Generation Interconnection Facility Study Report

For

PJM Generation Interconnection Request Queue Position AA1-115

Thirty First Street 115kV

October 2016

A. Transmission Owner Facilities Study Summary

1. Description of Project

EDF Renewable Development, Inc. (hereinafter referred to as "Developer") has proposed the addition of 20 MW of BATTERY STORAGE generation with 0% (0 MW) capacity to the Thirty First Street 115kV substation. This project is located in central Pennsylvania (Ref: "Figure 5").

The generation facility will interconnect with Pennsylvania Electric Company (Penelec), a FirstEnergy Company (FE), (hereinafter referred to as "Transmission Owner") at Transmission Owner's existing Thirty First Street station (interconnection substation).

2. Amendments to the System Impact Study data or System Impact Study Results

- An Interim Deliverability Study will need to be performed by PJM since the Facilities Study Commercial Operation Date is 12/01/2017, and the original study year was 2018.
- Added line item in Non-Direct Connection (NDC) costs for "Adjust remote relaying settings."

3. Interconnection Customer's Submitted Milestone Schedule

Developer's requested Commercial Operation Date (COD) for the generation facility is **December 1, 2017**. Transmission Owner's proposed schedule might not match Developer's requested Milestone Schedule. A Project Kickoff meeting must occur by **August 1, 2016** to meet the Milestone Schedule listed below.

Developer's Requested Milestone Schedule:

10/31/2017	Initial Back-feed through Project Substation Date
12/01/2017	Project Commercial Operation Date

Non-Direct Connection Schedule: in order to meet the Back-feed Date, a proposed **fifteen** (**15**)-month schedule is estimated, from the date of a fully executed Interconnection Construction Service Agreement and Construction Kick-Off Meeting, to complete the engineering, construction and associated activities, as detailed in the "Non-Direct Connection" section below.

4. Scope of Customer's Work

Direct Connection Facilities

Developer will construct facilities, including the BATTERY STORAGE collection system and generation step-up (GSU) transformer, and connect to the 115 kV four (4)-breaker ring bus (to be expanded from existing three (3)-breaker ring bus).

Point of Interconnection (POI): the point where Developer's 115 kV bus work crosses the Transmission Owner interconnection substation fence (Ref: Attachment 3).

Developer is required to own, install, and maintain a fully-rated, fault-interrupting circuit breaker on the high-side of the GSU transformer, between the position on the four-breaker ring bus and the generating station.

The direct connection facilities include line terminal equipment on Transmission Owner's side of the point of interconnection. This typically includes operational metering, dead-end structure, and a three-phase, gang-operated disconnect switch. These facilities are considered radial equipment from the terminal to the point of interconnection.

5. Description of Facilities Included in the Facilities Study

Non-Direct Connection Facilities

1. Thirty First Street Substation- Convert existing 115kV three (3)-breaker ring bus into a four (4)-breaker ring bus. (PJM Network Upgrade Number n4684)
2. Protection changes at Westfall and Summit Substations (PJM Network Upgrade Number n5058)

6. Total Costs of Transmission Owner Facilities included in Facilities Study

The following table summarizes the total estimated costs according to FERC criteria. The estimated costs are in 2016 dollars. The taxes are a CIAC (Contribution in Aid of Construction) Federal Income Tax Gross Up charge. This tax may or may not be charged based on whether or not this project meets the eligibility requirements of IRS Notice 88-129.

Description	NUN	Estimated Cost	Tax (if applicable)
Non-Direct Connection Facilities			
Convert existing 115kV three breaker ring bus into four breaker ring bus at Thirty First Street substation	n4637	$ 1,499,000	$ 269,300
Adjust remote relay settings at Westfall and Summit Substations	n5058	$ 26,000	$ 4,700
Total Estimated Costs		**$ 1,525,000**	**$ 274,000**

7. Summary of Milestone Schedules for Completion of Work Included in Facilities Study:

A proposed **fifteen** (**15**)-month **Non-Direct Connection** schedule is estimated to complete the engineering, construction and the associated activities, from the date of a fully executed Interconnection Construction Service Agreement and Construction Kick-Off Meeting. This schedule assumes that all issues covered by the "Environmental, Real Estate and Permitting Issues" section of this document are resolved, and outages will occur as planned. Construction cannot begin until after all applicable permits and/or easements have been obtained.

Activity	Start Month	End Month
Preliminary Engineering	1	2
Permits & Real Estate	N/A	N/A
Detailed Engineering	3	7
Equipment Procurement - Delivery	2	9
Below Grade Construction	8	10
Above Grade Construction	11	13
Testing & Commissioning	14	15

B. Transmission Owner Facilities Study Results

1. Transmission Lines – New

None.

