The wind locations do not directly match those locations used in the WITF. The Priority Projects analysis approximated wind injection locations based on the location of the Priority Projects, the location of wind in the GI queue, and state renewable target and load information. See the report for additional information.

8. Will a full N-1 reliability analysis be done on these Priority Projects? Will the wind be in the models?

   A full N-1 reliability analysis was performed on the Priority Projects, and the impact of this analysis is detailed in Attachment 2. Wind was not included in this reliability assessment.

Attachments

Click on the links below to see the attachments:

Attachment 1 – BATTF Report

Attachment 2 – TWG Reliability Report

Attachment 3 – TWG Comments to the Priority Project Reliability Report

Attachment 4 – Brattle Group Report

Attachment 5 – Improving the Eastward Transfer Capability

Attachment 6 – KEMA Report

Capital Improvement Approval Requisition

Company: **Southwestern Electric Power Company** **Version 1**

Project : **000021554 - Pirkey & Dolet Hills Land & Mineral Acquisition**
Pirkey Plant, Harrison County, Texas and Dolet Hills Plant, Caddo Parrish, Louisiana

Description: This Capital Improvement Requisition represents the continuation of the land and mineral acquisition programs put in place back in the mid 1980's. The existing CI was established in 2009 to cover anticipated expenditures for the period 2009-2011. This new CI is to provide funding for anticipated expenditures for the period 2012-2014. Approval of the CI will assist with an uninterrupted flow of lignite fuel to the Pirkey and Dolet Hills Plants.

Authorization Amount:

	Previously Approved Amount	This Submission	Total Amount to be Authorized
Total	$ -	$ 9,898,100	$ 9,898,100

Cash Flow:

	Prior Years	2012	2013	2,014	Total
Capital	$ -	$ 1,541,600	$ 6,502,500	$ 1,854,000	$ 9,898,100
Removal	$ -	$ -	$ -	$ -	$ -
Total to be Authorized	$ -	$ 1,541,600	$ 6,502,500	$ 1,854,000	$ 9,898,100
Associated O&M	$ -	$ -	$ -	$ -	$ -

Start Date: 1/1/2012 **Completion Date:** 12/31/2014 **In Service Date:** 12/31/2014

Regulatory Cost Recovery: > The partners are billed for their percentage ownerships the month after land or rights are purchased, with immediate reimbursement. For SWEPCO, owned land is capitalized (however no depreciation expense is recoverable) thus only a return on the land investment is recovered and this is through base rates. Non-land costs will either be expensed or amortized but both are recovered through the fuel clause. A return on non-land costs is also recoverable on the undepreciated balance of development accounts in the appropriate rate case.

Approved By: Light/McCellon-Allen/McCullough **Approved On:**

Capital Improvement Approval Requisition

Expenditure to be Authorized (fully loaded)

	Capital	Removal	Total
Previously Approved Amount	-	-	-
This Submission	9,898,100	-	9,898,100
Total	**$ 9,898,100**	**$ -**	**$ 9,898,100**

2012 Direct Cost Budget Funding			Budget Offset Source and Amount
In Budget	$	1,541,600	
Budget Offset	$	-	

Requested future year funds are included in the last official Forecast.

Required Signatures

Authorization Limits	Title	Approver	Signature	Date
	VP, Business Unit	Henry, J.		
amt ≤ $ 10m	SVP, Business Unit	Light, T		
amt ≤ $ 10m	Opco President	McCellon-Allen, V		
amt ≥ $ 10m	EVP, Business Unit	McCullough, M		
CP&B Review	Manager, Capital and Lease Improvements	Lynch, D.		

Project Contacts

Contact	Name	Telephone
Project Manager	Greg Wright	8-740-3132
Requisition Detail Provider	Greg Shurbet	8-740-3133

Capital Improvement Approval Requisition

Project Justification
SWEPCO is requesting approval of $9,898,100 to continue the ongoing program of land acquisition of scheduled surface and/or mineral rights of properties needed and not currently controlled in the Q and V Areas of Marshall South and Rusk, the P, HS and R Areas of Dolet Hills, and the T and U Areas of Oxbow. Currently SWEPCO controls the vast majority of the land and mineral in the Marshall South, Rusk, Dolet Hills, and Oxbow Mining Areas. This CI is a continuation of the investment in Lignite Fuel for the Pirkey and Dolet Hills Plants.

- The approval of this CI will allow timely and cost effective acquisition of the needed tracts of land to execute the currently approved mine plan for the next lowest ratio/cost logical mining areas in the Marshall South, Rusk, Dolet Hills, and Oxbow Reserves.
- The approval of this CI will allow the continued development, mining, and delivery of lignite to the Pirkey and Dolet Hills Plants at the lowest reasonable cost
- The mining of these reserves will continue to allow SWEPCO to have control over its fuel deliveries to the Pirkey and Dolet Hills Plants.
- The mining of the Marshall South, Rusk, Dolet Hills, and Oxbow Reserves will allow SWEPCO to continue to protect its investment and insure recovery of those investments in the regulatory arena.

Other Alternatives Considered
Mining around the necessary uncontrolled properties would significantly increase costs and limit the amount of lignite available to fuel the Pirkey and Dolet Hills Plants.

The Corporate Planning and Budgeting's Resource Planning Group is routinely updating the analysis to determine the least expensive fueling alternative for the Pirkey Power Plant. The last analysis that was performed in May 2011 continues to support the burning of lignite as opposed to Powder River Basin coal or a combined cycle gas plant.

Conclusion

The approval of the Capital Improvement Requisition will allow the ongoing program of land acquisitions for mining to continue, and the Pirkey and Dolet Hills Plants to receive the lowest cost fuel to meet the electricity demand of its customers. The land CI will also provide:

- Three year land purchases to facilitate permitting, development, and mining processes.
- Fee controlled properties, which will potentially lower reclamation and bond release costs.

Associated/Future Projects

Future land acquisitions will be needed beyond 2014 to ensure the continued lowest cost delivered fuel source to the Pirkey and Dolet Hills Plants.

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 2**
Project:	000021701 - Flint Creek Unit 1 Low NOx Modifications - - Revision - Phase 2
Location:	Gentry, AR
Description:	This Improvement Requisition is for the installation of combustion controls equipment, Low NOx burners with Over-fire Air (LNB/OFA), in order to comply with EPA's Regional Haze Rule (RHR) at Flint Creek Phase 1 is the engineering, design, and procurement of long lead materials Phase 2 is for the construction, commissioning, startup, and closeout of the project The total estimated costs for all phases was $9 3M All costs are shown at AEP's 50% ownership share
Reason for Revision:	This Improvement Requisition was initially approved to comply with the EPA's RHR at Flint Creek Due to changes in environmental rules, this equipment will be installed in order to comply with EPA's Mercury and Air Toxics Standards (MATS) rule at Flint Creek Version 1 was approved for $4 3M This revision requests an additional $5 4M for the installation, startup/commissioning and closeout of this project, for a new authorized amount of $9 7M Additionally, the total estimated cost of all phases of the project increased $0 4M from $9 3M to $9 7M due to overhead rate increases This is the final phase of this project
Phase Description:	Phase 2 of 2-Stage 5-7 for the Construction, Startup/Commissioning, and Closeout

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$4,305,002	$5,389,505	$9,694,507
	Total	**$4,305,002**	**$5,389,505**	**$9,694,507**

Cash Flow:

	Prior Years	2017	2018	Future Years	Total
Capital	$306,911	$3,642,191	$5,398,905	$0	$9,348,007
Removal	$0	$0	$346,500	$0	$346,500
Total To Be Authorized	**$306,911**	**$3,642,191**	**$5,745,405**	**$0**	**$9,694,507**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$306,911	$3,642,191	$5,745,405	$0	$9,694,507
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 09/19/2016 **In Service Date :** 06/30/2018 **Completion Date:** 06/30/2018

Regulatory Recovery:

Southwestern Electric Power Company -- $9 69M (100%)

- $1 74M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $3 10M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $3 20M (33%) SWP TX base rate case filing, TYE TBD effective TBD
- $1 65M (17%) FERC Annual Formula Rate update, TYE 12/31/18, effective 6/1/19

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 10/23/2017

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2017	2018	Future Years	Total
In Forecast $	$193,090	$3,247,878	$5,205,533	$0	$8,646,501
Offsets Required	$0	$0	$0	$0	$0
Total Direct Cost	**$193,090**	**$3,247,878**	**$5,205,533**	**$0**	**$8,646,501**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	10/12/2017
Approved	Elizabeth B Dailey	10/12/2017
Approved	Timothy V Riordan	10/16/2017
Approved	Michael L Bright	10/16/2017
Approved	John M McManus	10/16/2017
Approved	Franklin R Pifer	10/16/2017
Approved	Tara D Beske	10/16/2017
Approved	Thomas P Brice Jr	10/16/2017
Approved	Daniel V Lee	10/19/2017
Approved	Venita McCellon-Allen	10/19/2017
Approved	Michael H Huggett	10/19/2017
Approved	Alesia A Austin	10/23/2017

Project Contacts:

