



SPP Notification to Construct

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P. Jay Caspary
Director, Engineering

SPP-NTC-20000

February 13, 2008

Matthew McGee
212 E. 6th St.
Tulsa, OK 74119

RE: Transmission System Upgrade Notification to Construct Approved Appendix B projects in 2008-2017 SPP Transmission Expansion Plan

Dear Mr. McGee,

During the January 29, 2008 meeting, the Southwest Power Pool (SPP) Board of Directors approved and directed the network upgrades listed below be constructed. As a result, based on Section IX.4 of Attachment O of the OATT, SPP is notifying American Electric Power to move forward with the development of the following upgrades/mitigations to alleviate associated reliability concerns:

Project ID: 107

Project Name: Line - E Rogers - Avoca 161 kV

Required In-Service Date: 6/1/2008

Estimated Project Cost: \$720,000

Upgrade ID: 10132

Upgrade Description: Install 3% impedance reactor set at East Rogers on 161 kV line to Avoca REC.

Upgrade Justification: To address the overload of the Dyess to Elm Springs 161 kV overload for an outage of Dyess to Tontitown 161 kV; Also defers the need for the Flint Creek to East Centerton by four years.



Project ID: 110

Project Name: XFR - Pryor Junction 138/69 kV

Required In-Service Date: 6/1/2008

Estimated Project Cost: \$1,829,100

Upgrade ID: 10137

Upgrade Description: Upgrade Pryor Junction 138/69 kV transformer; Ratings A=133 and B=146

Upgrade Justification: To address the overload of the Pryor Junction 138/69 kV transformer for the outage of Inola tap to Catoosa 138 kV for the outage of Inola tap to Choutes 138 kV.

Project ID: 217

Project Name: Line - Tap N. Huntington - Waldron 69 kV

Required In-Service Date: 6/1/2008

Estimated Project Cost: \$400,000

Upgrade ID: 10276

Upgrade Description: Reconnect the Huntington 69 kV station from the North Huntington-Midland 69 kV line to the North Huntington-Waldron 69 kV line.

Upgrade Justification: Relieves overloading on N. Huntington - Huntington - Midland REC 69 kV.

Project ID: 230

Project Name: Line - Broken Bow - Craig Junction 138 kV

Required In-Service Date: 6/1/2008

Estimated Project Cost: \$8,900,000

Upgrade ID: 10295

Upgrade Description: Reconductor Broken Bow to Craig Junction 138 kV; Rebuild 7.66 miles of 3/0 CW CU with 795 ACSR

Upgrade Justification: To address the overload due to Loss of Craig Junction - Mountain River 138 kV or Mountain River - BBDAM TP4 138 kV.



Project ID: 218

Project Name: Line - Huntington - N Huntington 69 kV

Required In-Service Date: 6/1/2009

Estimated Project Cost: \$ 20,000

Upgrade ID: 10277

Upgrade Description: Upgrade CT at North Huntington on N Huntington to Huntington Waldron 69 KV

Upgrade Justification: To address the overloading of Huntington-Midland REC 69 kV from the outage of AES-Tarby 161 kV or Cavanal-Poteau 69 kV.

Project ID: 219

Project Name: Line - Excelsior - Excelsior Tap 161 KV

Required In-Service Date: 6/1/2009

Estimated Project Cost: \$4,000,000

Upgrade ID: 10278

Upgrade Description: Convert the Excelsior station from 69 kV to 161 kV. Reconnect Excelsior station from the Midland-Excelsior 69 kV line to the Hackett REC-North Huntington 161 kV line section. Open the Midland-Excelsior 69 kV line.

Upgrade Justification: To address the overloading of Huntington-Midland REC 69 kV from the outage of AES-Tarby 161 kV or Cavanal-Poteau 69 kV. Also addresses low voltage in the area around Midland.

Project ID: 221

Project Name: Line - Hope - Fulton 115 kV

Required In-Service Date: 6/1/2009

Estimated Project Cost: \$100,000

Upgrade ID: 10280

Upgrade Description: Replace conductor in Hope Substation.