2. Transmission Line – Upgrades

None.

3. New Substation/Switchyard Facilities

None.

4. Upgrades to Substation / Switchyard Facilities

It is proposed that the project be connected via a new 115 kV generation attachment bus to the Thirty First Street 115kV substation (northeast-side). Transmission Owner to re-configure the existing three-breaker ring bus by adding a breaker to create a four (4)-breaker ring bus. Developer is responsible for constructing all of the facilities on its side of the POI, as shown in the attached one-line diagram, "Figure 1."

Description of Facilities Work:

Facilities Work to be constructed by Transmission Owner:

Non-Direct Connection

1. **Thirty First Street Substation**
   [PJM Network Upgrade n**4637**]

Per the attached Protection Requirements, Transmission Owner will perform the following:

Convert existing 115kV three (3)-breaker ring bus into a four (4)-breaker ring bus.

Major equipment includes:

- Qty 1 - 145kV 3000 A 40 kA Breaker
- Qty 2 - 115kV 2000A Group operated breaker disconnect switches
- Qty 1 - 115kV 2000A MOAB Switch
- Qty 3 - 115kV Surge Arrestors
- Qty 1 - Prewired Relay Panel
- Qty 1 - Lot of Steel
- Qty 3 - 115kV CVT

2. Westfall & Summit Substations
[PJM Network Upgrade n**5058**]

Per the attached Protection Requirements, Transmission Owner will perform the following:

Adjust remote relay settings

Assumptions:

General Assumptions:

- Developer is to provide all access rights, easements, ROW and permits necessary to complete the Project to the satisfaction of Transmission Owner. Environmental permitting shall encompass all federal, state and local requirements, consultations and agency coordination. Confirmation of meeting all permitting requirements shall be provided to Transmission Owner, prior to start of construction. Following construction and energization, confirmation of permit closeout shall be provided to the satisfaction of Transmission Owner, prior to transfer of ownership. If any of these elements are not included in the final agreement between Transmission Owner and Developer, twelve (12)-to-eighteen (18) months should be added to the Project schedule to secure necessary permits.

Substation Assumptions:

- Estimate assumes grounding, RTU and AC/DC systems are sufficient.
- Estimate assumes breaker disconnect switch foundations/stands are already in place. Switches still need to be installed.
- Estimate assumes connection to Developer site will be over fiber.
- Estimate assumes control building is large enough to fit new prewired relay panel and fiber patch panel.
- Estimate assumes addition of 2000 A SCADA controlled disconnect switch on Developer line exit.
- The substation fence needs to be extended out approximately twenty-feet (20') on land that is not owned by Transmission Owner. Estimate assumes Developer will acquire the property needed to extend the fence.
- A rough-graded, level site for the substation expansion is to be provided by Developer.
- Estimate assumes the "plan" North section of the fence will need to be replaced with a taller section of fence due to the hillside.
- Estimate assumes drainage is sufficient and the new line exit will not interfere with existing drainage.
- 336.4kcmil dampening cable included for bus expansion.
- Estimate based on attached relay diagram and proposed layout.
- Estimate includes man hours for required changes to the existing relaying and controls.

Real Estate Assumptions:

- Estimate assumes Developer will provide all property rights, including access, for the switchyard. Developer will need to deed an additional approximate twenty feet (20') of property along the northern property line of Thirty First Street substation to Transmission Owner following completion of the switchyard ring bus expansion testing and approval.

  Detailed Protection Requirements are provided as Attachment 2.

5. Metering & Communications

Metering, SCADA and Communications

Developer shall install, own, operate, test and maintain the necessary revenue metering equipment. Developer shall provide Transmission Owner with dial-up communication to the revenue meter.

Transmission Owner's Revenue Metering Requirements may be found in the *Requirements for Transmission Connected Facilities* document located at the following links:

www.firstenergycorp.com/feconnect
www.pjm.com/planning/design-engineering/to-tech-standards.aspx

These requirements are in addition to any metering required by PJM.

Assumed SCADA work required at Thirty First Street substation only.

Assumed that SCADA is modified at substation with sufficient communications to support the revised telemetry.

Transmission Owner will obtain real-time, site-specific, generation data from PJM, via the required communication link from Developer to PJM. Transmission Owner will work with PJM and Developer to ensure the generation data provided to PJM meets Transmission Owner's requirements.

Communications for transmission line protection between the new interconnection substation, and Developer's generation (collector) substation, will be via fiber optics (see "Fiber Optic Communication Channels" section below).

Fiber Optic Communication Channels

Developer will design, provide, install, own and maintain a fiber optic communications cable* between FirstEnergy's Thirty First Street substation, and Developer's AA1-115 Chestnut Flats Battery Storage Collector substation. Developer is responsible for obtaining and maintaining all associated Rights-of-Way (ROW), Easements, and Permits for its fiber cable.

