

# Buttermilk Falls Expansion + Mountain Stone Expansion

## General Information

|                                                                                                               |                                                                                                   |
|---------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| Proposing entity name                                                                                         | Proprietary & Confidential Information                                                            |
| Does the entity who is submitting this proposal intend to be the Designated Entity for this proposed project? | Proprietary & Confidential Information                                                            |
| Company proposal ID                                                                                           | Proprietary & Confidential Information                                                            |
| PJM Proposal ID                                                                                               | 937                                                                                               |
| Project title                                                                                                 | Buttermilk Falls Expansion + Mountain Stone Expansion                                             |
| Project description                                                                                           | Expand Mountain Stone and Buttermilk Falls substations to enhance the 765 kV transmission system. |
| Email                                                                                                         | Proprietary & Confidential Information                                                            |
| Project in-service date                                                                                       | 06/2032                                                                                           |
| Tie-line impact                                                                                               | No                                                                                                |
| Interregional project                                                                                         | No                                                                                                |
| Is the proposer offering a binding cap on capital costs?                                                      | Yes                                                                                               |
| Additional benefits                                                                                           | Proprietary & Confidential Information                                                            |

## Project Components

1. 175) Buttermilk Falls Substation 765 kV
2. 174) Mountain Stone Substation 765 kV

### Substation Upgrade Component

|                 |                                         |
|-----------------|-----------------------------------------|
| Component title | 175) Buttermilk Falls Substation 765 kV |
|-----------------|-----------------------------------------|

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |          |
|---------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
| Project description                         | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |          |
| Substation name                             | Buttermilk Fall (PJM Baseline ID: b4036.14)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                |          |
| Substation zone                             | PENELEC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |          |
| Substation upgrade scope                    | Expand the in-development Buttermilk Falls substation by adding a new double-breaker-double bus string (2x new breakers) to create a new terminal position for a 750MVAR StatCom. Add two new 250 MVAR 765 kV cap banks with breakers off the bus. Add a new two string double-breaker-double bus with bus tie breakers (5x new breakers) off the existing buses. The first string will create a new terminal position for the existing line to Mountain Stone. The second string will create a new terminal position for the existing 765/500 kV Transformer. Add two new 250 MVAR 765 kV cap banks with breakers off the bus. |                |          |
| Transformer Information                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |          |
|                                             | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Capacity (MVA) |          |
| Transformer                                 | 765-500kV Xfmr #1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3125           |          |
|                                             | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       | Low Side       | Tertiary |
| Voltage (kV)                                | 765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 500            | NA       |
| New equipment description                   | Expand the 765kV switchyard by adding (11) 765kV, 5000A, 63kAIC breakers adding (3) additional bays. Add (4) 765kV, 250 MVAR capacitor banks and (1) 765kV, +/- 750 MVAR STATCOM.                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |          |
| Substation assumptions                      | The proposed substation modifies the 2025 RTEP substation ( PJM Baseline ID: b4036.14). The ultimate substation configuration has been designed in coordination with the engineering team currently designing Buttermilk Falls Substation and configured to fit on the same parcels identified in the awarded 2025 RTEP proposal, resulting in a larger footprint and limited impact to real-estate acquisition plan.                                                                                                                                                                                                           |                |          |
| Real-estate description                     | Expansion will be sited on the same property as PJM Baseline ID: b4036.14.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |          |
| Construction responsibility                 | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |          |
| Benefits/Comments                           | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |          |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                |          |
| Engineering & design                        | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                |          |

|                                  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |
|----------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|
| Permitting / routing / siting    | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| ROW / land acquisition           | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Materials & equipment            | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Construction & commissioning     | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Construction management          | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Overheads & miscellaneous costs  | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Contingency                      | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Total component cost             | \$315,585,741.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |
| Component cost (in-service year) | \$340,710,348.00                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                |
| Substation Upgrade Component     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |
| Component title                  | 174) Mountain Stone Substation 765 kV                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |
| Project description              | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                |
| Substation name                  | Mountain Stone (PJM Baseline ID: b4036.13)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                |
| Substation zone                  | PPL                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                |
| Substation upgrade scope         | Expand the in-development Mountain Stone substation (PJM Baseline ID: b4036.13) adding a new single string double-breaker-double bus with bus tie breakers (4x new breakers) off the existing buses creating a new terminal position; move the existing line from Buttermilk Falls to this new position. Add two new 250 MVAR 765 kV cap banks with breakers off the bus. On existing double-breaker-double bus install new 750 MVAR StatCom in existing terminal where the line from Buttermilk Falls was connected. Add two new 250 MVAR 765 kV cap banks with breakers off the bus. Install two new 500kV low side circuit breakers on low side of 765/500kV transformers. |                |
| Transformer Information          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |                |
|                                  | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Capacity (MVA) |
| Transformer                      | 765-500kV Xfmr #1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | 3125           |

