First Energy (JCP&L)
Local Plan Submission for the 2020 RTEP
Need Number: JCPL-2020-001
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020
Previously Presented:
Need Meeting 3/20/2020
Solutions Meeting 7/7/2020
Project Driver:
Operational Flexibility and Efficiency

Specific Assumption Reference:
Global Factors
- System reliability and performance
- Reliability of Non-BES facilities
- Load at risk in planning and operational scenarios

Add/Replace Transformers
- System concerns related to loss of an existing transformer or other contingency scenarios at a specific voltage level(s)

Problem Statement:
Oyster Creek substation serves approximately 30,300 customers and 120 MW of load. Loss of the Oyster Creek #7 and #8 230-34.5 kV transformers results in a local voltage collapse with the Oyster Creek – Bamber Lake – Whitings (Q121) 34.5 kV line overloaded >125% of its 52 MVA SE rating.
Need Number: JCPL-2020-001
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020
Selected Solution:
Install one 230-34.5 kV Transformer at Oyster Creek
  - Install one 230-34.5 kV 125 MVA Transformer.
  - Extend the 230 kV bus and install two 230 kV breakers.
  - Install two 34.5 kV breakers for connection to the 34.5 kV.

Estimated Cost: $6.8 M
Projected In-Service: 6/1/2023
Supplemental Project ID: s2300
Model: 2019 RTEP Model for 2024
**Need Number:** JCPL-2020-002

**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020

**Previously Presented:**
Need Meeting 6/16/2020
Solutions Meeting 7/16/2020

**Project Driver:**
*Customer Service*

**Specific Assumption Reference:**
New customer connection request will be evaluated per FirstEnergy’s "Requirements for Transmission Connected Facilities" document and "Transmission Planning Criteria" document.

**Problem Statement:**
New Customer Connection – A customer requested 34.5 kV service, anticipated load is 7 MW, location is near the Morris Park – Phillipsburg 34.5 kV line.

Requested in-service date is July 2020.
Need Number: JCPL-2020-002
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020
Selected Solution:
• Tap the Morris Park-Phillipsburg 34.5 kV line approximately 1.2 miles from Phillipsburg substation and build a 34.5 kV line one span toward the proposed customer substation.
• Disconnect the out-of-service customer owned 34.5 kV double circuit lines and jumper the 34.5 kV line at the tap location.
• Install two (2) 34.5 kV in-line switches on either side of the new customer tap connection
• Install one (1) 34.5 kV in-line switch on the line extension towards the customer substation
Estimated Project Cost: $0.4M
Projected In-Service: 7/31/2020
Supplemental Project ID: s2308
Model: 2019 Series 2024 Summer RTEP 50/50
**Need Number:** JCPL-2020-003  
**Process Stage:** Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020  
**Previously Presented:**  
Need Meeting 6/16/2020  
Solutions Meeting 7/16/2020  
**Project Driver:**  
*Customer Service*

**Specific Assumption Reference:**  
New customer connection request will be evaluated per FirstEnergy’s “Requirements for Transmission Connected Facilities” document and “Transmission Planning Criteria” document.

**Problem Statement:**  
New Customer Connection – A customer requested 34.5 kV service, anticipated load is 4 MW, location is near the Larrabee – Point Pleasant 34.5 kV line.

Requested in-service date is September 2020.
Need Number: JCPL-2020-003
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020

Selected Solution:
• Tap the Larrabee-Point Pleasant 34.5 kV line approximately 4.5 miles from Larrabee substation and build a 34.5 kV line one span toward the proposed customer substation.
• Install two (2) 34.5 kV in-line switches on either side of the new customer tap connection
• Install one (1) 34.5 kV in-line switch on the line extension towards the customer substation

Estimated Project Cost: $0.4M
Projected In-Service: 9/1/2020
Supplemental Project ID: s2309
Model: 2019 Series 2024 Summer RTEP 50/50
Need Number: JCPL-2020-004  
Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020  
Previously Presented:  
Need Meeting 7/7/2020  
Solutions Meeting 8/4/2020  
Project Driver:  
Customer Service

Specific Assumption Reference:  
Customer connection request will be evaluated per FirstEnergy’s “Requirements for Transmission Connected Facilities” document and “Transmission Planning Criteria” document.

Problem Statement:  
Customer Connection – JCP&L Distribution requested to complete a 230 kV service connection in 2016 with an initial in-service date of June 2018. The anticipated load is 9 MW, location is at the existing Manchester 230-12.5 kV substation.

Requested in-service date is June 2020.
Need Number: JCPL-2020-004

Process Stage: Submission of Supplemental Project for inclusion in the Local Plan 10/16/2020

Selected Solution:
Manchester 230-12.5 kV Transformer
- Install 230 kV circuit breaker and associated equipment (switch, relaying, etc.) to feed the new 230-12.5 kV #2 transformer.
- Remove 34.5-12.5 kV Mobile transformer.

Estimated Project Cost: $0.2 M

Projected In-Service: 8/31/2020

Supplemental Project ID: s2315

Model: 2019 RTEP Model for 2024
Questions?

Planning Community
Revision History

10/16/2020 – V1 – Original version posted to pjm.com. Included S2300, S2308, S2309 and S2315