Transmission Owner will install a short section of fiber cable, from Developer's fiber demarcation structure at the Thirty First Street substation to the control house, and make the associated fiber terminations.

*Note: Should additional PJM studies indicate that stability issues exist, therefore requiring dual high speed tripping schemes, the primary and backup relay fiber optic communication channels must be in separately-routed cable paths.

6. Environmental, Real Estate and Permitting Issues

The following are possible environmental, real estate and permitting issues:

- Environmental permitting, Real Estate acquisition, and Pennsylvania Public Utility Commission (PUC)] notification durations vary, some up to six (6) months after preliminary engineering is completed to provide the required information.
- The Transmission Owner interconnection substation expansion may involve environmental surveys, permits, approvals and plans with federal, state, and/or local agencies.
- Developer is to provide all access rights, easements, ROW and permits necessary to complete the Project to the satisfaction of Transmission Owner. Environmental permitting shall encompass all federal, state and local requirements, consultations and agency coordination. Confirmation of meeting all permitting requirements shall be provided to Transmission Owner, prior to start of construction. Following construction and energization, confirmation of permit closeout shall be provided to the satisfaction of Transmission Owner, prior to transfer of ownership. If any of these elements are not included in the final agreement between Transmission Owner and Developer, twelve (12)-to-eighteen (18) months should be added to the Project schedule to secure necessary permits.
- Developer is responsible for all property acquisition (including easements/rights-of-way (ROW)) for transmission, distribution and communication facilities needed for the generator interconnection.
- The Transmission Owner interconnection substation expansion may involve PA PUC notification/approval.

7. Information Required for Interconnection Service Agreement

The following table summarizes the total estimated costs according to FERC criteria. The estimated costs are in 2015 dollars. The taxes are a CIAC (Contribution in Aid of Construction) Federal Income Tax Gross Up charge. This tax may or may not be charged based on whether or not this project meets the eligibility requirements of IRS Notice 88-129.

Description	Direct Labor	Direct Material	Indirect Labor	Indirect Materials
Non-Direct Connection Facilities				
Convert existing 115kV three breaker ring bus into four breaker ring bus at Thirty First Street substation	$ 842,100	$ 298,500	$ 254,000	$ 104,400
Adjust remote relay settings at Westfall and Summit Substations	$ 20,000	$ 0	$ 6,000	$ 0
Total	**$ 862,100**	**$ 298,500**	**$ 260,000**	**$ 104,400**

Schedule:

A proposed **fifteen** (**15**)-month **Non-Direct Connection** schedule is estimated to complete the engineering, construction and the associated activities, from the date of a fully executed Interconnection Construction Service Agreement and Construction Kick-Off Meeting. This schedule assumes that all issues covered by the "Environmental, Real Estate and Permitting Issues" section of this document are resolved, and outages will occur as planned. Construction cannot begin until after all applicable permits and/or easements have been obtained.

Activity	Start Month	End Month
Preliminary Engineering	1	2
Permits & Real Estate	N/A	N/A
Detailed Engineering	3	7
Equipment Procurement - Delivery	2	9
Below Grade Construction	8	10
Above Grade Construction	11	13
Testing & Commissioning	14	15

Attachment 1. Generation Connection Requirements

The proposed interconnection facilities must be designed in accordance with the Transmission Owner's *Requirements for Transmission Connected Facilities* document located at either of the following links:

www.firstenergycorp.com/feconnect

www.pjm.com/planning/design-engineering/to-tech-standards.aspx

If Developer chooses "Option to Build," it will also be responsible for following Transmission Owner's *Approved Vendors and Contractors* document located at the PJM site (second link above).

The following is an excerpt taken from Transmission Owner's *Requirements for Transmission Connected Facilities* document:

> *The generation facility's minimum requirement shall be the provision of a reactive power capability sufficient to maintain a composite power delivery at continuous rated power output for the facility at either the POI or generator terminals as specified in the table below. The power factors range between 0.95 leading (absorbing VARs) and 0.90 lagging (producing VARs) as defined by the table. These reactive requirements apply to both the initial installation as well as to any incremental change in unit MW capability. FE will coordinate with the Connecting Party to identify the optimal generator step-up transformer tap to make such a capability available when demanded.*
>
> *If the connection studies show the need for a wind-powered or other nonsynchronous generating facility to provide reactive support to the transmission system, the minimum requirement shall be the provision of a reactive power capability sufficient to maintain a composite power delivery at continuous rated power output for the facility at the POI at a power factor as defined in the table. These reactive requirements apply to both the initial installation as well as to any incremental change in unit MW capability. FE will coordinate with the Connecting Party to identify the optimal generator step-up transformer tap to make such a capability available when needed.*

