved for Phase 2 study. In the event project changes are made during DP2 that impact this report, updates will be provided as part of the Phase 3 report. Following execution of the project's final agreement, this report will not be updated to account for other changes made as part of the agreements modification clause and instead the scope change process will be followed.

A. Transmission Owner Facilities Study Summary

1. PROJECT DESCRIPTION

The Project Developer (PD) has proposed a battery storage uprate to a planned Solar and Wind Farm Facility located in LaSalle County, Illinois with a designated PJM Project ID of AG2-061.

This project is an increase to the planned AD2-038 and AF2-143 projects, and will share the same Point of Change in Ownership.

The AG2-061 project is a 50 MW uprate (20 MW Capacity uprate) to the previous project. The total installed facilities will have a capability of 200 MW with 110 MW of this output being recognized by PJM as Capacity.

2. POINT OF INTERCONNECTION (POI)

The Battery Storage Facility will interconnect with the ComEd transmission system via a direct connection into the TSS 918 Dana 345kV substation.

The proposed generation interconnection is shown on the single line diagram in Attachment #1.

3. POINT OF CHANGE IN OWNERSHIP

The Point of Change in Ownership will be located at the first dead-end structure inside the TSS 918 Dana substation fence line.

4. SCOPE OF PROJECT DEVELOPER INTERCONNECTION FACILITIES

Project Developer will design, build, own, operate and maintain the Project Developer Interconnection Facilities on Project Developer's side of the Point of Change in Ownership (PCO). This includes, but is not limited to:

- All changes to topology, including generation, must be modeled during the Phase 1 study for PRC-027 compliance. A protection system coordination study is required for new BES buses or when there is a 15% (or greater) change in fault current for an existing BES bus. Setting changes may be required per the outcome of this coordination study.
- Power output from the developer site shall be in accordance with the power quality standards contained in the IEEE Standard 519. The generating units and all associated equipment at the Project Developer site shall not introduce any distortion of ComEd's waveform or telephone or carrier interference that is inconsistent or conflicts with such standard.

B. Transmission Owner Facilities Study Results

The following is a description of the planned Transmission Owner facilities for the physical interconnection of the proposed AG2-061 project to ComEd transmission system. These facilities shall be designed according to ComEd Applicable Technical Requirements and Standards. Once built, ComEd will own, operate, and maintain these Facilities.

1. TRANSMISSION OWNER INTERCONNECTION FACILITIES:

The ComEd Interconnection Facilities will include, but not be limited to, the following which are existing at TSS 918 Dana for L.91801 and shall be verified for the addition of the AG2-061:

- A 345kV dead-end structure and foundation within the fence of the Project Developer's facility, to terminate the Project Developer's generator lead line.
- Line conductor from the dead-end structure to the bus position in the switchyard of the Project Developer's Osagrove Flats facility.
- One (1) Motor Operated Disconnect (MOD) switch.
- Three (3) metering CTs, three (3) metering CCVTs, meters, and associated equipment to meter L.91801.
- Three (3) surge arrestors
- Foundation and structures

2. STAND ALONE NETWORK UPGRADE

This section is not applicable.

3. NETWORK UPGRADES

- TSS 918 Dana
    - Review and reset relay settings for 345kV L.91801, L.91815, and L.91509. Retain existing relays.
    - Verify load-ability of existing line L.91801 for bi-directional power flow.
    - Update fault data in CAPE; check for PRC-027 requirements.
    - Review and update if required the AMI & Revenue metering equipment. The review will take into consideration the new total generation output. The metering equipment will be sized to properly meter the output when the generation is in online as well as metering power supplied from the ComEd system for generator aux. power requirements when the generation is offline. All metering equipment in accordance to ComEd Standards. Revenue grade metering must meet the requirements established by the published EED interconnection guidelines. Metering shall include registration of the generator output and auxiliary power usage. Install 345kV standard interconnection metering and telemetry to ComEd TSO including CB status, MW, MVAR, MWh and voltage values.
    - Install one pair of serial fiber connections for reach Developer RTU data exchange to be coordinated with ComEd SCADA engineering.

        - Breaker statuses
        - Line analog values
    - Install one pair of fiber jumpers to link Battery Charge Meter to ComEd SCADA system
- TSS 915 Dee Mac
    - Review and reset relay settings for 345kV L.91509, L.91501, and L.0303. Retain existing relays.
- TSS 98 Nevada
    - Review and reset relay settings for 345kV L.9806 and L.91815. Retain existing relays.

4. OTHER SCOPE OF WORK

This section is not applicable.

5. MILESTONE SCHEDULE FOR COMPLETION OF COMED WORK

Facilities outlined in this report are estimated to take 12 months to construct, from the time the Generation Interconnection Agreement is fully executed. This schedule is may be impacted by the timeline for procurement and installation of long lead items, the ability to obtain outages to construct and test the proposed facilities.

