SPP-NTC-200242

SPP
Notification to Construct

February 12, 2018

Mr. Derek Brown
Westar Energy, Inc.
P.O. Box 889
Topeka, KS 66601

RE: Notification to Construct Approved Reliability Network Upgrades

Dear Mr. Brown,

On January 28, 2014, the SPP Board of Directors approved the Network Upgrade(s) listed below to be constructed as part of the 2014 Integrated Transmission Planning ("ITP") Near-Term Assessment. On January 28, 2014, SPP issued a Notification to Construct ("NTC") directing Westar Energy, Inc. ("WR"), as the Designated Transmission Owner, to construct the Network Upgrade(s). WR submitted an acceptance to construct the Network Upgrade(s) on May 13, 2014.

Since the January 28, 2014 issuance of the NTC, SPP determined that it was necessary to clarify the applicability of base plan funding for Project ID 30558. Accordingly, SPP provides this clarified NTC to WR.

New Network Upgrades

Project ID: 30097
Project Name: Device - Vaughn Cap 115 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $1,198,694

> **Network Upgrade ID:** 50103
> **Network Upgrade Name:** Vaughn 115 kV Cap Bank
> **Network Upgrade Description:** Install 10.9-Mvar capacitor bank at 115 kV bus at Vaughn substation.
> **Network Upgrade Owner:** WR
> **MOPC Representative(s):** John Olsen, Tom Stuchlik
> **TWG Representative:** Mo Awad
> **Categorization:** Zonal Reliability
> **Network Upgrade Specification:** Install at least 10.9 Mvar of capacitance at Vaughn 115 kV.

Network Upgrade Justification: To address low voltage at East Eureka 115 kV for the outage of Emporia Energy Center - Lang 345 kV Ckt 1, or Lang 345/115 kV Transformer Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $1,198,694
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30553
Project Name: Line - Butler - Weaver 138 kV Ckt 1
Need Date for Project: 6/1/2015
Estimated Cost for Project: $200,046

Network Upgrade ID: 50691
Network Upgrade Name: Butler - Weaver 138 kV Terminal Upgrades Ckt 1
Network Upgrade Description: Change CT setting from 600/5 to 1200/5 and upgrade relays at both Butler and Weaver to achieve a new emergency rating of 160 MVA on Butler - Weaver 138 kV Ckt 1.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 160 MVA.
Network Upgrade Justification: To address the overload of Butler - Weaver 138kV Ckt 1 for the outage of Benton - Midian 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $200,046
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30556
Project Name: Sub - McDowell Creek Switching Station 115 kV Terminal Upgrades
Need Date for Project: 6/1/2014
Estimated Cost for Project: $258,795

Network Upgrade ID: 50694
Network Upgrade Name: McDowell Creek Switching Station 115 kV Terminal Upgrades
Network Upgrade Description: Upgrade terminal equipment including the wave trap at McDowell Creek Substation to a minimum of 1200 Amps.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik

TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 239 MVA.
Network Upgrade Justification: To address the overload of Fort Junction Switching Station - McDowell Creek Switching Station 115 kV circuits 1 and 2 for various outages including Jeffrey Energy Center - Summit 345 kV Ckt 1, and, when built, Geary - Jeffrey Energy Center 345 kV Ckt 1 and Geary 345/115 kV Transformer Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $258,795
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30558
Project Name: XFR - Neosho 138/69 kV Ckt 1
Need Date for Project: 6/1/2014
Estimated Cost for Project: $8,469,554

Network Upgrade ID: 50696
Network Upgrade Name: Neosho 138/69 kV Ckt 1 Transformer
Network Upgrade Description: Replace the existing Neosho #2 A, B, and C transformers with a single transformer with a minimum emergency rating of 165 MVA. Then, re-terminate the Neosho 138/69 kV #1 transformer. This will move the 138 kV connection of this transformer from the Neosho South 138 kV bus to the Neosho 138 kV center bus.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 165 MVA.
Network Upgrade Justification: To address the overload of Neosho (NEOSHO4X) 161/138 kV Transformer Ckt 1 for the outage of Neosho - NEOSHOS4 138kV Ckt Z1.
Estimated Cost for Network Upgrade (current day dollars): $7,925,681
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/9/2017

