Seams Update

RSC

July 2017
SPP-AECI Joint Projects
Morgan Transformer Project

- Addition of a new 400 MVA 345/161 kV Transformer at AECI’s Morgan substation and an uprate of the 161 kV line between Morgan and Brookline
  - Located in southwest Missouri
  - Wholly on AECI’s transmission system
  - $13.75M Cost Estimate
Brookline Reactor Project

- Addition of a 50 MVAR Reactor at City Utilities Brookline 345 kV substation
  - Located in southwest Missouri
  - Wholly on SPP’s transmission system
  - $5.0M Study-level Cost Estimate
Approvals

• SPP Board of Directors
  • Approved the Morgan Transformer Project as a part of the 2017 SPP ITP10 Portfolio
  • Approved Regional Cost Allocation of the Morgan Transformer Project
  • Approved the Brookline Reactor Project out of the Regional Review of the SPP-AECI JCSP

• Regional State Committee
  • Approved Regional Cost Allocation of the Morgan Transformer Project

• AECI Board of Directors
  • Met on May 24th, 2017 to approve AECI’s participation in both the Morgan Transformer and Brookline Reactor Projects
FERC Filings

- SPP will make a filing at FERC for the two projects
  - Approval of SPP-AECI Joint Projects
  - Cost Sharing between SPP and AECI
  - SPP Regional Cost Allocation
  - Other Issues Related to the Treatment of the Projects

- SPP and AECI met with FERC staff for a pre-filing meeting on June 13\textsuperscript{th} to discuss the purpose of the filing

- SPP is targeting to make the filings shortly following Board of Director’s meeting in July
Cost Sharing between SPP and AECI

• Morgan Transformer Project
  • $13.75* Million Study Level Cost Estimate
    • SPP Cost Responsibility - $12.25 Million (89.1%)
    • AECI Cost Responsibility - $1.5 Million (10.9%)

• Brookline Reactor Project
  • $5.0 Million Study Level Cost Estimate
    • SPP Cost Responsibility - $4.85 Million (97%)
    • AECI Cost Responsibility - $150 Thousand (3%)

*Original $9.2 Million Study Level Cost Estimate

*Project still cost beneficial at new cost estimate
Payment Obligations

• Morgan Transformer Project
  • SPP’s payment obligation for its portion of the Morgan Transformer Project shall be determined by utilizing SPP’s portion of the final costs of the Facility multiplied by a 16% levelized carrying charge for the physical service life of the Facility

• Brookline Reactor Project
  • AECI intends to provide its portion of the costs of the Brookline Reactor Project in a lump sum payment to SPP or CUS as a contribution in aid of construction
Ownership / Capacity

- **Morgan Transformer Project**
  - AECI will own 100% of the project
  - AECI will construct the project and be responsible for the maintenance and operation of the facility

- **Brookline Reactor Project**
  - City Utilities of Springfield will own 100% of the project and will be responsible for the maintenance and operation of the facility
  - SPP will assign City Utilities of Springfield to construct the project in accordance with the provisions of the Tariff

- **Allocation of Capacity**
  - SPP and AECI will allocate the additional transmission capacity based on the allocation of the cost assumed by each Party for the Facilities
  - “Capacity” includes physical capacity of the project and any change in flowgate allocations
Revised 2017 ITP10 Analysis

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<th>Future</th>
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<th>Cost ($M) 40-year</th>
<th>Net Benefit ($M) 40-year</th>
<th>B/C 40-year</th>
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- Revised analysis simply reflects impact of updated cost estimates for both projects
- F1 = Regional Clean Power Plan Implementation
- F3 = Reference Case
SPP-MISO CSP
Regional Review
SPP-MISO CSP Regional Review

• 2016 SPP-MISO CSP Recommended Project
  • Loop One Split Rock – Lawrence 115 kV ckt into Sioux Falls (I18) benefit to SPP

• Regional Review
  • SPP staff is currently working with the ESWG and SSC to verify the project's benefits to SPP
  • Process will conclude with recommendations to MOPC and SPP Board in October

• Regional Review Scope
  • Conduct the 2017 Regional Review utilizing the 2017 ITP10 Future 1 and Future 3 2025 sidebar model to calculate a 1-year B/C ratio on the approved Interregional Project
  • 1-year 1.0 B/C requirement (RR Criteria)
I18: Loop One Split Rock-Lawrence 115 kV ckt into Sioux Falls

- **Project Details:**
  - Location: South Dakota
  - **Congestion Analysis:** Completely relieves congestion on Lawrence – Sioux Falls 115 kV
  - **Need:** Sioux Falls – Lawrence 115kV FLO
    - Sioux Falls – Split Rock 230kV

Open an existing line
Loop to existing substation