Generation Type	New / Increase	Size	Power Factor Requirement	Measurement Location
Synchronous	New	> 20 MW	0.95 leading to 0.90 lagging	Generator Terminals
Synchronous	New	<= 20 MW	0.95 leading to 0.90 lagging	Point of Interconnection
Wind or Non-Synchronous	New	ALL	0.95 leading to 0.95 lagging	Point of Interconnection
Synchronous	Increase	> 20 MW	1.0 (Unity) to 0.90 lagging	Generator Terminals
Synchronous	Increase	<= 20 MW	1.0 (Unity) to 0.90 lagging	Point of Interconnection
Wind or Non-Synchronous	Increase	ALL	1.0 (Unity) to 0.95 lagging	Point of Interconnection

Induction generators and other generators with no inherent VAR (reactive power) control capability, or those that have a restricted VAR capability less than the defined requirements, must provide dynamic supplementary reactive support located at the generation facility with electrical characteristics equivalent to that provided by a similar-sized synchronous generator.

Design Requirements

Developer is responsible for specifying appropriate equipment and facilities such that the parallel generation is compatible with Transmission Owner's Transmission System. Developer is also responsible for meeting any applicable federal, state, and local codes.

Design Criteria

Facilities owned and operated by Transmission Owner shall comply with the applicable Transmission Owner technical requirements and standards posted on the PJM website per the PJM Tariff, and the following criteria. Where there are different requirements for the same criterion, the more restrictive shall apply. Developer must abide by any PJM, RFC or NERC criteria imposed that is more restrictive than those of Transmission Owner.

General Design Requirements

• System phasing (counter clockwise)	X-Y-Z
• System frequency:	60 hertz
• Elevation, AMSL:	1256 feet
• Isokeraunic level:	40
• Maximum ambient temperature:	40 degrees C
• Minimum ambient temperature:	-40 degrees C
• Maximum conductor operating temperature:	Contact Transmission Owner
• Wind Loading (round shapes):	Per ASCE 7-98, per Fig. 6-1 depending on location
• Ice loading – Substations (no wind):	25 mm
• Seismic zone:	Per ASCE 7-98, per Fig. 9.4.1.1(a) and (b). Equipment qualification per IEEE 693-97

Voltage and Current Ratings

• Nominal phase-to-phase:	115 kV
• Maximum phase-to-phase:	121 kV
• Basic impulse level (BIL):	550 kV
• Maximum continuous current carrying capacity:	2000 A
• Design fault current:	40 kA
• Single Contingency (breaker failure) clearing time:	30 cycles

Clearances and Spacing

- Recommended rigid bus center-to-center phase spacing: 84”
- Minimum phase-to-phase, metal-to-metal distance: 53”
- Recommended phase-to-ground: 45”
- Minimum phase-to-ground: 42”
- Low bus height above top of foundations (match existing): 15’-1”
- High bus height above top of foundations (match existing): 21’-1”
- Minimum vertical clearance from live parts to grade: 11’-7”
- Minimum horizontal clearance from live parts: 6’-1”
- Minimum conductor clearance above roads in switchyard: 20’-2”
- Minimum bottom of insulator to top of foundation: 8’-6”

General Assumptions/Qualifiers

The accomplishment of the work on the Transmission Owner system to support the estimated costs and proposed schedule is dependent on the following:

- Obtaining the necessary substation outages. Substation outages are typically not granted from June to September and are discouraged during extreme winter conditions.
- No equipment delivery, environmental, permitting, regulatory or real estate delays.
- No extreme weather.
- No force majeure.
- Estimates assume no significant rock encountered during construction, and suitable soil conditions exist to accommodate a standard ground-grid and foundation installation.
- Developer will develop, and secure regulatory approval for, all necessary Erosion and Sediment Control (E&SC) plans and National Pollutant Discharge Elimination System (NPDES) permits.
- Developer will obtain all necessary permits.
- Developer will develop all necessary access roads for project sites.
- Developer will conduct all necessary wetlands and waterways studies and permits.
- Developer will conduct all necessary historical and archaeological studies.
- Assumed no vegetation clearing necessary by Transmission Owner.
- Assumed the interconnection substation and generation (collector) substation are adjacent (i.e. share a common fence. The 115 kV connection between the substations will be via rigid bus over the fence (i.e. no 115 kV transmission line between the substations).

If Developer chooses the “Option to Build,” it must utilize an approved Transmission Owner A/E & Construction Contractor. A listing of Transmission Owner Approved Vendors and Contractors is located at the following PJM site:

www.pjm.com/planning/design-engineering/to-tech-standards.aspx

Transmission Owner would act in an oversight capacity reviewing all design information & site construction (estimated cost for Engineering Oversight and Commissioning support would be provided by Transmission Owner).