Upgrade Justification: To address the overload on conductor in the Hope substation for the base case



Project ID: 225

Project Name: Line - North Magazine - Magazine REC – Danville 161 kV

Required In-Service Date: 6/1/2009

Estimated Project Cost: \$25,194,800

Upgrade ID: 10286

Upgrade Description: Magazine REC – Danville 161 kV rebuild 17.96 miles of 250 Copperweld with 1272 ACSR.

Upgrade Justification: To address the overload due to Loss of Fort Smith - ANO 500 kV.

Required In-Service Date: 6/1/2009

Estimated Upgrade Cost: \$17,900,000

Upgrade ID: 10289

Upgrade Description: North Magazine – Magazine REC 161 kV rebuild 7.43 miles of 250 CWC with 1272 ACSR.

Upgrade Justification: To address the overload due to Loss of Fort Smith - ANO 500 kV.

Required In-Service Date: 6/1/2009

Estimated Upgrade Cost: \$7,294,800

Project ID: 227

Project Name: Line- Breaker Daingerfield - Jenkins REC 69 kV

Required In-Service Date: 6/1/2009

Estimated Project Cost: \$250,000

Upgrade ID: 10291

Upgrade Description: Replace Daingerfield 69 kV Breaker # 1M90 & reset relays.

Upgrade Justification: To address the overload due to loss of Lone Star South - Pittsburg 138 kV, Petty - Chappel Hill REC 138 kV.

Project ID: 291

Project Name: Line - Bann - Lonestar Ordinance Tap 69 kV

Required In-Service Date: 6/1/2010

Estimated Project Cost: \$ 25,000

Upgrade ID: 10377

Upgrade Description: Relay at Bann new limits will be 65/72 MVA summer (line conductor/Lonestar switch) and 72/72 MVA winter (Lonestar Switch)

Upgrade Justification: To address overloads at Bann-Lonestar Ordinance Tap 69 kV for New Boston-North New Boston 69 kV outage.

Project ID: 292
Project Name: Line - Greggton - Lake Lamond 69 kV
Required In-Service Date: 6/1/2010
Estimated Project Cost: \$1,496,000

Upgrade ID: 10378
Upgrade Description: Reconductor Greggton - Lake Lamond 69 kV line with 1272 ACSR
Upgrade Justification: To address the loss of transformer the Purdue 138/69 kV

Project ID: 294
Project Name: Line - North Mineola - Mineola 69 kV
Required In-Service Date: 6/1/2010
Estimated Project Cost: \$350,000

Upgrade ID: 10380
Upgrade Description: Replace Mineola 2 Switches & Breaker
Upgrade Justification: To address the overload due to loss of Purdue - Big Sandy 69 kV or Big Sandy- Hawkins 2 69 kV

Project ID: 297
Project Name: Line - Quitman - Westwood 69 kV
Required In-Service Date: 6/1/2010
Estimated Project Cost: \$1,600,000

Upgrade ID: 10383
Upgrade Description: Reconductor Quitman - Westwood 69 kV 3.91 miles of 2/0 with 795 ACSR
Upgrade Justification: To address the overload due to loss of Grand Saline - Mineola 69 kV.

Project ID: 108
Project Name: Line - North Market - Arsenal Hill 69 kV
Required In-Service Date: 6/1/2011
Estimated Project Cost: \$2,300,000

Upgrade ID: 10441
Upgrade Description: Reconductor North Market - Arsenal Hill 69 kV 2.29 Miles With 1272 ACSR
Upgrade Justification: To address the overload due to loss of Arsenal Hill - Shed Road 69 kV