|                                             |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |          |
|---------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|----------|
|                                             | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Low Side       | Tertiary |
| Voltage (kV)                                | 765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 500            | NA       |
|                                             | Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | Capacity (MVA) |          |
| Transformer                                 | 765-500kV Xfmr #2                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | 3125           |          |
|                                             | High Side                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Low Side       | Tertiary |
| Voltage (kV)                                | 765                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 500            | NA       |
| New equipment description                   | Expand the 765kV Switchyard by adding (8) 765kV, 5000A, 63kAIC breakers and adding (1) additional bay. Add (4) 765kV, 250 MVAR capacitor banks, and (1) 765kV, +/- 750 MVAR STATCOM. Add (2) 500kV, 5000A, 63kAIC breakers.                                                                                                                                                                                                                                                                                                       |                |          |
| Substation assumptions                      | The proposed substation modifies the 2025 RTEP substation ( PJM Baseline ID: b4036.13). The ultimate substation configuration has been designed in coordination with the engineering team currently designing Mountain Stone Substation and configured to fit on the same parcels identified in the awarded 2025 RTEP proposal, however the larger footprint requires shifting the substation several hundred feet to the east on the other side of PPL's existing 500-kV transmission lines feeding into the Juniata substation. |                |          |
| Real-estate description                     | Expansion will be sited on the same property as PJM Baseline ID: b4036.13                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                |          |
| Construction responsibility                 | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Benefits/Comments                           | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Component Cost Details - In Current Year \$ |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                |          |
| Engineering & design                        | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Permitting / routing / siting               | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| ROW / land acquisition                      | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Materials & equipment                       | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Construction & commissioning                | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |
| Construction management                     | Proprietary & Confidential Information                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                |          |

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Overheads & miscellaneous costs  | Proprietary & Confidential Information |
| Contingency                      | Proprietary & Confidential Information |
| Total component cost             | \$322,119,008.00                       |
| Component cost (in-service year) | \$348,086,547.00                       |

## Congestion Drivers

None

## Existing Flowgates

None

## New Flowgates

Proprietary & Confidential Information

## Financial Information

|                              |         |
|------------------------------|---------|
| Capital spend start date     | 02/2027 |
| Construction start date      | 12/2030 |
| Project Duration (In Months) | 64      |

## Cost Containment Commitment

|                            |                                        |
|----------------------------|----------------------------------------|
| Cost cap (in current year) | Proprietary & Confidential Information |
| Cost cap (in-service year) | Proprietary & Confidential Information |

## Components covered by cost containment

1. 175) Buttermilk Falls Substation 765 kV - PROPOSER

## 2. 174) Mountain Stone Substation 765 kV - PROPOSER

### Cost elements covered by cost containment

|                                                                                                                 |                                        |
|-----------------------------------------------------------------------------------------------------------------|----------------------------------------|
| Engineering & design                                                                                            | Yes                                    |
| Permitting / routing / siting                                                                                   | Yes                                    |
| ROW / land acquisition                                                                                          | Yes                                    |
| Materials & equipment                                                                                           | Yes                                    |
| Construction & commissioning                                                                                    | Yes                                    |
| Construction management                                                                                         | Yes                                    |
| Overheads & miscellaneous costs                                                                                 | Yes                                    |
| Taxes                                                                                                           | No                                     |
| AFUDC                                                                                                           | No                                     |
| Escalation                                                                                                      | No                                     |
| Additional Information                                                                                          | Proprietary & Confidential Information |
| Is the proposer offering a binding cap on ROE?                                                                  | Yes                                    |
| Would this ROE cap apply to the determination of AFUDC?                                                         | No                                     |
| Would the proposer seek to increase the proposed ROE if FERC finds that a higher ROE would not be unreasonable? | No                                     |
| Is the proposer offering a Debt to Equity Ratio cap?                                                            | Proprietary & Confidential Information |
| Additional cost containment measures not covered above                                                          | Proprietary & Confidential Information |

### Additional Comments

As per confirmation by PJM, the Project Capital Expenditures Section will be automatically redacted by PJM.