Description	Start month	Finish month
Detailed Design	1	6
Construction	7	12

6. ASSUMPTIONS IN DEVELOPING SCOPE/COST/SCHEDULE

- Assumes completion of contingent projects AD2-038, AF2-143, and AE1-163.
- ComEd estimate does not include costs of design and construction of AG2-061 Battery and transmission as described in IC scope of work. ComEd estimated schedule is based on ISA/CSA contract being executed by all parties.
- This cost estimates assume that work will be performed during normal weekdays and with no overtime. Transmission line outages for construction have not been identified, but generally are available from September to May. These outages are controlled by PJM.
- Costs are based on 2026 rates and do not reflect a potential increase in Labor or Material costs after 2026
- The Project Developer 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. Formal submittal of this request to ComEd's TSO for ultimate review by PJM can be made 7 months prior to back feed request date.
- All upgrades to facilities included in this document will be required to meet latest ComEd

standards.

- Foundation design assumes typical soil conditions at locations and will be subject to change after soil boring tests.
- Assumes no additional foundations are needed.
- ComEd cost estimate is valid for six (6) months after Facilities Study release by PJM.
- Upgrades are subject to change based on detailed design development.
- It is assumed that ComEd facilities included in this document will not require a sound study.
- It is assumed no geotechnical soil borings, resistivity study, and analysis for substation will be needed.
- This Facilities Study is time dependent. If the project is not into construction within one year of the issuance, the study will be void and the project re-studied, requiring the completion of a new Facility Study.
- It is assumed that all associated network upgrades, as listed in the Phase 1 study, are complete prior to this New Service Request Project being placed in service.
- The Project Developer shall provide shunt reactive compensation as required.
- There are sufficient spare fibers on one of the two Single Mode, 48-ct Fiber cable to be installed between Osagrove Flats and TSS 918 Dana for the new Battery Charge Meter requirements under AG2-061.

7. REVENUE METERING REQUIREMENTS

All revenue metering needed for this interconnection project must meet the metering requirements stated in Appendix 2, section 8 of the AG2-061 GIA, and in PJM Manuals M01 and M14D. The details of applicable revenue metering requirements are given in the 'ComEd Interconnection Guidelines' posted on PJM website.

It is assumed the revenue metering has been installed on the ComEd side of the Point of Change in Ownership under the previous installation AD2-038, owned and maintained by ComEd.

- REVENUE METERING FOR PJM AND COMED
    - The revenue meter measures the wholesale energy output (Hourly compensated net MWH and Hourly compensated net MVARH) of the Generating Facility.
    - The metering equipment, including revenue meter and CT/PT shall be installed, at Project Developer's expense, at the interconnection substation on ComEd side of the Point of Change in Ownership.
    - ComEd shall own, operate, maintain, inspect, and test all the metering equipment as set forth in 'Testing of Metering Equipment' section of the PJM Tariff, at the Project Developer's expense.
- REAL-TIME METERING FOR PJM
    - The Project Developer shall install, own, operate, maintain, inspect, and test real-time metering equipment to measure and transmit directly to PJM the real time MW, MVAR, voltage and status of electrical equipment such as circuit breakers and Motor Operated Disconnect switches, in conformance with the requirements listed in PJM Manuals M-01 and M-14D, at the Project Developer's expense.

- RETAIL METERING FOR COMED
    - The AMI Meter measures the energy consumption by the Project Developer at transmission level and hence shall be designed to measure low MW flow.
    - The metering equipment including AMI Meter and CT/PT shall be installed at the interconnection substation on ComEd side of the POI, at the Project Developer's expense.
    - ComEd shall own, operate, maintain, inspect, and test all the metering equipment as set forth in the 'ComEd Interconnection Guidelines'.
- BATTERY CHARGE METER FOR COMED`
    - FERC Order 841 designates inflow to charge battery storage facility as wholesale power. To separately measure the power inflow to charge the battery and bill it at wholesale rate, the Project Developer needs to install the following equipment.
        - Battery Charge Meter including Current Transformer/Potential Transformer (CT/PT) at the output terminal of the battery storage facility to measure power inflow from transmission system to charge the battery storage facility.
        - Fiber cable to provide communication link to transmit Battery Charge Meter data to the ComEd SCADA system.

8. LAND REQUIREMENTS FOR INTERCONNECTION SUBSTATION

No additional easements, access rights, or temporary or permanent real property rights or acquisitions were identified as required for network upgrades to the ComEd system or for the project to interconnect at this location within this study. However, as further needs are assessed in detailed engineering, design and/or construction activities, if it is determined that there is a need for easements, access rights, or temporary or permanent real property rights or acquisitions, the developer is fully responsible for the costs to acquire these required land rights. Also, as necessary, the schedule will be adjusted accordingly to account for the necessary time to obtain these required land rights. All easements, access rights, or temporary or permanent real property rights or acquisitions shall comply with all ComEd requirements as detailed in "Land requirements for Interconnection Substations".