Attachment 2. Detailed Protection Requirements

Not to be used for Construction

Following is the protection scope information (Facilities Study Stage only) for the AA1-115 Chestnut Flats Battery Storage project. These relay requirements reflect only the project scope for the installation of the AA1-115 Interconnection Substation connected to Transmission Owner's Thirty First Street substation. This study assumes no dual pilot relaying is required for stability.

Short Circuit Analysis

Fault values at Thirty First Street substation without the new battery storage in service are:

Three phase = 9432 A
Single line to ground = 8165 A
Z1= 0.8911 + j 5.2479 %
Z0= 1.3121 + j 7.6782 %

Impedances are given on a 100 MVA and 115kV base. The fault currents provided are bolted, symmetrical values for normal system conditions. Future increases in fault currents are possible and it is Developer's responsibility to upgrade its equipment and/or protective equipment coordination when necessary.

Transmission Owner Thirty First Street Substation

Install one new 115kV nominal, 145kV rated, 40kA interrupting breaker in the existing ring bus to create a new line terminal for the AA1-115 Chestnut Flats Battery Storage line exit. The breaker shall be equipped with four sets (12 total) 2000:5 multi-ratio C800 relay accuracy CTs with a thermal rating factor of 2.0. Install one SEL-501 relay for Failure-to-Trip protection. Install one set of three-phase CCVTs on the new line exit. Install one SATEC meter for the new line exit. Connect all new relays to the existing SEL-2020 communications processor and Arbiter 1094B GPS clock. Perform a coordination study of the existing protective relay settings for equipment at Thirty First Street substation to determine if relay settings are affected by the installation of the Chestnut Flats Battery Storage installation.

AA1-115 Chestnut Flats Battery Storage Collector Substation 115kV line exit – Install SEL-411L primary and SEL-411L backup relays for line protection, each utilizing a current differential protection scheme over dedicated fiber, with backup overcurrent and step distance protection. Primary and Backup relays will be connected to separate CTs, independent windings of the same voltage transformers, and be powered from different DC distribution panel circuit breakers.

Chestnut Flats Wind Farm Collector Substation 115kV line exit – CT inputs on the differential relays will need to be reconnected to the proper CTs with the new configuration of the Thirty First Street substation. Modify tripping pattern of the line protection and breaker failure relays to accommodate the installation of the additional 115kV ring bus breaker.

AA1-115 Chestnut Flats Battery Storage Collector Substation

Developer is solely responsible for protecting its own equipment in such a manner that electrical faults or other disturbances on the Transmission Owner system do not damage its equipment. The protection requirements for Developer's substation are detailed in the Transmission Owner "*Requirements for Transmission Connected Facilities"* document. All 115 kV faults on Developer's side of the Point of Interconnection must be cleared high speed (1 cycle relay plus 3 cycles breaker) and isolated from the Transmission Owner transmission system. Transmission Owner shall review the settings for all Developer-owned relays on the 115 kV system in order to establish coordination between Developer's protective equipment and the Transmission Owner transmission system relays. Transmission Owner personnel may witness functional testing of the relays and tripped devices. All Developer substation equipment must adhere to the requirements in Section 8 of Transmission Owner's "*Requirements for Transmission Connected Facilities*" document. This covers topics such as: overhead wire, BIL issues, surge protection, electrical clearances, station grounding, etc. It is expected that the substation will be built using good utility practice and all necessary safety codes are adhered to. After installation, the equipment is expected to be maintained properly according to Section 18 of Transmission Owner's "*Requirements for Transmission Connected Facilities*" document. Transmission Owner will reserve the right to approve all work performed on equipment that protects the Transmission Owner transmission system, including the 115 kV circuit breaker and associated relaying. In addition, prior to energization, the substation must be inspected and pass a final checkout by Transmission Owner personnel, in accordance with Section 17 of the Transmission Owner "*Requirements for Transmission Connected Facilities*" document. The cost for the substation checkout will be the responsibility of Developer.

Thirty First Street Substation 115kV line exit – Install SEL-411L primary and SEL-411L backup line protection relays, each utilizing a current differential protection scheme over dedicated fiber, with backup overcurrent and step distance protection. Separate CTs shall be used for primary and backup protection. Install a SEL-501 relay for Failure to Trip. The breaker failure relay shall trip and block close each electrically adjacent breaker and will key direct transfer trip to the Thirty First Street substation via the primary and backup SEL-411l line protection relays. All 115kV CTs utilized for high side relaying shall be C800 relay accuracy.