Project ID: 222**Project Name:** Line - Bonanza - Bonanza Tap 161 kV**Required In-Service Date:** 6/1/2011**Estimated Project Cost:** \$100,000**Upgrade ID:** 10281**Upgrade Description:** Reconductor 0.1 mile Bonanza-Bonanza T line 161 kV section to 1590 ACSR.**Upgrade Justification:** To address overload of Bonanza-Bonanza Tap 161 kV for the outage AES-Tarby 161 kV and other outages**Project ID: 343****Project Name:** Line - Winnsboro - Magnolia Tap 69 kV**Required In-Service Date:** 6/1/2011**Estimated Project Cost:** \$250,000**Upgrade ID:** 10440**Upgrade Description:** Replace 69 kV switch # 9114 @. Replace 69 kV switches @ Winnsboro. Reset cities CTs and relay settings at Winnsboro.**Upgrade Justification:** To address the overload due to loss of the 138/69 kV transformer at North Mineola**Project ID: 345****Project Name:** Line - Mangolia - Forest Hill 69 kV**Required In-Service Date:** 6/1/2011**Estimated Project Cost:** \$125,000**Upgrade ID:** 10442**Upgrade Description:** Replace 69 kV switch at Magnolia tap new emergency limit 85 MVA**Upgrade Justification:** To address the overload due to loss of 138/69 kV North Mineola transformer

Project ID: 346
Project Name: Line - Forest Hills - Quitman 69 kV
Required In-Service Date: 6/1/2011
Estimated Project Cost: \$100,000

Upgrade ID: 10443
Upgrade Description: Replace 69 kV Bus & reset relays at Quitman substation
Upgrade Justification: To address the loss of 138/69 kV North Mineola transformer

Project ID: 347
Project Name: Line - Woodlawn – Baldwin 69 kV
Required In-Service Date: 6/1/2011
Estimated Project Cost: \$1,700,000

Upgrade ID: 10444
Upgrade Description: Reconductor with 2.7 miles 477 ACSR 69 kV Woodlawn-Baldwin. Reset relays.
Upgrade Justification: To address the overload due to loss of Baldwin - Woodlawn - Karnack Tap 69 kV.

Project ID: 348
Project Name: Line - Dyess – Tontitown 161 kV
Required In-Service Date: 6/1/2011
Estimated Project Cost: \$300,000

Upgrade ID: 10445
Upgrade Description: Replace 161 kV breaker switches and CT at Dyess.
Upgrade Justification: To address the overload due to loss of Tontitown - Elm Springs 161 kV.

Project ID: 113
Project Name: Multi - Wallace Lake - Port Robson - Red Point 138 kV
Required In-Service Date: 6/1/2012
Estimated Project Cost: \$24,000,000

Upgrade ID: 10140
Upgrade Description: Convert Red Point-Haughton to 138 kV, 1590 ACSR (includes Red Point terminal & Haughton station conversion).
Upgrade Justification: To address the overload due to loss of Fort Humbug - Trichel Street 138 kV



Required In-Service Date: 6/1/2012
Estimated Upgrade Cost: \$4,200,000

Upgrade ID: 10141
Upgrade Description: Convert Haughton-McDade to 138 kV, 1590 ACSR (includes McDade station conversion).
Upgrade Justification: To address the overload due to loss of Fort Humbug - Trichel Street 138 kV
Required In-Service Date: 6/1/2012
Estimated Upgrade Cost: \$7,000,000

Upgrade ID: 10142
Upgrade Description: New 138 kV line from Port Robson to McDade (includes Port Robson terminal).
Upgrade Justification: To address the overload due to loss of Fort Humbug - Trichel Street 138 kV
Required In-Service Date: 6/1/2012
Estimated Upgrade Cost: \$9,800,000

Upgrade ID: 10143
Upgrade Description: New 138 kV line from Wallace Lake to Finney Tap (includes Wallace Lake terminal).
Upgrade Justification: To address the overload due to loss of Fort Humbug - Trichel Street 138 kV
Required In-Service Date: 6/1/2012
Estimated Upgrade Cost: \$3,000,000

Project ID: 296
Project Name: Line - Dyess - Elm Springs REC 161 kV
Required In-Service Date: 6/1/2012
Estimated Project Cost: \$300,000

Upgrade ID: 10382
Upgrade Description: Rebuild / reconductor Dyess - Elm Springs REC 161 kV 5.17 miles of line with 2156 ACSR.
Upgrade Justification: To address the overload due to loss of Chamber Springs to Farmington 161 kV or Dyess - Tontitown 161 kV.



Project ID: 387

Project Name: Line - Riverside - Okmulgee 138 kV

Required In-Service Date: 6/1/2012

Estimated Project Cost: \$125,000

Upgrade ID: 10505

Upgrade Description: Replace wave trap at Okmulgee.