Type	Name
Detail Provider	RENTZSCH,ARTHUR W
Project Manager	RENTZSCH,ARTHUR W

Capital Improvement Approval Requisition

Additional Information

IR Justification:	**Version 2:** The Mercury and Air Toxics Standards (MATS) rule controls organic hazardous air pollutant emissions through work practice standards, including regular inspections, repairs and tuning of burners at coal-fired electric generating units Such inspections and repairs are important to support more efficient combustion of fuels and lower air emissions Recent inspections have confirmed that these 40-year old burners have suffered wear and tear consistent with the harsh demands of their operating environments and replacement will eliminate the need for continued repairs In addition, in the event the Arkansas Department of Environmental Quality's (ADEQ) current regulations are not replaced by their proposed State Implementation Plan (SIP), installing the Low NOx burners with Over-fire Air (LNB/OFA) combustion control equipment is the most cost effective option to comply with EPA's Regional Haze Rule (RHR) NOx emission rate limit **Version 1:** The EPA issued the Federal Implementation Plan (FIP) for RHR for Arkansas on August 31, 2016 The FIP specifies the installation of LNB/OFA for Flint Creek to meet the RHR
Alternatives Considered:	**Version 2:** Doing nothing is not an option, as the plant would not be operating in compliance to regulations thus requiring the unit to be retired **Version 1:** Other options evaluated and determined not to be cost effective alternatives include • Flue Gas Recirculation (FGR) for combustion control and for post combustion control • Selective Catalytic Reduction (SCR) and Selective Non-Cataytic Reductions (SNCR) Doing nothing is not an option, as the plant would not be operating in compliance to regulations thus requiring the unit to be retired
Conclusion:	**Version 2:** Installing LNB/OFA combustion control equipment is the most cost effective option for NOx emission rate **Version 1:** Using the EPA's Best Available Retrofit Technology regulatory process five factor analysis performed by Trinity Consultants, installing the LNB/OFA combustion control equipment is the most cost effective option to obtain the RHR NOx emission rate limit.

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	ARS6STMAJ - Stall Unit 6S HP/IP and LP Turbine Rebuild and Steampath Seal Replacement -
Location:	Shreveport, LA
Description:	This IR is requesting funding for the High-pressure/Intermediate-pressure (HP/IP) and Low-pressure (LP) turbine rebuild Gland and steampath seal replacement and component repairs, will restore internal clearances to near design value at reassembly, thereby reducing excessive steam leakage upon the unit's return to service HP/IP and LP turbine disassembly and reassembly will be performed by the Regional Service Organization (RSO) with any steampath seal component repairs to be done by the Central Machine Shop (CMS) Steampath seal replacement and component repairs will provide for continued reliable service over the next inspection interval In addition, the Original Equipment Manufacturer (OEM) has informed General Electric (GE) D11 steam turbine users of the potential for N-2 packing casing cracking and severe dishing of selected diaphragms that could contribute to in-service failure should these conditions be left unaddressed N-2 packing casing condition and diaphragm dishing will be assessed and repairs completed as required to facilitate reliable return to service Since this is the first major inspection on Stall Unit 6S, GE technical field assistance will be on site working with AEP RSO turbine coordination and labor crews to facilitate turbine disassembly, inspection, repair, and reassembly

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$3,793,263	$3,793,263
	Total	**$0**	**$3,793,263**	**$3,793,263**

Cash Flow:

	Prior Years	2018	2019	Future Years	Total
Capital	$0	$0	$2,772,836	$0	$2,772,836
Removal	$0	$0	$1,020,427	$0	$1,020,427
Total To Be Authorized	**$0**	**$0**	**$3,793,263**	**$0**	**$3,793,263**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$0	$3,793,263	$0	$3,793,263
Total Expense	$0	$0	$794,970	$0	$794,970

Project Dates: **Start Date :** 01/01/2019 **In Service Date :** 11/29/2019 **Completion Date:** 12/31/2019

Regulatory Recovery:

Southwestern Electric Power Company -- $3 8M (100%)

- $0 7M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $1 2M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $1 3M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $0 6M (17%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Daniel V Lee, Albert M Smoak **Approved On :** 09/12/2018

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2018	2019	Future Years	Total
In Forecast $	$0	$0	$2,191,133	$0	$2,191,133
Offsets Required	$0	$0	-$2,191,133	$3,010,057	$818,924
Total Direct Cost	**$0**	**$0**	**$0**	**$3,010,057**	**$3,010,057**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	08/07/2018
Approved	Elizabeth B Dailey	08/08/2018
Bypassed	Michael W Durner	08/14/2018
Approved	Tommy J Slater	08/14/2018
Approved	John M McManus	08/17/2018
Approved	Tara D Beske	08/20/2018
Approved	Thomas P Brice Jr	08/20/2018
Approved	Daniel V Lee	08/20/2018
Approved	Albert M Smoak	08/24/2018
Approved	Michael H Huggett	08/24/2018
Approved	Douglas Adams	09/12/2018

Project Contacts:

Type	Name
Detail Provider	MEYERROSE,PHILIP S
Project Manager	MEYERROSE,PHILIP S

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The Stall Unit 6S HP/IP and LP turbine rebuild scheduled for Fall 2019 will be the first major steam turbine inspection since the unit was originally placed in service in 2010 This 8 to 9 year run exceeds the OEM recommended inspection interval of 6 years Review of Generating Availability Data System (GADS) data confirms this unit has been base loaded with an average of 8 starts per year over the initial operating interval Total service hours are expected to approach 80,000 by the Fall 2019 scheduled outage It is necessary to replace gland and steampath seals at scheduled turbine rebuilds to restore internal clearances and provide for improved efficiency and heat rate upon unit return to service The OEM has informed GE D11 steam turbine users of the potential for N-2 packing casing cracking and severe dishing of selected diaphragms that could contribute to in-service failure should these conditions be left unaddressed N-2 packing casing condition and diaphragm dishing will be assessed and repairs completed as required to facilitate reliable return to service Dependent upon as-found condition and repair scope, plans for potential N-2 packing casing and / or diaphragm replacement at next inspection can be defined and budgeted accordingly. Remaining steampath component repair will be completed and is expected to provide for continued reliable service over the next operating interval The operating service hours coupled with inspection interval exceeding OEM recommendation contributes to a "Notice" Health Status of the turbine projected for 2019
Alternatives Considered:	Alternative 1 HP/IP and LP turbine rebuild during Fall 2019 outage with capital replacement of gland and steampath seals Repair steampath components for reinstallation In addition, N-2 packing casing condition and diaphragm dishing will be assessed and repairs or replacements completed as required to facilitate reliable return to service This is the least expensive of the options Alternative 2 GE provides turnkey replacement of HP/IP turbine, including rotor, diaphragms, N-2 packing casing, and gland and steampath seals with modernized enhanced steampath during Fall 2018 outage New steampath is projected to provide Combined Cycle (CC) Heat Rate Improvement of 0 34% and overall output increase of 1 1 to 1 6 MW at base load operation Outage length reduction of 2 5 to 3 weeks, but capital is expected to be significantly higher Alternative 3 Deferral of the project until Fall 2020 outage Service hours exceed 80,000 and 2% escalation of capital and O&M costs Continued operation increases risk assessment ranking from "Notice" to "Warning" Health Status Probability of failure today is 10% but expected to increase with continued operation due to potential of N-2 packing casing cracking and diaphragm dishing Deferral increases probability of failure to 15% In-service failure will result in an unplanned forced outage of approximately 10 5 weeks due to repair lead time, with impact on the O&M budget of $0 8M
Conclusion:	The recommended option is Alternative 1, which is to proceed with Stall Unit 6S steam turbine overhaul

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	ARSCP6A17 - Arsenal Hill - Stall Unit 6A LTSA Major Inspection - Capital 2017 -
Location:	Shreveport, LA
Description:	Arsenal Hill, Stall Unit 6A Long Term Service Agreement (LTSA) with Siemens, has Siemens performing all labor and supplying materials for major inspections Based on run hours per the contract, a major inspection is required in 2017 During this outage, combustion hardware (fuel nozzles, combustion zone baskets and transitions), rows 1 through 4 turbine blades and vanes, and compressor blades for rows 7 and 16 will be replaced by Siemens The parts to be replaced are at Siemens end of life per the LTSA

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$15,036,467	$15,036,467
	Total	**$0**	**$15,036,467**	**$15,036,467**

Cash Flow:

	Prior Years	2017	2018	Future Years	Total
Capital	$0	$14,336,467	$0	$0	$14,336,467
Removal	$0	$700,000	$0	$0	$700,000
Total To Be Authorized	**$0**	**$15,036,467**	**$0**	**$0**	**$15,036,467**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$15,036,467	$0	$0	$15,036,467
Total Expense	$0	$1,461,000	$0	$0	$1,461,000

Project Dates: **Start Date :** 01/01/2017 **In Service Date :** 12/31/2017 **Completion Date:** 12/31/2017

Regulatory Recovery:

Southwestern Electric Power Company -- $15 04M (100%)

- $2.71M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $4 81M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $4 96M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $2 56M (17%) FERC Annual Formula Rate update, TYE 12/31/17, effective 6/1/18

