



Initial Review and Screening 2021 RTEP Proposal Window 1 – Cluster No. 2

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2021 RTEP Proposal Window No. 1 - Cluster No. 23

As part of its 2021 RTEP process cycle of studies, PJM identified clustered groups of flowgates that were put forward for proposals as part of 2021 RTEP Window No. 1. Specifically, Cluster No. 2 - discussed in this Initial Review and Screening report - includes those flowgates listed in **Table 1**.

Table 1. 2021 RTEP Proposal Window No. 1 – Cluster No. 2 List of Flowgates

Flowgate	kV Level	Driver
N2-SVM8, N2-SVM9, N2-SVM10, N2-SVM11, N2-SVM12, N2-SVM13, N2-SVM16, N2-SVM17, N2-SVM18, N2-SVM19, N2-SVM26, N2-SVM27, N2-SVD1, N2-SVD2, N2-SVD3, N2-SVD4, N2-SVD5, N2-SVD6, N2-SVD7, N2-SVD8, N2-SVD9, N2-SVD10, N2-SVD11, N2-SVD12, N2-SVD15, N2-SVD16	115 kV	Summer N-1-1 Voltage

Proposals Submitted to PJM

PJM conducted 2021 RTEP Proposal Window No. 1 for 60 days beginning July 2, 2021 and Closing August 31, 2021. During the window, four entities submitted ten 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. 2021 RTEP Proposal Window No. 1 – Cluster No. 2 List of Proposals received for

Proposal ID#	Project Type	Project Description	Total Construction Current Year Cost M\$	Cost Capping Provisions (Y/N)
292	Greenfield	The Dogwood Run project includes a new 115/230kV substation. This substation will include a 115kV 3-position ring bus and a 115/230kV transformer. The substation will connect via a short (~0.25 mile) 230kV line to a new line position at the nearby William Grove Substation. The Allen to Roundtop 115kV transmission line will be tied into the substation via an approximately 2 mile double circuit transmission line.	\$15.10	Y
582	Greenfield	The Dogwood Sprint 500 kV project includes a new 500/115kV substation interconnecting the Juniata - Three Mile Island 500kV transmission line and the Allen to Roundtop 115kV transmission line. The substation will include a 500kV three-position ring bus that steps down, via a 500/115kV transformer, to a 115kV three-position ring bus.	\$21.58	Y