DC Power – The relaying system shall have a reliable source of DC power, independent from the AC system that is immune to AC system disturbance or loss, to assure proper operation of the protection scheme. Primary and backup relaying schemes shall be powered from different DC distribution panel circuit breakers.

Fiber Requirements

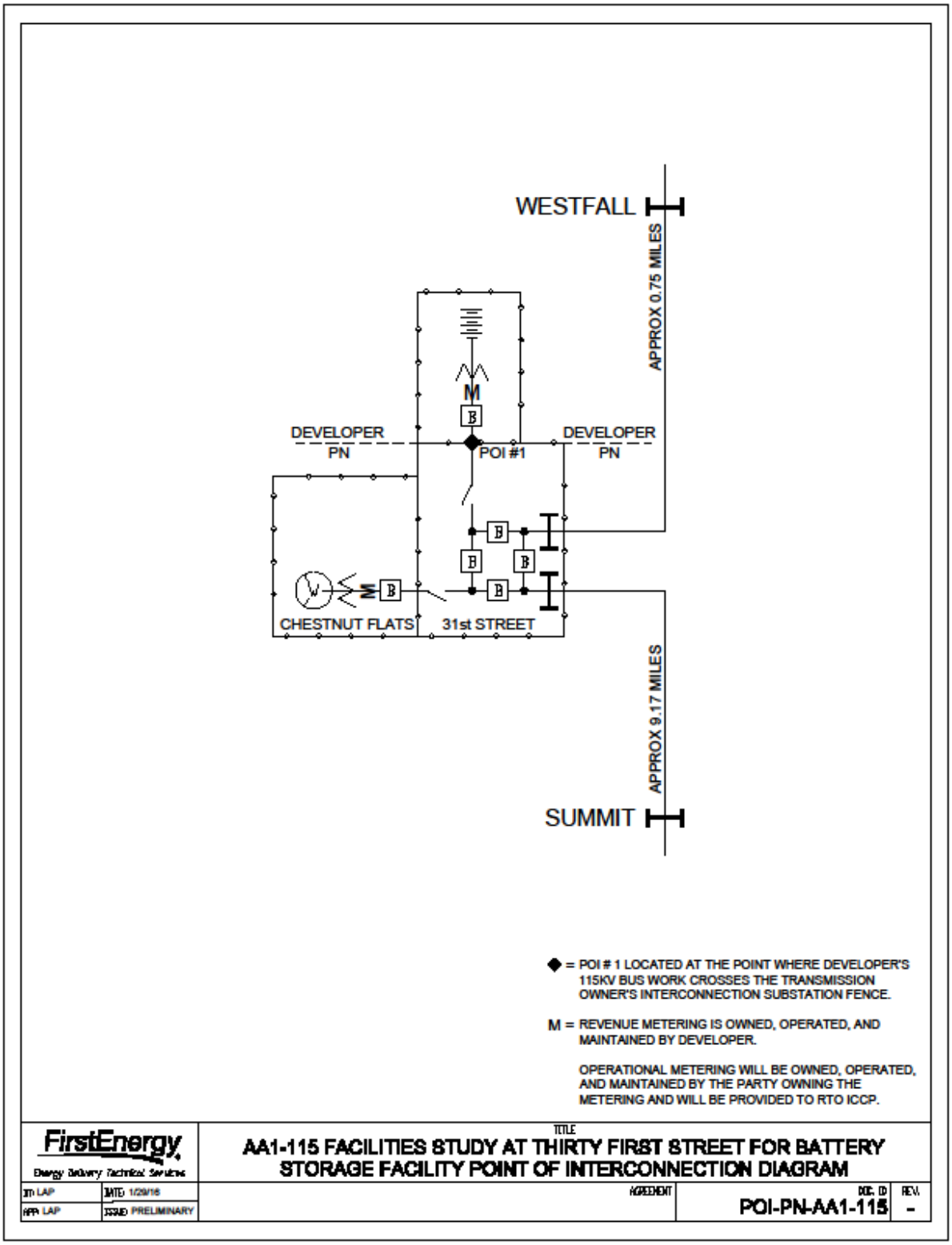
Developer will design, provide, install, own and maintain a fiber-optic communications cable* between Transmission Owner's Thirty First Street substation, and Developer's AA1-15 Chestnut Flats Battery Storage Collector substation. Developer is responsible for obtaining and maintaining all associated Rights-of-Way (ROW), Easements, and Permits for its fiber cable.

*Note: Should additional PJM studies indicate that stability issues exist, therefore requiring dual high speed tripping schemes, the primary and backup relay fiber-optic communication channels must be in separately-routed cable paths.