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Daniel V Lee, Venita McCellon-Allen, Mark C McCullough **Approved On :** 06/02/2017

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2017	2018	Future Years	Total
In Forecast $	$0	$13,710,000	$0	$0	$13,710,000
Offsets Required	$0	$149,000	$0	$0	$149,000
Total Direct Cost	**$0**	**$13,859,000**	**$0**	**$0**	**$13,859,000**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	05/23/2017
Approved	Elizabeth B Dailey	05/23/2017
Approved	Timothy V Riordan	05/24/2017
Approved	Paul W Franklin	05/24/2017
Approved	John M McManus	05/24/2017
Approved	Edward J Locigno	05/24/2017
Bypassed	Brenda F Meyers	05/26/2017
Approved	Daniel V Lee	05/30/2017
Approved	Venita McCellon-Allen	05/30/2017
Approved	Michael H Huggett	05/30/2017
Approved	Mark C McCullough	05/30/2017
Approved	Alesia A Austin	06/02/2017

Project Contacts:

Type	Name
Detail Provider	GLOSS,EUGENE E
Project Manager	GLOSS,EUGENE E

Capital Improvement Approval Requisition

Additional Information

IR Justification:	Arsenal Hill, Stall Unit 6A Long Term Service Agreement (LTSA) with Siemens has Siemens performing all labor and supplying materials for major inspections The AEP contract number is 3043300X168 and was entered into on 12/15/09 Siemens invoices AEP each year fixed, as well as quarterly variable, fees based on unit run hours At each scheduled outage, AEP is required to clear from the prepaid account the outage cost and book the costs to capital and O&M accounts Based on run hours, per the contract, a major inspection is required in 2017 During the outage, combustion hardware (fuel nozzles, combustion zone baskets, transitions), rows 1 through 4 turbine blades and vanes, and compressor blades rows 7 and 16 will be replaced by Siemens The parts to be replaced are at Siemens end of life per the LTSA
Alternatives Considered:	There are two alternatives with this contract, of which, neither are considered acceptable The first alternative would be to delay the outage one year, taking a risk for potential failure of the hot gas path components as well as the combustion components Combustion turbines consume the life of parts and if the parts are not removed to be replaced or refurbished according to schedule, the risk of part failure causing significant damage is high In addition, per the contract, there is a significant penalty payment of $1,526,500 to Siemens due to loss of life of the parts The second alternative would be to delay the outage one year and terminate the LTSA contract. This would impose $7,666,666 in termination fees The prepay account would still have to be cleared for the amount of this improvement requisition The cost to perform a major inspection without owning any capital hot gas path parts or combustion parts would still be incurred
Conclusion:	It is recommended to perform the major inspection in 2017 per the schedule mandated in the LTSA contract with Siemens The prepay account will be cleared per the accounting rules in place for this contract based on the major outage

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	ARSCP6B18 - Arsenal Hill - Stall Unit 6B LTSA Major Inspection - Capital 2018 -
Location:	Shreveport, LA
Description:	This Improvement Requisition is requesting funding for the Major Inspection for Arsenal Hill Unit 6 Arsenal Hill / Stall 6B Long Term Service Agreement (LTSA) with Siemens has Siemens performing all labor and supplying materials for Major Inspections Siemens invoices AEP each year fixed, as well as quarterly variable fees, based on unit run hours At each scheduled outage, AEP is required to clear from the prepaid account the outage cost and book the costs to capital and O&M accounts. Based on run hours, per the contract, a Major Inspection is required in 2018 During the outage, combustion hardware, row 1, 2, 3, & 4 turbine blades and vanes and compressor blades rows 7 & 16, along with multiple diaphragms rows and all associated sealing systems will be replaced by Siemens The parts to be replaced are at Siemens end of life per the Long Term Service Agreement

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$16,606,408	$16,606,408
	Total	**$0**	**$16,606,408**	**$16,606,408**

Cash Flow:

	Prior Years	2018	2019	Future Years	Total
Capital	$0	$15,906,408	$0	$0	$15,906,408
Removal	$0	$700,000	$0	$0	$700,000
Total To Be Authorized	**$0**	**$16,606,408**	**$0**	**$0**	**$16,606,408**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$16,606,408	$0	$0	$16,606,408
Total Expense	$0	$1,600,000	$0	$0	$1,600,000

Project Dates: **Start Date :** 01/01/2018 **In Service Date :** 12/31/2018 **Completion Date:** 12/31/2018

Regulatory Recovery:

Southwestern Electric Power Company -- $16 6M (100%)

- $3 0M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $5 3M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $5 5M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $2 8M (17%) FERC Annual Formula Rate update, TYE 12/31/18, effective 6/1/19

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Daniel V Lee, Albert M Smoak, Mark C McCullough **Approved On :** 04/19/2018

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2018	2019	Future Years	Total
In Forecast $	$0	$15,300,000	$0	$0	$15,300,000
Offsets Required	$0	$0	$0	$0	$0
Total Direct Cost	**$0**	**$15,300,000**	**$0**	**$0**	**$15,300,000**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	03/26/2018
Approved	Elizabeth B Dailey	03/26/2018
Approved	Timothy V Riordan	03/26/2018
Approved	Paul W Franklin	03/26/2018
Approved	John M McManus	03/26/2018
Approved	Tara D Beske	03/26/2018
Approved	Thomas P Brice Jr	03/27/2018
Approved	Daniel V Lee	03/27/2018
Approved	Albert M Smoak	04/02/2018
Approved	Michael H Huggett	04/09/2018
Approved	Mark C McCullough	04/17/2018
Approved	Alesia A Austin	04/19/2018

Project Contacts:

Type	Name
Detail Provider	GLOSS,EUGENE E
Project Manager	FARLOW,JACOB K

Capital Improvement Approval Requisition

Additional Information

IR Justification:	Arsenal Hill / Stall 6B Long Term Service Agreement (LTSA) with Siemens has Siemens performing all labor and supplying materials for Major Inspections AEP Contract # 3043300X168, 12/15/09 Siemens invoices AEP each year fixed, as well as quarterly variable fees, based on unit run hours At each scheduled outage, AEP is required to clear from the prepaid account the outage cost and book the costs to capital and O&M accounts Based on run hours, per the contract, a Major Inspection is required in 2018 During the outage, combustion hardware (fuel nozzles, combustion zone baskets, transitions, etc), row 1, 2, 3, & 4 turbine blades and vanes, and compressor blades rows 7 & 16 along with multiple diaphragms rows and all associated sealing systems will be replaced by Siemens The parts to be replaced are at Siemens end of life per the Long Term Service Agreement
Alternatives Considered:	There are two alternatives with this contract, neither are considered acceptable The first would be to delay the outage one year, taking a risk for potential failure of the hot gas path components as well as the combustion components Combustion turbines consume the life of parts and if the parts are not removed to be replaced or refurbished according to schedule, the risk of part failure causing catastrophic damage is high. The additional run hours would be worth an extra $4,459,400 Per the contract, there is a significant penalty payment of $1,647,900 to Siemens due to loss of life of the parts The second alternative would be to delay the outage one year and terminate the LTSA contract This would impose an additional $7,666,666 in termination fees The prepay account would still have to be cleared for the amount of this improvement requisition
Conclusion:	It is recommended to perform the Major Inspection in 2018 per the schedule mandated in the LTSA contract with Siemens The prepay account will be cleared per the accounting rules in place for this contract based on the major outage

Capital Program Approval Requisition

Company: **Southwestern Electric Power Company** **Version 2**

Project: **FC1FGDCPP - Flint Creek Unit 1 DFGD and Associated Work Retrofit Project - Phase 3**
Gentry, AR

Description: Install a Dry Flue Gas Desulfurization (DFGD) system with an integrated Pulse Jet Fabric Filter/ACI designed to achieve 95% SO2 removal for anticipated Regional Haze Rule (RHR) compliance and reduction in mercury, acid gases, and total particulate matter and other hazardous air pollutants to comply with the Mercury and Air Toxics Standard (MATS) regulation

The project will be executed in three phases in accordance with the AEP Fleet Transition Plan, Project Execution Strategy

Version 1 of this CI was a standalone project that approved Phase 1 and a portion of Phase 2a which consisted of project planning, conceptual engineering, design and feasibility studies needed to proceed with environmental permitting and to establish when the project definition and scope would be completed Deliverables for this phase included a project execution plan, an overall project schedule, and a budgetary cost estimate to validate the current long range plan forecast During this phase, the Architect Engineer (A/E) and FGD/ACI suppliers were selected and released to proceed with conceptual engineering and design to support critical path environmental permitting and construction planning activities This CI was converted into Version 1 of a CPP CI

Version 1 of the FGD CPP CI authorized funding to support completion of Phase 2, which will includes the required detailed engineering and design, permitting, procurement and contracting activities needed to proceed with the execution of the project to meet MATS and RHR compliance in 2016, including pre-air permit construction activities Contract awards to OEMs and other equipment suppliers were released as well as awards for Site Services and Warehouse construction

