



Final Review and Recommendation

2020 RTEP Proposal Window 1 – Cluster No. 9

Version 0

January 8, 2021

For Public Use

This page is intentionally left blank.

2020 RTEP Proposal Window 1 – Cluster No. 9

Final Review and Recommendation

As part of its 2020 RTEP process cycle of studies, PJM identified clustered groups of flowgates that were put forward for proposals as part of 2020 RTEP Window No. 1. Specifically, Cluster No. 9 - discussed in this Final Review and Recommendation report - includes those flowgates listed in **Table 1 and Figure 1**.

Table 1. 2020 RTEP Proposal Window 1 – Cluster No. 9 List of Flowgates

Flowgate	kV Level	Analysis
AEP-T376, AEP-T377, AEP-T384, AEP-T385, AEP-T388, AEP-T389	69kV	Thermal

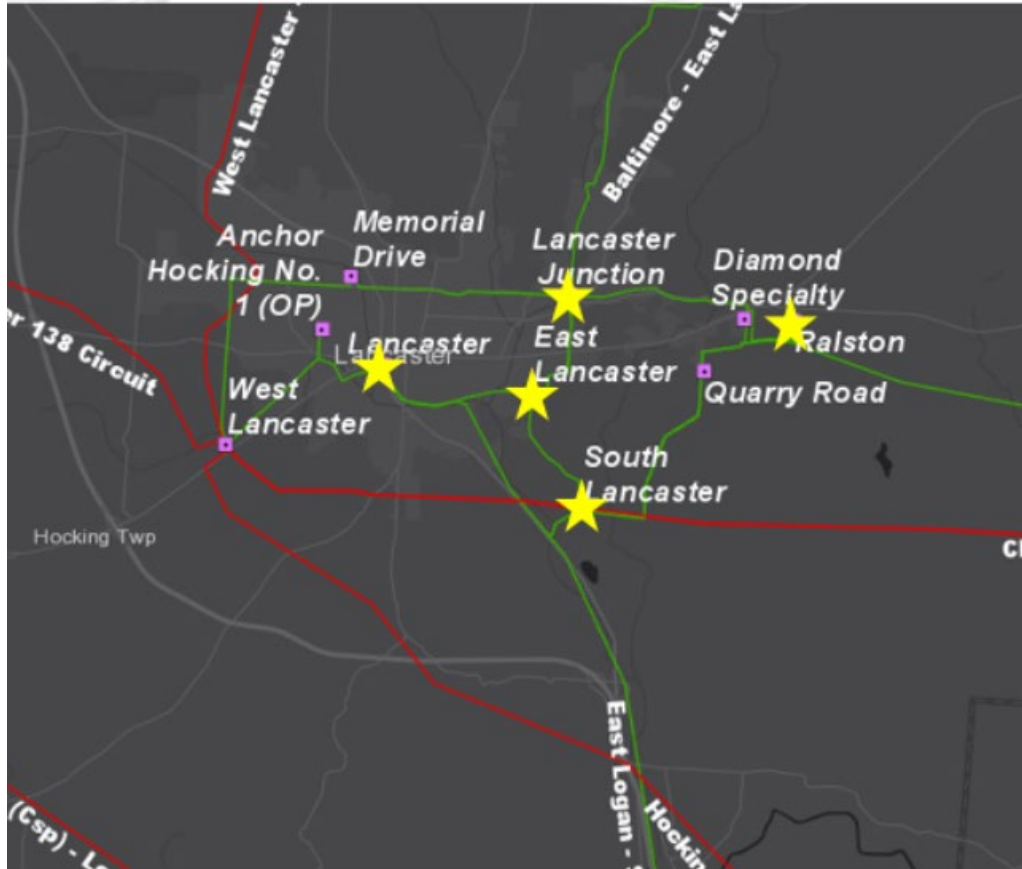
Proposals Submitted to PJM

PJM conducted 2020 RTEP Proposal Window No. 1 for 60 days beginning July 1, 2020 and closing August 31, 2020. During the window, several entities submitted two proposals through PJM’s Competitive Planner Tool. The proposals are summarized in **Table 2**. Publicly available redacted versions of the proposals can be found on PJM’s web site: <https://www.pjm.com/planning/competitive-planning-process/redacted-proposals.aspx>.

Table 2. 2020 RTEP Proposal Window 1 – Cluster No. 9 List of Proposals received for

Proposal ID#	Project Type	Project Description	Total Construction Cost M\$	Cost Capping Provisions (Y/N)
628	Upgrade	Lancaster Area Switching Improvements	1.466	N
915	Upgrade	Lancaster Area Line Rebuilds	11.147	N

Figure 1 – 2020 RTEP Proposal Window 1 – Cluster No. 9



Final Review and Recommendation

PJM completed a Final Review and Recommendation for the proposals listed in **Table 2** above based on data and information provided by the project sponsors as part of their submitted proposals. The data and information included the following preliminary analytical quality assessments:

- *Initial Performance Review* – PJM evaluated whether or not the project proposal solved the required reliability criteria violation drivers posted as part of the open solicitation process.
- *Initial Planning Level Cost Review* – PJM reviewed the estimated project cost submitted by the project sponsor and any relevant cost containment mechanisms submitted as well.
- *Initial Feasibility Review* – PJM reviewed the overall proposed implementation plan to determine if the project, as proposed, can feasibly be constructed.
- *Additional Benefits Review* – PJM reviewed information provided by the proposing entity to determine if the project, as proposed, provides additional benefits such as the elimination of other needs on the system

Initial performance reviews yielded the following results:

1. No significant difference among the two proposals as to their respective ability to solve the identified reliability criteria violations.
2. No creation of additional reliability criteria violations.