Upgrade Justification: To address overload at Riverside Station - Okmulgee 138 kV for the outage of Riverside Station to Explorer Okmulgee 138 kV or the outage of Okmulgee - Explorer Okmulgee 138 kV.

Project ID: 388

Project Name: Line - New Boston - North New Boston 69 kV

Required In-Service Date: 6/1/2012

Estimated Project Cost: \$100,000

Upgrade ID: 10506

Upgrade Description: Replace 2 sets of 69 kV of New Boston switches on terminal to North New Boston.

Upgrade Justification: To address the overload due to loss of Bann - Lone Star Ordinance Tap 138 kV.

Project ID: 389

Project Name: Line - SE Texarkana – Texarkana 69 kV

Required In-Service Date: 6/1/2012

Estimated Project Cost: \$150,000

Upgrade ID: 10507

Upgrade Description: Repace 69 kV jumpers switches Texarkana 114/143 MVA

Upgrade Justification: To address the overload at SE Texarkana - Texarkana 69 kV in the base case or for the loss of the Sugar Hill 138/69 kV transformer.



Project ID: 391

Project Name: Line - Lone Star South - Pittsburg 138 kV

Required In-Service Date: 6/1/2012

Estimated Project Cost: \$300,000

Upgrade ID: 10509

Upgrade Description: Replace 138 kV wavetraps at both ends. Reset CTs @ Lone Star South. Replace 138 kV switches & reset relays @ Pittsburg

Upgrade Justification: To address the overload due to loss of Petty - Chapel Hill REC 138 kV.

Project ID: 392

Project Name: Line - Howell - Kilgore 69 kV

Required In-Service Date: 6/1/2012

Estimated Project Cost: \$2,000,000

Upgrade ID: 10510

Upgrade Description: Howell - Kilgore 69 kV rebuild 3.49 miles of 4/0 ACSR with 795 ACSR.

Upgrade Justification: To address the overload due to loss of Greggton - Lake Lamond 69 kV.

Project ID: 106

Project Name: Line - Snyder - Altus Junction 138 kV

Required In-Service Date: 6/1/2013

Estimated Project Cost: \$16,760,000

Upgrade ID: 10130

Upgrade Description: Build new Snyder to Altus Jct 138 kV line

Upgrade Justification: Identified in the 2006 STEP to address overloads for the Snyder 138/69 kV transformer for various outages including Fort Cobb-Southwest Station 138 kV, Carnegie-Fort Cobb 138 kV.



Project ID: 229

Project Name: Multi - Flint Creek - E Centerton 161 kV

Required In-Service Date: 6/1/2013

Estimated Project Cost: \$15,200,000

Upgrade ID: 10292

Upgrade Description: Reconductor 1.09 MILES of 2-397 ACSR with 1590 ACSR from Flint Creek to Gentry 161 kV

Upgrade Justification: To address overloads on Flint Creek - Gentry 161 kV line for the outages of Lowell - Tontitown 161 kV, Lowell - Rogers 161 kV or East Rogers - Dyess 161 kV.

Required In-Service Date: 6/1/2011

Upgrade ID: 10293

Upgrade Description: Reconductor Gentry - Bentonville 279th St. 161 kV with 1590 conductor

Upgrade Justification: To address overloads on Flint Creek - Gentry 161 kV line for the outages of Lowell - Tontitown 161 kV, Lowell - Rogers 161 kV or East Rogers - Dyess 161 kV.

Required In-Service Date: 6/1/2013

Upgrade ID: 10294

Upgrade Description: Reconductor Bentonville 279th St. 161 kV - East Centerton with 1590 conductor 161 kV

Upgrade Justification: To address overloads on Flint Creek - Gentry 161 kV line for the outages of Lowell - Tontitown 161 kV, Lowell - Rogers 161 kV or East Rogers - Dyess 161 kV.