Network Upgrade ID: 72007
Network Upgrade Name: Neosho 138 kV Terminal Equipment
Network Upgrade Description: Re-terminate the Neosho 345/138 kV #1 transformer from the Neosho South 138 kV bus to the Neosho 138 kV center bus.
Network Upgrade Owner: WR

MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 165 MVA.
Network Upgrade Justification: To address the overload of Neosho (NEOSHO4X) 161/138 kV Transformer Ckt 1 for the outage of Neosho - NEOSHOS4 138kV Ckt Z1.
Estimated Cost for Network Upgrade (current day dollars): $5,493,873
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 12/1/2017

Project ID: 30568
Project Name: Device - Clay Center Switching Station 115 kV
Need Date for Project: 6/1/2016
Estimated Cost for Project: $1,390,166

Network Upgrade ID: 50706
Network Upgrade Name: Clay Center Switching Station 115 kV Cap Bank
Network Upgrade Description: Install 10.8-Mvar capacitor bank at Clay Center Switching Station (Bus No. 533320).
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Zonal Reliability
Network Upgrade Specification: Install at least 10.8 Mvar of capacitance at Clay Center Switching Station 115 kV.
Network Upgrade Justification: To address low voltages in the Clay Center area for outage of the Geary County 345/115 kV Transformer.
Estimated Cost for Network Upgrade (current day dollars): $1,390,166
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30579
Project Name: Line - Wellington – Creswell 69 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $15,394,465

Network Upgrade ID: 50726
Network Upgrade Name: City of Wellington - Sumner County No.4 Rome 69 kV Ckt 1 Rebuild

Network Upgrade Description: Rebuild 9.06-mile 69 kV line from Wellington to Sumner County No. 4 Rome with single 1192 ACSR conductor to achieve 1200 Amp minimum ampacity.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 96 MVA.
Network Upgrade Justification: To address the overload of City Of Wellington - Sumner County No.4 Rome 69 kV Ckt 1 for the outage of Gill Energy Center West - Peck 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,405,817
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Network Upgrade ID: 50727
Network Upgrade Name: Creswell - Sumner County No.4 Rome 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 9.43-mile 69 kV line from Creswell to Sumner County No. 4 Rome with single 1192 ACSR conductor to achieve 1200 Amp.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 96 MVA.
Network Upgrade Justification: To address the overload of Creswell - Sumner County No.4 Rome 69 kV Ckt 1 facility for the outage of Gill Energy Center West - Peck 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,988,648
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30580
Project Name: Line - Crestview - Kenmar 69 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $10,581,480

Network Upgrade ID: 50730
Network Upgrade Name: Crestview - Northeast 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 5.64-mile 69 kV line from Crestview to

Northeast.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Crestview - Northeast 69 kV Ckt 1 for the outage of Renew 2 - Ripley 69 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $7,752,352
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Network Upgrade ID: 50733
Network Upgrade Name: Kenmar - Northeast 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 1.74-mile 69 kV line from Kenmar to Northeast with single 1192 ACSR to achieve 1200 Amp minimum ampacity.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 143 MVA.
Network Upgrade Justification: To address the overload of Kenmar - Northeast 69 kV Ckt 1 for a fault on the Seventeenth 138/69 kV transformer (WR-B3-18), Evans Energy Center South - Lakeridge 138 kV Ckt 1 or Hoover North - Lakeridge 138 kV Ckt 1.
Estimated Cost for Network Upgrade (current day dollars): $2,829,128
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Project ID: 30584
Project Name: Line - Montgomery - Sedan 69 kV Ckt 1
Need Date for Project: 6/1/2018
Estimated Cost for Project: $43,086,308