The cost review provided no significant factors to consider other than the differences in apparent costs. A high level review of the plans identified in the proposals does not reveal any concerns.

PJM presented a First Read and Second Read of the Initial Performance Review and Recommended Solution at the November 2020, and December 2020, TEAC meetings, respectively. No stakeholder comments in opposition to the selected solution were received at those meetings nor afterward via Planning Community.

Additional Benefits

In order to ensure that PJM develops more efficient or cost effective transmission solutions to identified regional needs, RTEP Process consideration must be given to the additional benefits a proposal window-submitted project may provide beyond those required to solve identified reliability criteria violations. As discussed in Section 1.1 and Section 1.4.2 of PJM manual 14B, Transmission Owner Attachment M-3 needs and projects must be reviewed to determine any overlap with solutions proposed to solve the violations identified as part of opening an RTEP proposal window.

A review of these overlaps as part of PJM's 2020 Window No. 1 screening has identified potential benefits beyond solving identified reliability criteria violations. Based on the information provided by the sponsor, proposal No. 915 will address needs associated with aging infrastructure following a review of the information provided by the sponsor of the proposal. These needs are outlined below in regards to the multiple line sections as indicated in the three groups below.

Lancaster-East Lancaster-South Lancaster 69 kV Circuit (3.35 miles)

- From 2015 – 2020 this circuit has experienced 8 momentary and 2 permanent outages. Since the line does not directly serve customers, there were no CMI.
- The circuit currently has 49 open conditions on 27 structures (47% of the total structures), including bent tower legs, cracked poles, burnt and broken insulators, and heavy rusting.
- Structures are made up of 1923 steel lattice towers (17 structures) and wood poles (41 structures) from the 1950s and 1960s.
- The circuit conductor was primarily installed in 1923 consisting of 2/0 Copper (1.84 miles) and 556 ACSR (1.5 miles) from 1965.
- Proposal #915 is rebuilding the 2/0 Copper single circuit section of line between Lancaster and East Lancaster, approximately 0.8 miles. Approximately 1 mile is a double circuit section that's common to the Lancaster-South Lancaster circuit (included in next group below).

Lancaster-South Lancaster 69 kV Circuit (3.3 miles)

- From 2015 – 2020 this circuit has experienced 3 momentary and 2 permanent outages resulting in approximately 1M CMI.
- The circuit currently has 56 open conditions on 30 structures (77% of the total structures), including bent tower legs, cracked poles, burnt and broken insulators, and heavy rusting.
- Structures are made up of 1923 steel lattice towers (25 structures) and wood poles (14 structures) from the 1970s.
- The circuit conductor was primarily installed in 1923 consisting of 2/0 Copper (2.79 miles) and 556 ACSR (0.5 miles) from 1978.
- The baseline proposal is rebuilding the 2/0 Copper sections of line between Lancaster and South Lancaster, approximately 2.8 miles. Approximately 1 mile is a double circuit section that's common to the Lancaster-East Lancaster circuit (included in the group above).

Lancaster Junction-Ralston 69 kV Line (3.08 miles)

- From 2015 – 2020 the entire circuit has experienced 12 momentary and 4 permanent outages resulting in approximately 3.1M CMI.
- The line currently has 33 open conditions on 27 structures (36% of the total structures), including damaged braces, rot top, rot heart, burnt insulators, and broken ground lead wires.
- Structures are made up of wood poles from the 1940s (16 structures) and the 1960s (27). Some structures have been replaced since the 1980s (27 structures).
- The circuit conductor was installed in 1955 consisting of 1/0 Copper (1.9 miles), 1/0 ACSR (0.44 miles), and 556 ACSR (0.74 miles).
- The baseline proposal is rebuilding the 1/0 conductor sections of line between Lancaster and South Lancaster, approximately 2.3 miles.

Recommended Solution

Given the additional benefits associated with proposal No. 915 that indicate it will address these aging infrastructure concerns warrant consideration. PJM understands that the aging infrastructure issues identified, which would be resolved through proposal No. 915, would not be resolved by proposal No. 628, leaving the RTEP exposed to increased costs as then the scopes of work for both proposals would need to be pursued and costs for both scopes of work would be incurred. Proposal No. 915 is the more efficient or cost effective solution with a projected in-service date of 4/2025.

PJM presented this Recommended Solution with stakeholders at the December 1, 2020 TEAC. A final recommendation will be made to the PJM Board at its meeting scheduled for February 8th and 9th, 2021 for PJM Board review and approval.