Reason for Revision: This revision requests funds for Phase 3, the final phase, of the project Phase 3 activities include completion of project management, engineering, design, procurement, fabrication and the completion of construction, start-up and training activities required to install a NID DFGD, ACI system, Controls Modernization, CEMS and Boiler Modifications for Flint Creek Unit 1

The costs presented represent the SWEPCO portion only Flint Creek Unit 1 is 50% owned by SWEPCO and 50% owned by AECC. The direct cost for all phases ($195M) has not changed since Version 1 However the new total estimated cost for all phases has increased from Version 1's $215M to the $242M being requested in this Version The $27M increase is due to overhead and AFUDC rates being under applied on the initial estimate

Authorization Amount:

Company/ Function	Previously Approved Amount	This Submission	Total Amount to be Authorized
SWEPCO	101,725,480	140,939,200	242,664,680
Total	**$ 101,725,480**	**$ 140,939,200**	**$ 242,664,680**

Cash Flow:

	Prior Years	2013	2014	Future Years	Total
Capital	$ 11,232,268	$ 35,320,772	$ 74,088,941	$ 122,022,699	$ 242,664,680
Removal					
Total to be Authorized	$ 11,232,268	$ 35,320,772	$ 74,088,941	$ 122,022,699	$ 242,664,680
Associated O&M	$ -	$ -	$ -	$ -	$ -

Start Date: 5/1/2009 **Completion Date:** 6/30/216 **In Service Date:** 5/29/2016

Regulatory Cost Recovery:

Southwestern Electric Power Company - Generation – $242.66M (100%) (SWEPCO Share)

- $48 53M (20%) SWP AR base rate case filing, TYE TBD, effective TBD
- $72 80M (30%) SWP LA recovery through 4- year extension of formula rate update for 2011-2014 Then base rate case filing or formula rate extension, TYE TBD, effective TBD.
- $80.07M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $41 25M (17%) FERC Annual Formula Rate update, TYE 12/31/16, effective 6/1/17

Funding: **Included in IRC Presentation** Yes **Project Funded** Yes **Offset Source** SWEPCO - G

Requested future year funds are included in the last official Forecast

Approved By: D Lee / V McCellon-Allen / M McCullough / R Powers / N Akins **Approved On:**

Capital Program Approval Requisition

Reason for Revision

This revision requests funds for Phase 3 of the Project. Phase 3 activities include completion of project management, engineering, design, procurement, fabrication and the completion of construction, start-up and training activities required to install a NID DFGD, ACI system, Controls Modernization, CEMS and Boiler Modifications for Flint Creek Unit 1

Construction activities are scheduled to begin upon receipt of the modified air permit, which is expected to be received around November 1, 2013 and after approval of the Civil Prime Contract, which expected around December 31, 2013. SWEPCO is obligated to ensure Flint Creek Unit 1 meets Mats compliance requirements by April 15, 2016 This revision requests the necessary funding to complete the project previously authorized under Phase 1 and Phase 2

Justification for Version 1 (CPP)

This CI request will authorize funding to support completion of Phase 2, which will include the required detailed engineering and design, permitting, procurement and contracting activities needed to proceed with the execution of the project to meet MATS and RHR compliance in 2016, including pre-air permit construction activities Contract awards to the OEM and other long-lead engineered equipment suppliers will be through limited releases prior to regulatory approval to limit funding commitment risk. A revision for Phase III funding is scheduled for October, 2013

Justification for Version 1 (Standalone project FC001FGD0)

In order to comply with the Arkansas Department of Environmental Quality Regional Haze regulations in place at the time of the Phase 1 approval, it was anticipated that the Flint Creek Plant would be required to meet an SO2 emission limit of 0 15 lb/MMBtu (30-day rolling avg) limit by October 15, 2013 Since the justification for the Phase 1 funding, the project was suspended and previous draft Hazardous Air Pollutants (HAPS) have been finalized as the (MATS) Rule for coal and oil-fired electric generating units To meet this rule and the proposed RHR and National Ambient Air Quality Standard (NAAQS) for SO_2 and NO_x emissions, this project was reinstated under the Version 1 CI and Flint Creek will install and operate emission control equipment by April, 2016

Other Alternatives Considered

- Retire Unit and replace generation with natural gas combined cycle
- Retire Unit and replace generation with capacity and energy purchases from SPP

Conclusion

This funding request supports the Phase 3 engineering, permitting, procuring, construction, start-up and training of an integrated NID DFGD and ACI systems at Flint Creek Unit 1 for operation in the second quarter of 2016

Associated/Future Projects

- Boiler Modifications to burn broader fuel outlined in fuel specification

  The installation of the DFGD at Flint creek will expand the fuel flexibility of available sources to include 1 2 pound sulphur coal To support this flexibility, the installation of intelligent soot blowing system and infrared cameras will be required to support boiler cleanliness and performance

- Control System Modernization

  The existing unit control and monitoring systems have reliability, vendor support and obsolescence issues The installation of the DFGD project will utilize state of the art control systems for the DFGD, ID Fans and ACI equipment Consolidating the existing controls with these new state of the art controls through the modernization project into one common platform will minimize operational errors and improve unit Operator interface between the systems "Stand-alone" controls for the WFGD are not desirable

- Continuous Monitoring System (CEMS)

Capital Program Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 2**
Project:	FCLFPRGRM - Flint Creek - Intermediate Liner & Leachate Treatment - - Revision - Phase 3
Location:	Gentry, AR
Description:	Install an intermediate liner and leachate treatment system over the existing landfill in accordance with the requirements of the Arkansas Department of Environmental Quality (ADEQ) This will allow for treatment of the leachate to reduce the levels of selenium and hexavalent chromium before the leachate will be allowed to discharge to the bottom ash pond The prior phase of the CI for the leachate control system (FCLEACHAT) approved the engineering, design, and equipment supply activities for a bioreactor system supplied by GE and balance of plant (BOP) design and supply by River Consulting The prior phase of the CI for the landfill (FC001LNDF) approved the engineering, design, and permitting of an intermediate liner and leachate collection system over the existing landfill that will allow for future DFGD fly ash and byproduct Version 1 of FCLFPRGRM converted the two standalone projects (FCLEACHAT & FC001LNDF) into a program and authorized funding to support completion of the current phase of the leachate activities, which include final permitting and design activities to support the development of the specifications and documents required for labor contract bidding
Reason for Revision:	This revision requests funds for Phase 3, which is the final phase of the project Phase 3 activities include completion of project management, engineering, design, procurement, fabrication and the completion of construction, start-up and training activities required to complete the intermediate liner, leachate collection, and leachate treatment systems The costs presented represent the SWEPCO portion only Flint Creek Unit 1 is 50% owned by SWEPCO and 50% owned by AECC The total SWEPCO cost for all phases is $13 3M, a $1 5M increase from Version 2's estimate of $11 8M The increase is due to increase in labor rates and escalation of material
Phase Description:	Completion of engineering, construction, start-up and training activities

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	GEN	$3,573,784	$9,771,073	$13,344,857
	Total	**$3,573,784**	**$9,771,073**	**$13,344,857**

Cash Flow:

	Prior Years	2014	2015	Future Years	Total
Capital	$2,443,455	$2,334,456	$7,874,348	$692,598	$13,344,857
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$2,443,455**	**$2,334,456**	**$7,874,348**	**$692,598**	**$13,344,857**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$2,443,455	$2,334,456	$7,874,348	$692,598	$13,344,857
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 08/06/2009 **In Service Date :** 05/31/2016 **Completion Date:** 05/31/2016

Regulatory Recovery:

Southwestern Electric Power Company -- $13 3M (100%)

- $2 79M (21%) SWP AR base rate case filing, TYE TBD, effective TBD
- $3 86M (29%) SWP LA recovery through 4-year extension of formula rate update for 2011-2014 Then base case filing or formula rate extension, TYE TBD, effective TBD
- $4 26M (32%) SWP TX base rate case filing, TYE 6/30/16, effective 7/1/17
- $2 39M (18%) FERC Annual Formula Rate update, TYE 12/31/16, effective 6/1/17

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Toby L Thomas, Christian T Beam, Daniel V Lee, Venita McCellon-Allen, Mark C McCullough		**Approved On :** 08/19/2014

Capital Program Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2014	2015	Future Years	Total
In Forecast $	$1,476,342	$1,941,975	$6,000,181	$332,981	$9,751,479
Offsets Required	$0	-$285,442	$0	-$1,691	-$287,133
Total Direct Cost	**$1,476,342**	**$1,656,533**	**$6,000,181**	**$331,290**	**$9,464,346**

Required Signatures:

Status	Name	Date
Approved	Michael H Huggett	07/08/2014
Approved	Elizabeth B Dailey	07/08/2014
Approved	Timothy V Riordan	07/09/2014
Approved	Tommy J Slater	07/10/2014
Approved	Jeffery D Lafleur	07/10/2014
Bypassed	John A Mazzone	07/10/2014
Bypassed	Gary C Knight	07/10/2014
Bypassed	Elizabeth B Dailey	07/10/2014
Bypassed	Ranie K Wohnhas	07/10/2014
Bypassed	James H Garrett	07/10/2014
Bypassed	Toby L Thomas	07/10/2014
Bypassed	Keith M Darling	07/10/2014
Approved	Franklin R Pifer	07/15/2014
Approved	John M McManus	07/15/2014
Approved	Christian T Beam	07/17/2014
Approved	Brian K Rupp	07/17/2014
Approved	Sandra S Bennett	07/21/2014
Approved	Daniel V Lee	07/21/2014
Approved	Venita McCellon-Allen	07/21/2014
Approved	Michael H Huggett	07/23/2014
Approved	Mark C McCullough	08/11/2014
Approved	Alesia A Austin	08/19/2014

Project Contacts:

Type	Name
Detail Provider	LOZIER,BETH E
Project Manager	LOZIER,BETH E

Capital Program Approval Requisition

Component CI's

Component ID	Company	Description of Work	Previously Approved ($)		This Submission ($)		Total Authorized ($)		
			Capital	Removal	Capital	Removal	Capital	Removal	Total
FCLEACHAT	SWEPCO	FC Landfill Leachate Treatment	1,876,915	0	2,562,879	0	4,439,794	0	4,439,794
FC001LNDF	SWEPCO	Flint Creek FGD LandFill	1,696,869	0	7,208,194	0	8,905,063	0	8,905,063
		SWEPCO Total :	**3,573,784**	**0**	**9,771,073**	**0**	**13,344,857**	**0**	**13,344,857**
		Grand Total :	**3,573,784**	**0**	**9,771,073**	**0**	**13,344,857**	**0**	**13,344,857**

Capital Program Approval Requisition

Additional Information

IR Justification:	The existing ash landfill had environmental challenges of leachate collection and groundwater quality In accordance with Civil Engineering's Ash Planning Recommendation letter dated 8/25/09, the items are being dealt with in a two phase approach The identified items must be mitigated and remediated and at the same time, efforts will be undertaken to evaluate and identify the most feasible option for a new landfill in preparation for the acceptance of DFGD waste in 2016 Installation of an intermediate liner and leachate treatment system over the existing landfill in accordance with the requirements of the Arkansas Department of Environmental Quality (ADEQ) will allow for treatment of the leachate to reduce the levels of selenium and hexavalent chromium before the leachate will be allowed to discharge to the bottom ash pond The Leachate Treatment System Project in accordance with the requirements of the Arkansas Department of Environmental Quality (ADEQ) will treat the leachate to reduce the levels of selenium and hexavalent chromium before the leachate will be allowed to discharge to the Bottom Ash Pond The expected average flow rate of leachate is in the range of 15-25gpm Biological reduction has proven to be the only effective means that can achieve the compliance limit and the only available commercially proven technology is a bioreactor system (ABMet) proprietary to General Electric The bioreactor contains environmentally indigenous, non-pathogenic microbial cultures that digest the Se in process water Currently, the technology is operating successfully at four U S utility plants and is being installed at the Mountaineer Plant to treat selenium
Alternatives Considered:	The other options available include disposing of the waste at commercially available landfills
Conclusion:	In order to support the continued low cost operation of the Flint Creek plant, the existing landfill will be required to be remediated and a determination on the future DFGD landfill location will be finalized

Capital Program Approval Requisition
One Page Summary

Company:	AEP SYSTEM **Version: 13**
Project:	MAXIMOPGM - Enterprise Application Renewal Maximo Implementation - - Revision
Location:	1 Riverside Plaza, Columbus, Ohio
Description:	AEP signed an Enterprise License agreement (ELA) with IBM in Dec 2014 which has provided AEP with the opportunity to deploy unlimited Maximo application licenses until June 2018 Maximo is IBM's comprehensive work and asset management application that competes directly with Ventyx Asset Suite which is currently used at AEP There are three instances of Asset Suite currently at AEP - Corporate (ver 6 0), OVEC (ver 6 0), Cook Nuclear (ver 7 0) Corporate and OVEC version 6 0 is already out of support from the vendor Ventyx is releasing ver 9 in Q2 2016 on a completely new technology platform AEP began an Enterprise Application Renewal Study (EAR) with the help of Ernst &Young (EY) consultants in Q2 2015 The first phase of this study focused on the development of a business case to upgrade/replace the enterprise work and asset management applications at AEP with either Asset Suite ver 9 or Maximo ver 7 6 The recommendation based on vendor analysis, enterprise adoption and financial benefit is to replace Ventyx Asset Suite with IBM Maximo In scope of this project is 1. The replacement of all existing functionality in Asset Suite with Maximo 2 Absorb potentially 91 applications into Maximo either using base functionality or through configuration The financials in this request were based on a Class 5 estimate (+100% / -50%) This Capital IR is associated with the Lease IR ITPFP1410 for lease capital of $1M This program is converting previously approved Corporate Stewardship project ITPFP1406 into a program to facilitate enhanced project billing on each company and is being administratively approved due to no change in scope or cost
Reason for Revision:	The Wave 1 0 corporate release has been delayed a month from July 2019 to August 2019 This allows for additional test cycles for financial reconciliation and to validate functionality of new build as the result of approved change requests by AEP executive/senior leadership that ensures must-have application functionality prior to go-live The OVEC release has been moved from September 2019 to October 2019 Additionally with the decision to not bring historical data into Maximo there is a need to develop and implement a process across the business to pull data from multiple sources within the Enterprise Data Warehouse Following Wave 1 0 go-live the capitalization of the production testing has been extended from 90 to 120 days The total estimated capital cost of Wave 1 0 (ITPFP1421) is $131 9M, a $16 4M increase from the previously approved $115 5M The total estimate for Wave 1 0 and 1 5 is $208M as of 08/12/2019 The Wave 1 0 estimate is a Class 1 (+15% / -10%)
Authorization Amount:	

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
AEG	APP_SYS_SW	$408	$717	$1,125
AEP EN	APP_SYS_SW	$2,907	-$460	$2,447
AEPCI	APP_SYS_SW	$0	$0	$0
AEPEI	APP_SYS_SW	$74,025	$21,308	$95,333
AEPEP	APP_SYS_SW	$15,168	$3,702	$18,870
AEPES	APP_SYS_SW	$289	$323	$611
AEPINV	APP_SYS_SW	$0	$0	$0
AEPON	APP_SYS_SW	$275,858	$86,807	$362,665
AEPPRO	APP_SYS_SW	$1,586	-$728	$858
AEPSC	APP_SYS_SW	$5,614,548	$229,205	$5,843,752
AEPTD	APP_SYS_SW	$2,499	-$2,123	$377
AEPTX	APP_SYS_SW	$13,945,022	$2,477,345	$16,422,366
APCO	APP_SYS_SW	$22,755,654	$2,578,206	$25,333,860
APTC	APP_SYS_SW	$69,978	$67,246	$137,224
CSW	APP_SYS_SW	$0	$0	$0
CSWEGY	APP_SYS_SW	$494,457	$57,387	$551,845
DHLC	APP_SYS_SW	$531,433	$17,289	$548,722
DSKLLC	APP_SYS_SW	$0	$0	$0
GENCO	APP_SYS_SW	$80,860	$54,758	$135,618
IMPCO	APP_SYS_SW	$16,053,452	$3,147,409	$19,200,861
IMTC	APP_SYS_SW	$3,203,987	$768,228	$3,972,214
KGPCO	APP_SYS_SW	$349,262	$60,385	$409,647
KYPCO	APP_SYS_SW	$5,994,083	$619,179	$6,613,262
KYTC	APP_SYS_SW	$183,835	$40,184	$224,019
OHPCO	APP_SYS_SW	$13,019,347	$1,813,343	$14,832,690
OHTC	APP_SYS_SW	$5,181,555	$1,186,018	$6,367,573
OKTC	APP_SYS_SW	$1,622,343	$226,096	$1,848,439
PSO	APP_SYS_SW	$8,976,899	$919,693	$9,896,592
SER	APP_SYS_SW	$0	$0	$0
SWEPCO	APP_SYS_SW	$14,542,946	$1,481,181	$16,024,127
SWTC	APP_SYS_SW	$22	$28	$50
TRENTW	APP_SYS_SW	$0	$0	$0

USTI	APP_SYS_SW	$6,991	$2,811	$9,802
WPCO	APP_SYS_SW	$569,914	$66,091	$636,005
WVTC	APP_SYS_SW	$1,897,943	$511,402	$2,409,345
	Total	**$115,467,269**	**$16,433,030**	**$131,900,299**

Cash Flow:

	Prior Years	2019	2020	Future Years	Total
Capital	$80,895,184	$49,194,207	$1,810,909	$0	$131,900,299
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$80,895,184**	**$49,194,207**	**$1,810,909**	**$0**	**$131,900,299**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$80,895,184	$49,194,207	$1,810,909	$0	$131,900,299
Total Expense	$3,130,439	$23,331,713	$1,545,000	$3,230,440	$31,237,592

Project Dates: **Start Date :** 01/04/2016 **In Service Date :** 12/31/2019 **Completion Date:** 03/31/2020

Regulatory Recovery: AEP System -- $132M (100%)
Allocated costs will be recovered in the next base rate proceeding or through other regulatory mechanisms in each regulated jurisdiction