Network Upgrade ID: 50739
Network Upgrade Name: Elk Junction - Montgomery 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 9.7-mile 69 kV line from Elk Junction to Montgomery to achieve new emergency rating of 72 MVA.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik

TWG Representative: Mo Awad
Categorization: Zonal Reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 72 MVA.
Network Upgrade Justification: To address low voltage at Elk River 69 kV for loss of existing Elk River 69 kV capacitor bank.
Estimated Cost for Network Upgrade (current day dollars): $10,537,806
Cost Allocation of the Network Upgrade: Zonal
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Network Upgrade ID: 50740
Network Upgrade Name: Elk Junction - Sedan 69 kV Ckt 1 Rebuild
Network Upgrade Description: Rebuild 18.8-mile 69 kV line from Elk Junction to Sedan to achieve new emergency rating of 72 MVA.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Categorization: Zonal Reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 72 MVA.
Network Upgrade Justification: To address low voltage at Elk River 69 kV for loss of existing Elk River 69 kV capacitor bank.
Estimated Cost for Network Upgrade (current day dollars): $32,548,502
Cost Allocation of the Network Upgrade: Zonal
Estimated Cost Source: WR
Date of Estimated Cost: 11/21/2013

Upgrades with Modifications

Previous NTC Number: 200228
Previous NTC Issue Date: 9/10/2013
Project ID: 30437
Project Name: Multi - Geary County 345/115 kV and Geary - Chapman 115 kV
Need Date for Project: 6/1/2014
Estimated Cost for Project: $64,658,982

Network Upgrade ID: 50532
Network Upgrade Name: Geary County 345/115 kV Substation
Network Upgrade Description: Build new Geary County 345/115 kV substation south of Junction City where JEC - Summit 345 kV and McDowell Creek - Junction City #2 115 kV circuits separate. Install 345/115 kV 440 MVA transformer and 115 kV terminal equipment.

Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Reason for Change: The 2014 ITP Near-Term Assessment accelerated the Need Date from 6/1/2015 to 6/1/2014.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 440 MVA.
Network Upgrade Justification: To address low voltages along the Abilene - Chapman 115 kV line for the outages: Abilene - Northview 115 kV Ckt 1 and Ckt 2; East Manhattan - Jeffrey Energy Center 230 kV Ckt 1; McDowell Creek - Morris County 230 kV Ckt 1; McDowell Creek 230/115 kV transformer Ckt 1; or various other outages.
Estimated Cost for Network Upgrade (current day dollars): $20,530,196
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 8/30/2013

Network Upgrade ID: 50534
Network Upgrade Name: Chapman Junction - Geary County 115 kV Ckt 1
Network Upgrade Description: Build new 15.1-mile 115kV line between the new Geary County substation and Chapman Tap. 10.4 miles of the line will be built as a 2nd circuit to the existing Summit - McDowell Creek 345 kV line.
Network Upgrade Owner: WR
MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Reason for Change: The 2014 ITP Near-Term Assessment accelerated the Need Date from 6/1/2015 to 6/1/2014.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 262 MVA.
Network Upgrade Justification: To address low voltages along the Abilene - Chapman 115 kV line for the outages: Abilene - Northview 115 kV Ckt 1 and Ckt 2; East Manhattan - Jeffrey Energy Center 230 kV Ckt 1; McDowell Creek - Morris County 230 kV Ckt 1; McDowell Creek 230/115 kV transformer Ckt 1; or various other outages.
Estimated Cost for Network Upgrade (current day dollars): $27,938,225
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 8/30/2013
Network Upgrade ID: 50605
Network Upgrade Name: Geary County 345 kV
Network Upgrade Description: Install 345 kV ring bus at the new Geary County substation.
Network Upgrade Owner: WR