Proposal ID#	Project Type	Project Description	Total Construction Current Year Cost M\$	Cost Capping Provisions (Y/N)
561	Greenfield	At the existing PPL Williams Grove Substation, install a new 75 MVA 115 / 69 kV transformer and construct a new ~3.4 mile 115 kV single circuit transmission line from Williams Grove to Allen Substation. Install a new Allen four breaker ring bus Switchyard near the existing METED Allen Substation on adjacent new property to be purchased and owned by PPL. Terminate the Round Top - Allen and the Allen-PPGI 115 kV lines into the new switchyard.	\$15.62	Y
992	Greenfield	At the existing PPL Williams Grove Substation, install a new 300 MVA 230/115 kV transformer. Construct a new ~3.4 mile 115 kV single circuit transmission line from Williams Grove to Allen Substation. Install a new Allen four breaker ring bus Switchyard near the existing METED Allen Substation on adjacent new property to be purchased and owned by PPL. Terminate the Round Top - Allen and the Allen-PPGI 115 kV lines into the new switchyard	\$18.57	Y
386	Greenfield	Expand the existing incumbent Williams Grove 230 kV station to add a new 230/115 kV transformer. Construct a 3.7 mile greenfield 115 kV line from Williams Grove 115 kV station to Allen 115 kV station. Install (2) breakers at Williams Grove 230 kV, (1) breaker at Williams Grove 115 kV, and (1) breaker at Allen 115 kV. Also, reconductor 14.2 miles of existing Juniata - Cumberland 230kV line.	\$20.25	Y
113	Greenfield	Expand the existing incumbent Williams Grove 230 kV station to add a new 230/115 kV transformer. Construct a 3.7 mile greenfield 115 kV line from Williams Grove 115 kV station to Allen 115 kV station. Install (2) breakers at Williams Grove 230 kV, (1) breaker at Williams Grove 115 kV, and (1) breaker at Allen 115 kV. (hereinafter, "the Project")	\$12.03	Y
789	Greenfield	Loop the PPL owned Cumberland - Williams Grove 230 kV Line into a new MAIT owned substation constructed adjacent to the line. The substation will be a three-breaker ring bus and will include a 300 MVA 230/115 kV transformer. The MAIT owned Allen 115 kV Substation is to be reconfigured into a four-breaker ring bus. A new 115 kV line (approx. 2.1 miles) is to be constructed and terminated at the new substation and the Allen Substation along the TMI-Juniata 500 kV Line corridor.	\$28.54	N
477	Upgrade	Install +/- 90 MVAR STATCOM at Roundtop Substation	\$32.16	N
457	Greenfield	<u>At the existing PPL Williams Grove Substation, install a new 75 MVA 115 / 69 kV transformer and construct a new ~3.4 mile 115 kV single circuit transmission line from Williams Grove to Allen Substation. Install a new Allen four breaker ring bus Switchyard near the existing METED Allen Substation on adjacent new property presently owned by FE. Terminate the Round Top - Allen and the Allen-PPGI 115 kV lines into the new switchyard.</u> At the existing PPL Williams Grove Substation, install a new 300 MVA 230/115 kV transformer. Construct a new ~3.4 mile 115 kV single circuit transmission line from Williams Grove to Allen Substation. Install a new Allen four breaker ring bus Switchyard near the existing METED Allen Substation on adjacent property presently owned by FE. Terminate the Round Top - Allen and the Allen-PPGI 115 kV lines into the new switchyard	\$15.27	Y[AS1]
99	Greenfield	At the existing PPL Williams Grove Substation, install a new 300 MVA 230/115 kV transformer. Construct a new ~3.4 mile 115 kV single circuit transmission line from Williams Grove to Allen Substation. Install a new Allen four breaker ring bus Switchyard near the existing METED Allen Substation on adjacent property presently owned by FE. Terminate the Round Top - Allen and the Allen-PPGI 115 kV lines into the new switchyard.	\$17.82	Y[AS2]

Initial Review and Screening

PJM has completed an initial review and screening of the proposals listed in **Table 2** above based on data and information provided by the project sponsors as part of their submitted proposals. This review and screening included the following preliminary analytical quality assessment:

- *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. All ten proposals solve the identified reliability criteria violations
2. One of the proposals (proposal ID 789) create a new reliability issue

Additional Benefits

In order to ensure that PJM develops more efficient or cost effective transmission solutions to the 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 proposals as part of PJM's 2021 Window No. 1 screening has identified potential benefits beyond solving identified reliability criteria violations. With the exception of proposal ID 477, all nine proposals add a third source to the Allen 115 kV substation and provide operational flexibility. Proposal ID 386 provides market efficiency benefit, however the market efficiency need is already addressed separately.

Initial Review Conclusions and next steps

Based on this information,

- Proposal No. 561 and 457 requires building a new feed to 115kV from 69 kV system and isn't preferable.
- Proposal ID 992 requires additional greenfield to build a 115 V substation to expand the Allen station
- Proposal ID 113 and 386 don't provide operational flexibility the other projects provide
- Proposal ID 789 causes a new violation
- Proposal ID 477 doesn't provide the operational flexibility a new 115 kV line provides, plus it is the most expensive project.
- Proposal ID 582 required a connection to a 500 kV system and will require additional greenfield
- Proposal No.292 will require additional greenfield to build a new 230/115 kV substation.
- Proposal No. 99 appears to be requiring less greenfield