PJM Greenfield

General Information

Proposing entity name: PJM
Company proposal ID: PJM-101
PJM Proposal ID: 362
Project title: PJM Greenfield
Project description: Build the "Barnyard 500/138 kV Project" in south eastern Pennsylvania. The project will establish a greenfield 500/138 kV station cutting in Whitemarsh-Jenkintown 500 kV circuit on the high side and Montco-Flint and Montco-Barbadoes 138 kV circuits on the low side with a 500/138 kV step-down transformer.
Project in-service date: 04/2021
Tie-line impact: No
Interregional project: No
Is the proposer offering a binding cap on capital costs?: Yes
Additional benefits: Additional Project benefits

Supporting Documents

Project analysis attachments: Project Analysis.csv
Market efficiency simulation modeling files: Market Efficiency.csv

Project Components

1. PJM Greenfield

Greenfield Substation Component
PJM Greenfield

Barnyard

The project will establish a greenfield 500/138 kV station cutting in Whitemarsh-Jenkintown 500 kV circuit on the high side and Montco-Flint and Montco-Barbadoes 138 kV circuits on the low side with a 500/138 kV step-down transformer.

AC

500/138

**Transformer Information**

<table>
<thead>
<tr>
<th>Name</th>
<th>Capacity (MVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Montco 1</td>
<td>500</td>
</tr>
<tr>
<td>High Side</td>
<td></td>
</tr>
<tr>
<td>Low Side</td>
<td>138</td>
</tr>
<tr>
<td>Tertiary</td>
<td></td>
</tr>
</tbody>
</table>

500

One 450 MVA, 3 phase, 500/138 kV transformer.

**Normal ratings**

<table>
<thead>
<tr>
<th>Summer (MVA)</th>
<th>Winter (MVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>500.000000</td>
<td>450.000000</td>
</tr>
</tbody>
</table>

**Emergency ratings**

<table>
<thead>
<tr>
<th>Summer (MVA)</th>
<th>Winter (MVA)</th>
</tr>
</thead>
<tbody>
<tr>
<td>600.000000</td>
<td>550.000000</td>
</tr>
</tbody>
</table>

**Environmental assessment**

The study area is primarily agricultural. PJM will begin coordination with local, state, and federal agencies in the early stages of the Project to identify potential mitigation and/or avoidance measures. Additionally, the majority of the project parallels an existing extra-high voltage (EHV) line which will minimize new environmental impacts.

**Outreach plan**

PJM will begin outreach efforts early in project planning to clearly convey the need for the Project, as well as collect input from interested parties. The station will be located near an existing Whitemarsh substation in an agricultural area near EHV lines and little opposition is expected.

**Land acquisition plan**

PJM will use the same land acquisition process and approach that is successfully employed on hundreds of projects every year.
Construction responsibility

Proposer

Additional comments

Additional comments applicable to proposal.

Supporting Documents

Single line diagram

Single line diagram.txt

General arrangement drawing

General Arrangement.txt

Substation location

Barnyard substation location.png

Component Cost Details - In Current Year $

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering &amp; design</td>
<td>$223,550.00</td>
</tr>
<tr>
<td>Permitting / routing / siting</td>
<td>$15,000.00</td>
</tr>
<tr>
<td>ROW / land acquisition</td>
<td>$76,960.00</td>
</tr>
<tr>
<td>Materials &amp; equipment</td>
<td>$702,004.00</td>
</tr>
<tr>
<td>Construction &amp; commissioning</td>
<td>$8,494,564.00</td>
</tr>
<tr>
<td>Construction management</td>
<td>$66,866.00</td>
</tr>
<tr>
<td>Overheads &amp; miscellaneous costs</td>
<td>$23,591.00</td>
</tr>
<tr>
<td>Contingency</td>
<td>$9,775,941.00</td>
</tr>
<tr>
<td>Total component cost</td>
<td>$19,378,476.00</td>
</tr>
<tr>
<td>Component cost (in-service year)</td>
<td>$1,447,583.00</td>
</tr>
</tbody>
</table>

Congestion Drivers

None

Existing Flowgates
**New Flowgates**

None

**Financial Information**

Capital spend start date 08/2020

Construction start date 09/2020

Project Duration (In Months) 8

**Capital Expenditure Documents**

Upload completed template Capital Expenditure.xlsx

**Cost Containment Commitment**

Cost cap (in current year) $22,212,343.00

Cost cap (in-service year) $29,431,756.00

**Components covered by cost containment**

1. PJM Greenfield - 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: Yes
AFUDC: No
Escalation: No

Additional Information:
The cost containment commitment covers the competitive portion of the proposal.

Is the proposer offering a binding cap on ROE? No
Is the proposer offering a Debt to Equity Ratio cap? No

Supporting Documents:
Cost commitment legal language: Cost Containment Legal Language.docx

Additional comments:
None