Funding: **IRC Approved :** Yes **In Budget :** Partial

Approved By : Operating Company Presidents , Greg A Filipkowski, Mark C McCullough, Lisa M Barton, Lana L Hillebrand, Nicholas K Akins, Charles E Zebula

Approved On : 10/14/2019

Capital Program Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2019	2020	Future Years	Total
In Forecast $	$69,778,864	$27,522,446	$0	$0	$97,301,310
Offsets Required	$0	$14,701,327	$1,600,000	$0	$16,301,327
Total Direct Cost	**$69,778,864**	**$42,223,773**	**$1,600,000**	**$0**	**$113,602,636**

Required Signatures:

Status	Name	Date
Approved	Jon E Walters	08/09/2019
Approved	Kimete Seferi	08/12/2019
Approved	Ranie K Wohnhas	08/13/2019
Approved	Marc D Reitter	08/16/2019
Approved	William King	08/16/2019
Approved	Leigh Anne Strahler	08/16/2019
Approved	Matthew A Horeled	08/16/2019
Approved	Thomas P Brice Jr	08/19/2019
Approved	Steven H Ferguson	08/20/2019
Approved	Venkata N Miriyala	08/20/2019
Approved	Greg A Filipkowski	08/26/2019
Approved	Peggy I Simmons	08/26/2019
Approved	Judith E Talavera	08/26/2019
Approved	D B Mattison	08/26/2019
Approved	Christian T Beam	08/27/2019
Approved	Rajagopalan Sundararajan	08/30/2019
Approved	Toby L Thomas	08/30/2019
Approved	Albert M Smoak	09/02/2019
Approved	Stanley J Bundy	09/12/2019
Approved	Oliver J Sever Jr	09/12/2019
Approved	Mark C McCullough	09/20/2019
Approved	Lisa M Barton	09/20/2019
Approved	Paul Chodak III	09/30/2019
Approved	Lana L Hillebrand	10/08/2019
Bypassed	Nicholas K Akins	10/14/2019
Bypassed	Kip Fox	10/14/2019
Bypassed	Charles E Zebula	10/14/2019
Approved	Abbe M Ross	10/14/2019

Project Contacts:

Type	Name
Detail Provider	MYLES,MICHELLE F
Project Manager	ROMBACH,BRETT R

Capital Program Approval Requisition

Component CI's

Component ID	Company	Description of Work	Previously Approved ($)		This Submission ($)		Total Authorized ($)		
			Capital	Removal	Capital	Removal	Capital	Removal	Total
IT1531421	AEG	Maximo Imp - AEG	0	0	0	0	0	0	0
IT3751421	AEG	Maximo Imp - AEG - Lawrencebur	0	0	0	0	0	0	0
		AEG Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1021421	AEP EN	Maximo Imp - Energy Supply	2,907	0	-460	0	2,447	0	2,447
		AEP EN Total :	**2,907**	**0**	**-460**	**0**	**2,447**	**0**	**2,447**
IT2031421	AEPCI	Maximo Imp - C&I	0	0	0	0	0	0	0
		AEPCI Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1001421	AEPCO	Maximo Imp - AEP Inc	6,890	0	5,071	0	11,961	0	11,961
		AEPCO Total :	**6,890**	**0**	**5,071**	**0**	**11,961**	**0**	**11,961**
IT4001421	AEPEI	Maximo Imp - AEP Energy Inc	74,025	0	21,308	0	95,333	0	95,333
		AEPEI Total :	**74,025**	**0**	**21,308**	**0**	**95,333**	**0**	**95,333**
IT1751421	AEPEP	Maximo Imp - AEP EP	15,168	0	3,702	0	18,870	0	18,870
		AEPEP Total :	**15,168**	**0**	**3,702**	**0**	**18,870**	**0**	**18,870**
IT1851421	AEPES	Maximo Imp - AEPES	289	0	323	0	611	0	611
		AEPES Total :	**289**	**0**	**323**	**0**	**611**	**0**	**611**
IT1961421	AEPINV	Maximo Imp - AEP Investments	0	0	0	0	0	0	0
		AEPINV Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT4191421	AEPON	Maximo Imp - OnSite Partners	275,858	0	86,807	0	362,665	0	362,665
		AEPON Total :	**275,858**	**0**	**86,807**	**0**	**362,665**	**0**	**362,665**
IT1431421	AEPPRO	Maximo Imp - Pro Serv	1,586	0	-728	0	858	0	858
		AEPPRO Total :	**1,586**	**0**	**-728**	**0**	**858**	**0**	**858**
IT1721421	AEPRES	Maximo Imp - AEP Res	0	0	0	0	0	0	0
		AEPRES Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
ITPFP1421	AEPSC	Maximo Implementation	287,587	0	-281,194	0	6,392	0	6,392
ITOVC1421	AEPSC	Maximo Imp - OVEC/IKEC	0	0	0	0	0	0	0
		AEPSC Total :	**287,587**	**0**	**-281,194**	**0**	**6,392**	**0**	**6,392**
IT2041421	AEPTD	Maximo Imp - AEP T&D Svcs	2,499	0	-2,123	0	377	0	377
		AEPTD Total :	**2,499**	**0**	**-2,123**	**0**	**377**	**0**	**377**
IT1191421	AEPTX	Maximo Imp - TN - D	1,642,485	0	258,926	0	1,901,411	0	1,901,411
IT1691421	AEPTX	Maximo Imp - TC - T	4,457,333	0	923,534	0	5,380,866	0	5,380,866
IT1921421	AEPTX	Maximo Imp - TN - T	2,262,501	0	603,560	0	2,866,061	0	2,866,061
IT2111421	AEPTX	Maximo Imp - TC - D	5,582,704	0	691,324	0	6,274,028	0	6,274,028
IT1011421	AEPTX	Maximo Imp - AEP Utilities	0	0	0	0	0	0	0
IT1661421	AEPTX	Maximo Imp - TN - G	0	0	0	0	0	0	0
		AEPTX Total :	**13,945,022**	**0**	**2,477,345**	**0**	**16,422,366**	**0**	**16,422,366**
IT3451421	AEPWIN	Maximo Imp -	0	0	0	0	0	0	0

		Wind Holding							
		AEPWIN Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1401421	APCO	Maximo Imp - AP - D	6,802,640	0	942,076	0	7,744,716	0	7,744,716
IT1501421	APCO	Maximo Imp - AP - T	5,450,942	0	736,812	0	6,187,754	0	6,187,754
IT2151421	APCO	Maximo Imp - AP - G	10,502,073	0	899,318	0	11,401,390	0	11,401,390
		APCO Total :	**22,755,654**	**0**	**2,578,206**	**0**	**25,333,860**	**0**	**25,333,860**
IT3821421	APTC	Maximo Imp - AP Transco	69,978	0	67,246	0	137,224	0	137,224
		APTC Total :	**69,978**	**0**	**67,246**	**0**	**137,224**	**0**	**137,224**
IT0341421	BPCO	Maximo Imp - Buckeye	0	0	0	0	0	0	0
		BPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT2701421	CCT	Maximo Imp - AEG - CCT	408	0	717	0	1,125	0	1,125
		CCT Total :	**408**	**0**	**717**	**0**	**1,125**	**0**	**1,125**
IT1041421	CD	Maximo Imp - Cardinal	0	0	0	0	0	0	0
		CD Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1761421	CSW	Maximo Imp - CSW Energy Svcs	0	0	0	0	0	0	0
		CSW Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1711421	CSWEGY	Maximo Imp - CSW Energy	494,457	0	57,387	0	551,845	0	551,845
		CSWEGY Total :	**494,457**	**0**	**57,387**	**0**	**551,845**	**0**	**551,845**
IT2451421	DHLC	Maximo Imp - Dolet Hills	531,433	0	17,289	0	548,722	0	548,722
		DHLC Total :	**531,433**	**0**	**17,289**	**0**	**548,722**	**0**	**548,722**
IT4321421	DSKLLC	Maximo Imp - Desert Sky Wind F	0	0	0	0	0	0	0
		DSKLLC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT3741421	ETT	Maximo Imp - ETTx	4,798,760	0	448,931	0	5,247,692	0	5,247,692
		ETT Total :	**4,798,760**	**0**	**448,931**	**0**	**5,247,692**	**0**	**5,247,692**
IT1811421	GENCO	Maximo Imp - AEP Gen Res	80,860	0	54,758	0	135,618	0	135,618
IT181MAX1	GENCO	Maximo Imp - AEP Gen Res	0	0	0	0	0	0	0
		GENCO Total :	**80,860**	**0**	**54,758**	**0**	**135,618**	**0**	**135,618**
IT1201421	IMPCO	Maximo Imp - IM - T	2,534,827	0	268,973	0	2,803,800	0	2,803,800
IT1701421	IMPCO	Maximo Imp - IM - D	3,896,263	0	540,938	0	4,437,201	0	4,437,201
IT1901421	IMPCO	Maximo Imp - IM - Nuc	5,774,849	0	1,100,376	0	6,875,225	0	6,875,225
IT2801421	IMPCO	Maximo Imp - IM River Trans	706	0	764	0	1,470	0	1,470
IT1321421	IMPCO	Maximo Imp - IM - G	3,846,807	0	1,236,358	0	5,083,164	0	5,083,164
		IMPCO Total :	**16,053,452**	**0**	**3,147,409**	**0**	**19,200,861**	**0**	**19,200,861**
IT3851421	IMTC	Maximo Imp - IM Transco	3,203,987	0	768,228	0	3,972,214	0	3,972,214
		IMTC Total :	**3,203,987**	**0**	**768,228**	**0**	**3,972,214**	**0**	**3,972,214**
IT2601421	KGPCO	Maximo Imp - KGP - T	66,322	0	11,290	0	77,611	0	77,611
IT2301421	KGPCO	Maximo Imp - KGP - D	282,941	0	49,095	0	332,036	0	332,036
		KGPCO Total :	**349,262**	**0**	**60,385**	**0**	**409,647**	**0**	**409,647**
IT1171421	KYPCO	Maximo Imp - KYP - G	3,568,241	0	301,932	0	3,870,173	0	3,870,173
IT1101421	KYPCO	Maximo Imp - KYP - D	1,435,345	0	190,588	0	1,625,932	0	1,625,932
IT1801421	KYPCO	Maximo Imp - KYP - T	990,496	0	126,660	0	1,117,156	0	1,117,156
		KYPCO Total :	**5,994,083**	**0**	**619,179**	**0**	**6,613,262**	**0**	**6,613,262**
IT3841421	KYTC	Maximo Imp -	183,835	0	40,184	0	224,019	0	224,019