MOPC Representative(s): John Olsen, Tom Stuchlik
TWG Representative: Mo Awad
Reason for Change: The 2014 ITP Near-Term Assessment accelerated the Need Date from 6/1/2015 to 6/1/2014.
Categorization: Regional reliability
Network Upgrade Specification: All elements and conductor must have at least an emergency rating of 1793 MVA.
Network Upgrade Justification: To address low voltages along the Abilene - Chapman 115 kV line for the outages: Abilene - Northview 115 kV Ckt 1 and Ckt 2; East Manhattan - Jeffrey Energy Center 230 kV Ckt 1; McDowell Creek - Morris County 230 kV Ckt 1; McDowell Creek 230/115 kV transformer Ckt 1; or various other outages.
Estimated Cost for Network Upgrade (current day dollars): $16,190,561
Cost Allocation of the Network Upgrade: Base Plan
Estimated Cost Source: WR
Date of Estimated Cost: 8/30/2013

Withdrawal of Upgrades

Previous NTC Number: 200175
Previous NTC Issue Date: 4/9/2012
Project ID: 30350
Project Name: Device - Elk River 69 kV Capacitor

Network Upgrade ID: 50399
Network Upgrade Name: Elk River 69 kV
Network Upgrade Description: Install second 6 Mvar capacitor at Elk River 69 kV.
Reason for Change: Identified in 2014 ITP Near-Term Assessment as no longer required.

Previous NTC Number: 20086
Previous NTC Issue Date: 2/8/2010
Project ID: 534
Project Name: XFR - Halstead South 138/69 kV Ckt 1

Network Upgrade ID: 10679
Network Upgrade Name: HALSTEAD SOUTH BUS 138/69KV TRANSFORMER CKT 1
Network Upgrade Description: Replace Halstead 138/69 kV transformer with 100/110 MVA unit.
Reason for Change: Identified in 2014 ITP Near-Term Assessment as no longer required.

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Withdrawal of Network Upgrade
WR has been made aware of all Network Upgrades withdrawn through the expansion plan process. This letter is the formal notification to stop any further work on this Network Upgrade(s) and submit any cost information associated with the Network Upgrade(s) to SPP.

Commitment to Construct
Please provide to SPP a written commitment to construct the Network Upgrade(s) within 90 days of the date of this NTC, pursuant to Attachment O, Section VI.6 of the SPP OATT, in addition to providing a construction schedule and an updated ±20% cost estimate, NTC Project Estimate, in the Standardized Cost Estimate Reporting Template for the Network Upgrade(s). Failure to provide a sufficient written commitment to construct as required by Attachment O could result in the Network Upgrade(s) being assigned to another entity.

Mitigation Plan
The Need Date represents the timing required for the Network Upgrade(s) to address the identified need. Your prompt attention is required for formulation and approval of any necessary mitigation plans for the Network Upgrade(s) included in the Network Upgrade(s) if the Need Date is not feasible. Additionally, if it is anticipated that the completion of any Network Upgrade will be delayed past the Need Date, SPP requires a mitigation plan be filed within 60 days of the determination of expected delays.

Notification of Commercial Operation
Please submit a notification of commercial operation for each listed Network Upgrade to SPP as soon as the Network Upgrade is complete and in-service. Please provide SPP with the actual costs of these Network Upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Notification of Progress
On an ongoing basis, please keep SPP advised of any inability on WR's part to complete the approved Network Upgrade(s). For project tracking, SPP requires WR to submit status updates of the Network Upgrade(s) quarterly in conjunction with the SPP Board of Directors meetings. However, WR shall also advise SPP of any inability to comply with the Project Schedule as soon as the inability becomes apparent.

All terms and conditions of the SPP OATT and the SPP Membership Agreement shall apply to this Project, and nothing in this NTC shall vary such terms and conditions.
Don't hesitate to contact me if you have questions or comments regarding these instructions.
Thank you for the important role that you play in maintaining the reliability of our electric grid.

Sincerely,

Larry Nicholl

SPP-NTC-200242

Lanny Nickell
Vice President, Engineering
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cc: Carl Monroe - SPP
Antoine Lucas - SPP
Jay Caspary - SPP
John Olsen - WR
Mo Awad - WR