Non-Direct Connect Protection Requirements

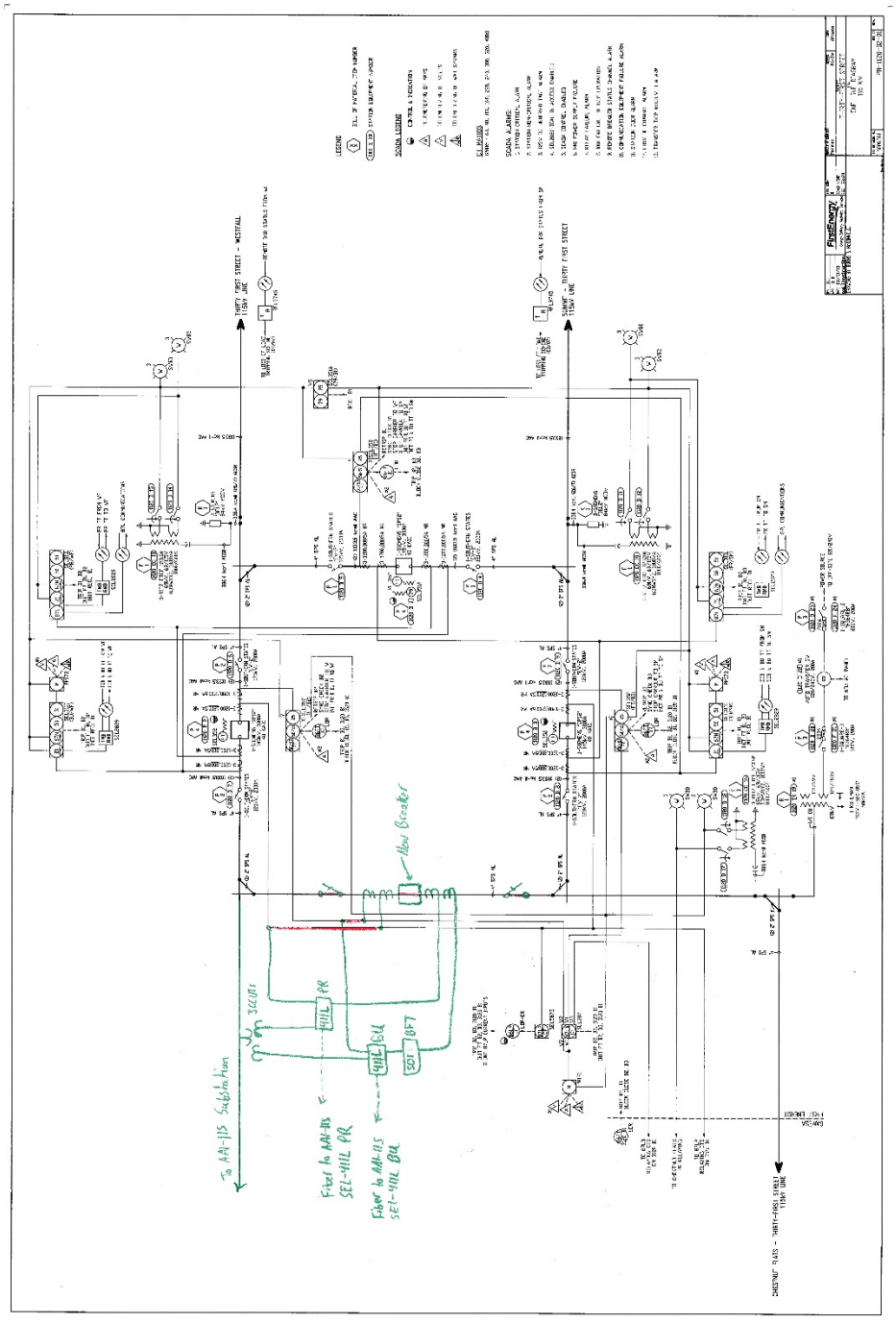
An area coordination study of the existing protective relay settings for equipment at Westfall and Summit substations will be performed to determine if relay settings are affected by the AA1-115 Chestnut Flats Battery Storage installation.

Attachment 3. One-Line Diagram



* Note: Diagram does not represent a physical layout. Not to be used for construction.

Attachment 4. Relay Sketch



* Note: Diagram does not represent a physical layout. Not to be used for construction.