		KY Transco							
		KYTC Total :	**183,835**	**0**	**40,184**	**0**	**224,019**	**0**	**224,019**
IT1601421	OHPCO	Maximo Imp - OP - T	4,293,360	0	487,084	0	4,780,444	0	4,780,444
IT2501421	OHPCO	Maximo Imp - OP - D	8,725,987	0	1,326,259	0	10,052,246	0	10,052,246
		OHPCO Total :	**13,019,347**	**0**	**1,813,343**	**0**	**14,832,690**	**0**	**14,832,690**
IT3801421	OHTC	Maximo Imp - OH Transco	5,181,555	0	1,186,018	0	6,367,573	0	6,367,573
		OHTC Total :	**5,181,555**	**0**	**1,186,018**	**0**	**6,367,573**	**0**	**6,367,573**
IT3861421	OKTC	Maximo Imp - OK Transco	1,622,343	0	226,096	0	1,848,439	0	1,848,439
		OKTC Total :	**1,622,343**	**0**	**226,096**	**0**	**1,848,439**	**0**	**1,848,439**
IT1981421	PSO	Maximo Imp - PSO - G	3,126,992	0	223,240	0	3,350,232	0	3,350,232
IT1671421	PSO	Maximo Imp - PSO - D	4,396,911	0	530,667	0	4,927,577	0	4,927,577
IT1141421	PSO	Maximo Imp - PSO - T	1,452,996	0	165,786	0	1,618,783	0	1,618,783
		PSO Total :	**8,976,899**	**0**	**919,693**	**0**	**9,896,592**	**0**	**9,896,592**
IT4401421	SER	Maximo Imp - AEP Wind	0	0	0	0	0	0	0
		SER Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT1941421	SWEPCO	Maximo Imp - SEP - T	3,039,650	0	401,828	0	3,441,478	0	3,441,478
IT1111421	SWEPCO	Maximo Imp - SEPT - T	0	0	0	0	0	0	0
IT1591421	SWEPCO	Maximo Imp - SEP - D	2,499,244	0	310,568	0	2,809,812	0	2,809,812
IT1611421	SWEPCO	Maximo Imp - SEPT - D	1,282,922	0	162,758	0	1,445,680	0	1,445,680
IT1681421	SWEPCO	Maximo Imp - SEP - G	7,721,130	0	606,027	0	8,327,157	0	8,327,157
		SWEPCO Total :	**14,542,946**	**0**	**1,481,181**	**0**	**16,024,127**	**0**	**16,024,127**
IT3881421	SWTC	Maximo Imp - SW Transco	22	0	28	0	50	0	50
		SWTC Total :	**22**	**0**	**28**	**0**	**50**	**0**	**50**
IT4311421	TRENTW	Maximo Imp - Trent Wind Farm L	0	0	0	0	0	0	0
		TRENTW Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT4231421	TRSRC	Maximo Imp - Transource PA	17,526	0	15,478	0	33,004	0	33,004
IT4071421	TRSRC	Maximo Imp - Transource MO	496,726	0	34,100	0	530,826	0	530,826
IT4241421	TRSRC	Maximo Imp - Transource MD	7,059	0	6,819	0	13,877	0	13,877
		TRSRC Total :	**521,310**	**0**	**56,397**	**0**	**577,707**	**0**	**577,707**
IT3191421	USTI	Maximo Imp - USTI	6,991	0	2,811	0	9,802	0	9,802
		USTI Total :	**6,991**	**0**	**2,811**	**0**	**9,802**	**0**	**9,802**
IT4131421	WPCO	Maximo Imp - WP - Gen	0	0	0	0	0	0	0
IT2001421	WPCO	Maximo Imp - WP - T	229,348	0	17,718	0	247,066	0	247,066
IT2101421	WPCO	Maximo Imp - WP - D	340,566	0	48,373	0	388,939	0	388,939
		WPCO Total :	**569,914**	**0**	**66,091**	**0**	**636,005**	**0**	**636,005**
IT3831421	WVTC	Maximo Imp - WV Transco	1,897,943	0	511,402	0	2,409,345	0	2,409,345
		WVTC Total :	**1,897,943**	**0**	**511,402**	**0**	**2,409,345**	**0**	**2,409,345**
		Grand Total :	**115,467,269**	**0**	**16,433,030**	**0**	**131,900,299**	**0**	**131,900,299**

Capital Program Approval Requisition

Additional Information

IR Justification:	A key business driver for AEP is to modernize the core enterprise business applications in support of a multi-year technology transformation strategy This business driver aligns well with the corporate strategy and AEP core values The replacement of Asset Suite with Maximo will improve the employee experience which has been the single largest complaint from Asset Suite users The scope of this project is to not only replace Asset Suite with Maximo but also potentially absorb 91 other applications that are currently in place because Asset Suite does not fully support those business needs Process changes and change management will be critical to the success of this project and has been considered in the cost estimates A planning initiative will be kicked off after the approval of this IR, which will detail the schedule in which this project will be implemented From the Asset Management study, it has been determined that the Maximo implementation has a positive NPV with both indirect and intangible benefits
Alternatives Considered:	1 Do Nothing - This is a risky option Corporate and OVEC version of Asset Suite (ver. 6 0) is already out of support by the vendor These instances must be upgraded to ver 8 (available to AEP now) or ver 9 which will be released in Q2 2016 Asset Suite ver 9 is on a completely new technology platform and will be a major project by itself 2 Upgrade to Asset Suite v9 - While this is a viable option, the Asset Suite ver 9 demo during the EAR study revealed that the user interface and business functionality remain similar to our current version Upgrading to Asset Suite v9 will generate low annual capital and O&M benefits while requiring a significant investment in the upgrade project
Conclusion:	Recommend replacing Asset Suite with Maximo and rationalizing as many as 91 additional applications, Gartner, Inc placed Maximo as a leader in the Gartner Magic Quadrant for Energy and Utilities EAM software It is highly scalable and supports a broad range of functionality to all energy and utility sub sectors. It is successfully deployed and used at several utilities such as Duke, Southern, Excel Energy, TVA, NextEra to name a few

Capital Program Approval Requisition
One Page Summary

Company:	AEP SYSTEM **Version: 5**
Project:	ITSCBILL - IT Corporate Project Service Corp Billing - - Revision
Location:	1 Riverside Plaza, Columbus, Ohio
Description:	This program is being set up to facilitate the treatment of IT corporate projects over $10M The projects that are attached will be the post-allocated billing repositories for charges approved on various IT corporate standalone projects The individual projects established under the program will have associated work orders created whenever a corporate project over $10M is approved, that meets the criteria for inclusion in this program This program will be used to allow for corporate software projects over $10M to be approved corporately, but to also have visibility at the company level as they are billed out Without this special setup, the actuals from large software projects go into the software blankets on the receiving companies and are not identifiable at that point This program will not contain any funding All the funding will be on the standalone projects when they are approved Spend adherence monitoring will be performed on each individually approved standalone, based on a pre-allocated view.
Reason for Revision:	This revision is required to add a project for AEP Wind Holdings. With the additon of this project there is no change in the scope or cost of this program
Authorization Amount:	