Required In-Service Date: 6/1/2013

Project ID: 450

Project Name: Multi - Flint Creek – Centerton 345 kV and Centerton- East Centerton 161 kV

Required In-Service Date: 6/1/2014

Estimated Project Cost: \$35,185,000

Upgrade ID: 10582

Upgrade Description: Install 2 miles of 161 kV from new Centerton Substation to East Centerton Substation.

Upgrade Justification: To address the overload East Rogers - Rogers West REC 161 kV for the outage of Flint Creek to Gentry 161 kV. This assumes Inductor East Rogers to AVOCA and the switchable Reactor is on the East Rogers to Dyess 161 kV line.

Required In-Service Date: 6/1/2014

Estimated Upgrade Cost: \$2,000,000

Upgrade ID: 10584

Upgrade Description: Install 345/161 kV transformer at Centerton.

Upgrade Justification: To address the over load East Rogers - Rogers West REC 161 kV for the outage of Flint Creek to Gentry 161 kV. This assumes East Rogers to Avoca 161 kV inductor and the switchable reactor is on the East Rogers to Dyess line.

Required In-Service Date: 6/1/2014

Estimated Upgrade Cost: \$9,500,000

Upgrade ID: 10585

Upgrade Description: Install 22 miles of new 345 kV, 2-954 ACSR line.

Upgrade Justification: To address the overload East Rogers - Rogers West REC 161 kV for the outage of Flint Creek to Gentry 161 kV. This assumes East Rogers to Avoca 161 kV inductor and the switchable reactor is on the East Rogers to Dyess 161 kV line

Required In-Service Date: 6/1/2014

Estimated Upgrade Cost: \$23,685,000

Project ID: 511

Project Name: Multi - Centerton - Osage Creek 345 kV

Required In-Service Date: 6/1/2016

Estimated Project Cost: \$57,500,000

Upgrade ID: 10656

Upgrade Description: Install new 345/161 kV transformer at Osage Creek

Upgrade Justification: To relieve overload on Lines - Beaver-Eureka 161 kV and East Rogers-Avooca 161 kV for outage of Flint Creek to Brookline 345 kV

Required In-Service Date: 6/1/2016

Estimated Upgrade Cost: \$12,000,000

Upgrade ID: 10659

Upgrade Description: Install 9 miles of 345 kV line from Centerton to East Rogers

Upgrade Justification: To relieve overload on Lines - Beaver-Eureka 161 kV and East Rogers-Avooca 161 kV for outage of Flint Creek to Brookline 345 kV

Required In-Service Date: 6/1/2016

Estimated Upgrade Cost: \$13,500,000

Upgrade ID: 10660

Upgrade Description: Install 32 miles of 345 kV line from East Rogers to Osage Creek

Upgrade Justification: To relieve overload on Lines - Beaver-Eureka 161 kV and East Rogers-Avooca 161 kV for outage of Flint Creek to Brookline 345 kV

Required In-Service Date: 6/1/2016

Estimated Upgrade Cost: \$32,000,000

The Required In-Service Date represents the timing required for the upgrade to address the identified need. We would appreciate your prompt attention to the formulation and approval of any necessary mitigation plans if this date is not feasible.

American Electric Power shall submit certification of commercial operation for each listed upgrade to SPP as soon as the upgrade is complete and in-service. Please provide SPP with the actual costs of these upgrades as soon as possible after completion of construction. This will facilitate the timely billing by SPP based on actual costs.

Please keep SPP advised of any inability on American Electric Power's part to complete the approved upgrades. In addition, SPP requests that a construction schedule supporting the required upgrade(s) noted above be provided within 30 days of receipt of this Notice to Construct. For project tracking, SPP will request on a quarterly basis, in conjunction



with the SPP Board of Directors meetings, that American Electric Power submit updates to the schedule status to SPPprojecttracking@spp.org. If it is anticipated that the completion of any approved project will be delayed past the required in-service date, SPP requires a mitigation plan be filed within 30 days of the determination of expected delay in the project schedule.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Jay Caspary', written in a cursive style.

P. Jay Caspary
Director, Engineering

cc: Paul Johnson, Richard Ross, Terri Gallup, Brent Wilson, Scott Rainbolt, Les Dillahunty, Carl Monroe, Pat Bourne, SPPprojecttracking@spp.org.