9. APPLICABLE TECHNICAL REQUIREMENTS AND STANDARDS

- ComEd Interconnection Guidelines (For Generators at Transmission Level), Rev. 2, Dated 12/16/2021
- ComEd Guidelines on Land Requirements for Interconnection Substations, Rev. 2, Dated January 2026

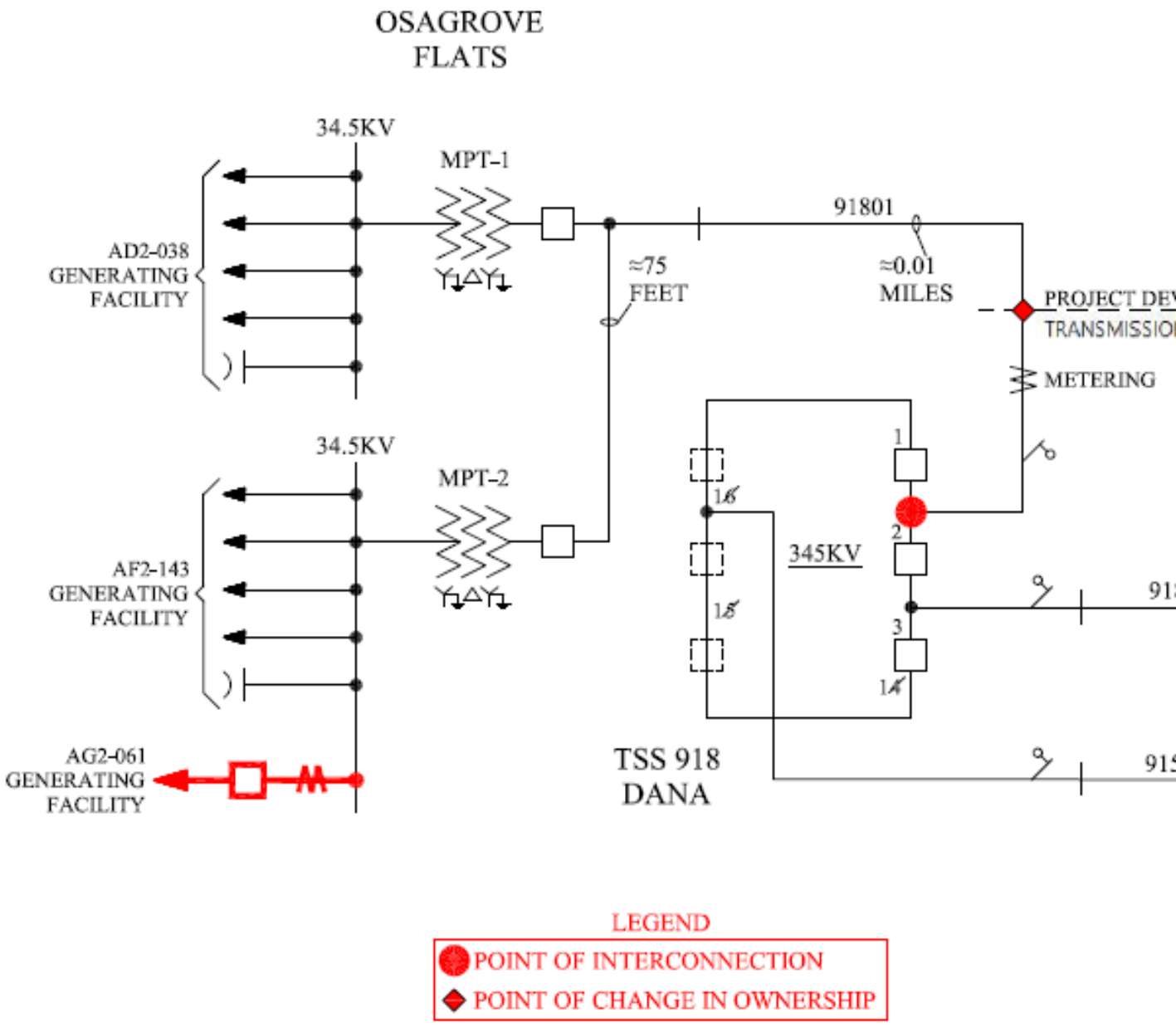
10. ENVIRONMENTAL AND PERMITING

No environmental concerns and/or permitting requirements were identified as needed by this study. However, should detailed engineering and design and/or construction activities identify the need for an environmental study and/or permit requirements, the developer is fully responsible for the costs related to any environmental study, any actions to address the identified environmental impacts and the permits. Also, the schedule will be adjusted accordingly to account for the necessary time to perform the environmental study, address the identified environmental impacts and to obtain the

permits, if applicable. All environmental studies, actions to address environmental impacts and permit actions shall comply with all ComEd requirements as detailed in "ComEd Environmental Requirements for Third Party Developers", and with all local, city, county, state, and federal requirements.

C. APPENDICES

Attachment #1: Single line Diagram for the Physical Interconnection


OSAGROVE
FLATS
34.5KV
MPT-1
AD2-038
GENERATING
FACILITY
91801
≈75
FEET
≈0.01
MILES
PROJECT DEV
TRANSMISSIO
METERING
34.5KV
MPT-2
AF2-143
GENERATING
FACILITY
345KV
AG2-061
GENERATING
FACILITY
TSS 918
DANA
LEGEND
POINT OF INTERCONNECTION
POINT OF CHANGE IN OWNERSHIP