Attachment 5. Aerial Diagram

Thirty First Street 115kV Substation (Existing)

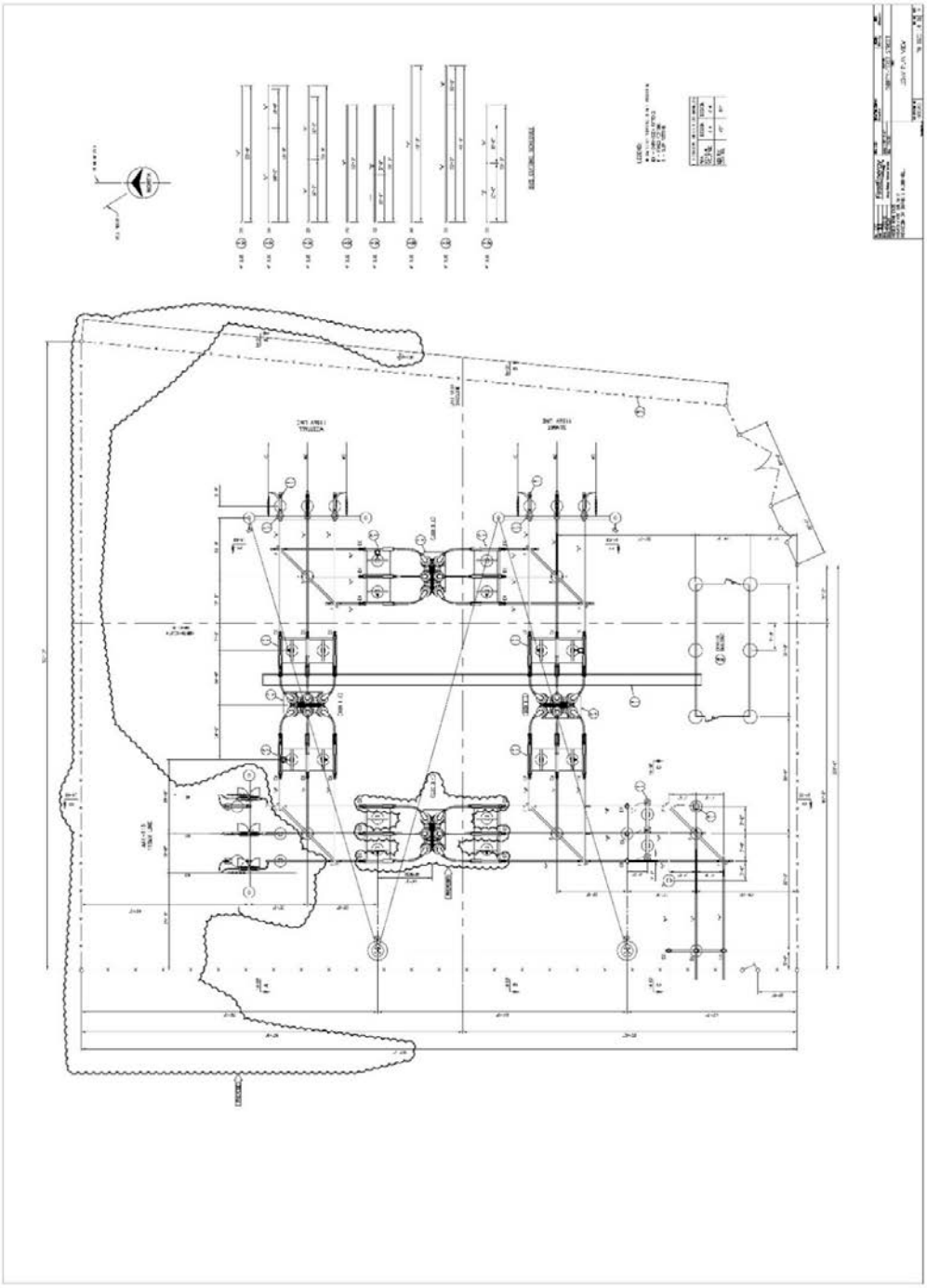
* Notes/Assumptions:

- This report assumes generation (collector) substation will be located on the northeastern side of the interconnection substation.
- This report assumes the interconnection substation and generation (collector) substation are adjacent (i.e. share a common fence). The 115 kV connection between the substations will be via rigid bus over the fence (i.e. no 115 kV transmission line between the substations.
- The Point of Interconnection (POI) would be where Developer's 115 kV bus work crosses the Thirty First Street substation fence.
- Developer to work out any associated Real Estate/ROW issues with Transmission Owner and the surrounding property owners.
- It appears an existing drainage ditch might be affected. Developer would be responsible for resolving any environmental issues that would arise from its project.
- There is a significant slope behind the existing substation that will be challenging for the expansion and will likely require a retaining wall by Developer. There is also a swale to the north and a detention area to the east that will likely need to be maintained.

Attachment 6. Proposed Layout

Thirty First Street 115kV Substation (Existing)

Preliminary- Not to be used for Construction



- Note: Developer is responsible for acquiring the additional approximate twenty feet (20') of land required for the substation expansion for Transmission Owner. Developer will obtain all necessary permits.