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
AEG	APP_SYS_SW	$0	$0	$0
AEP CR	APP_SYS_SW	$0	$0	$0
AEP EN	APP_SYS_SW	$0	$0	$0
AEPCI	APP_SYS_SW	$0	$0	$0
AEPEI	APP_SYS_SW	$0	$0	$0
AEPEP	APP_SYS_SW	$0	$0	$0
AEPES	APP_SYS_SW	$0	$0	$0
AEPINV	APP_SYS_SW	$0	$0	$0
AEPNF	APP_SYS_SW	$0	$0	$0
AEPON	APP_SYS_SW	$0	$0	$0
AEPPRO	APP_SYS_SW	$0	$0	$0
AEPREP	APP_SYS_SW	$0	$0	$0
AEPRN	APP_SYS_SW	$0	$0	$0
AEPSC	APP_SYS_SW	$0	$0	$0
AEPTD	APP_SYS_SW	$0	$0	$0
AEPTX	APP_SYS_SW	$0	$0	$0
AEPUF	APP_SYS_SW	$0	$0	$0
APCO	APP_SYS_SW	$0	$0	$0
APTC	APP_SYS_SW	$0	$0	$0
CSWEGY	APP_SYS_SW	$0	$0	$0
DHLC	APP_SYS_SW	$0	$0	$0
ELECTR	APP_SYS_SW	$0	$0	$0
GENCO	APP_SYS_SW	$0	$0	$0
GRID A	APP_SYS_SW	$0	$0	$0
IMPCO	APP_SYS_SW	$0	$0	$0
IMTC	APP_SYS_SW	$0	$0	$0
KGPCO	APP_SYS_SW	$0	$0	$0
KYPCO	APP_SYS_SW	$0	$0	$0
KYTC	APP_SYS_SW	$0	$0	$0
OHPCO	APP_SYS_SW	$0	$0	$0
OHTC	APP_SYS_SW	$0	$0	$0
OKTC	APP_SYS_SW	$0	$0	$0
PSO	APP_SYS_SW	$0	$0	$0
RITELI	APP_SYS_SW	$0	$0	$0
SER	APP_SYS_SW	$0	$0	$0
SWEPCO	APP_SYS_SW	$0	$0	$0
SWTC	APP_SYS_SW	$0	$0	$0
TRHLD	APP_SYS_SW	$0	$0	$0
USTI	APP_SYS_SW	$0	$0	$0
WPCO	APP_SYS_SW	$0	$0	$0
WVTC	APP_SYS_SW	$0	$0	$0
	Total	**$0**	**$0**	**$0**

Cash Flow:

	Prior Years	1901	1902	Future Years	Total
Capital	$0	$0	$0	$0	$0
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$0**	**$0**	**$0**	**$0**	**$0**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$0	$0	$0	$0
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 06/30/2017 **In Service Date :** 07/01/2027 **Completion Date:** 07/01/2027

Regulatory Recovery: The regulatory language will be included on the standalone projects as they are approved

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : **Approved On :** 07/19/2019

Capital Program Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	1901	1902	Future Years	Total
In Forecast $	$0	$0	$0	$0	$0
Offsets Required	$0	$0	$0	$0	$0
Total Direct Cost	**$0**	**$0**	**$0**	**$0**	**$0**

Required Signatures:

Status	Name	Date
Approved	Abbe M Ross	07/19/2019

Project Contacts:

Type	Name
Detail Provider	WALTERS,JON E
Project Manager	

Capital Program Approval Requisition

Component CI's

Component ID	Company	Description of Work	Previously Approved ($)		This Submission ($)		Total Authorized ($)		
			Capital	Removal	Capital	Removal	Capital	Removal	Total
IT154BILL	AEP CR	Corp Prgrm Billing -AEP Credit	0	0	0	0	0	0	0
		AEP CR Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT102BILL	AEP EN	Corp Prgrm Billing-AEP Energy	0	0	0	0	0	0	0
		AEP EN Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT203BILL	AEPCI	Corp Prgrm Billing - AEP C + I	0	0	0	0	0	0	0
		AEPCI Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT100BILL	AEPCO	Corp Prgrm Billing - AEP Inc	0	0	0	0	0	0	0
		AEPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT400BILL	AEPEI	Corp Prgrm Billing AEP Energy	0	0	0	0	0	0	0
IT401BILL	AEPEI	Corp Prgrm Billing - BSE	0	0	0	0	0	0	0
		AEPEI Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT175BILL	AEPEP	Corp Prgrm Billing - AEP Energ	0	0	0	0	0	0	0
		AEPEP Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT185BILL	AEPES	Corp Prgrm Billing-AEP Enrgy S	0	0	0	0	0	0	0
		AEPES Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT196BILL	AEPINV	Corp Prgrm Billing-AEP Invest	0	0	0	0	0	0	0
		AEPINV Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT364BILL	AEPNF	Corp Prgrm Billing-AEP Nonut F	0	0	0	0	0	0	0
		AEPNF Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT419BILL	AEPON	Corp Prgrm Billing - AEP OnSit	0	0	0	0	0	0	0
		AEPON Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT143BILL	AEPPRO	Corp Prgrm Billing - AEP Pro S	0	0	0	0	0	0	0
		AEPPRO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT397BILL	AEPREP	Corp Prgrm Billing - AEP Retai	0	0	0	0	0	0	0
		AEPREP Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT422BILL	AEPRN	Corp Prgrm Billing RENEWABLES	0	0	0	0	0	0	0
		AEPRN Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT204BILL	AEPTD	Corp Prgrm Billing-AEP T&D Svc	0	0	0	0	0	0	0
		AEPTD Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT119BILL	AEPTX	Corp Prgrm Billing - AEPTN Dis	0	0	0	0	0	0	0

IT169BILL	AEPTX	Corp Prgrm Billing-AEPTC Trans	0	0	0	0	0	0	0
IT211BILL	AEPTX	Corp Prgrm Billing - AEPTC Dis	0	0	0	0	0	0	0
IT192BILL	AEPTX	Corp Prgrm Billing-AEPTN Trans	0	0	0	0	0	0	0
		AEPTX Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT353BILL	AEPUF	Corp Prgrm Billing-AEP Util Fu	0	0	0	0	0	0	0
		AEPUF Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT345BILL	AEPWIN	Corp Prgrm Billing - AEP Wind	0	0	0	0	0	0	0
		AEPWIN Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT215BILL	APCO	Corp Prgrm Billing - APCO Gene	0	0	0	0	0	0	0
IT150BILL	APCO	Corp Prgrm Billing - APCO Tran	0	0	0	0	0	0	0
IT140BILL	APCO	Corp Prgrm Billing - APCO Dist	0	0	0	0	0	0	0
		APCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT382BILL	APTC	Corp Prgrm Billing - AEP AP Tr	0	0	0	0	0	0	0
		APTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT034BILL	BPCO	Corp Prgrm Billing - Buckeye	0	0	0	0	0	0	0
		BPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT270BILL	CCT	Corp Prgrm Billing - AEG CCT	0	0	0	0	0	0	0
		CCT Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT104BILL	CD	Corp Prgrm Billing - Cardinal	0	0	0	0	0	0	0
		CD Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT171BILL	CSWEGY	Corp Prgrm Billing - CSW Energ	0	0	0	0	0	0	0
		CSWEGY Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT245BILL	DHLC	Corp Prgrm Billing-Dolet Hills	0	0	0	0	0	0	0
		DHLC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT379BILL	ELECTR	Corp Prgrm Billing-Elec Trans	0	0	0	0	0	0	0
		ELECTR Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT374BILL	ETT	Corp Prgrm Billing - ETT	0	0	0	0	0	0	0
		ETT Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT420BILL	GENCO	Corp Prgrm Billing - Gen Res	0	0	0	0	0	0	0
IT181BILL	GENCO	Corp Prgrm Billing-AEP Gen Res	0	0	0	0	0	0	0
		GENCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT418BILL	GRID A	Corp Prgrm Billing - Grid Assu	0	0	0	0	0	0	0
		GRID A Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT170BILL	IMPCO	Corp Prgrm Billing - I&M	0	0	0	0	0	0	0

		Distr							
IT190BILL	IMPCO	Corp Prgrm Billing - I&M Nucle	0	0	0	0	0	0	0
IT120BILL	IMPCO	Corp Prgrm Billing - I&M Trans	0	0	0	0	0	0	0
IT280BILL	IMPCO	Corp Prgrm Billing - IM Riv Tr	0	0	0	0	0	0	0
IT132BILL	IMPCO	Corp Prgrm Billing - I&M Gener	0	0	0	0	0	0	0
		IMPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT385BILL	IMTC	Corp Prgrm Billing - AEP IM Tr	0	0	0	0	0	0	0
		IMTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT260BILL	KGPCO	Corp Prgrm Billing - KGP Trans	0	0	0	0	0	0	0
IT230BILL	KGPCO	Corp Prgrm Billing - KGP Distr	0	0	0	0	0	0	0
		KGPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT110BILL	KYPCO	Corp Prgrm Billing - KP Distri	0	0	0	0	0	0	0
IT180BILL	KYPCO	Corp Prgrm Billing-KYPCO Trans	0	0	0	0	0	0	0
IT117BILL	KYPCO	Corp Prgrm Billing - KYPCO Gen	0	0	0	0	0	0	0
		KYPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT384BILL	KYTC	Corp Prgrm Billing - AEP KY Tr	0	0	0	0	0	0	0
		KYTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT160BILL	OHPCO	Corp Prgrm Billing - OPCO Tran	0	0	0	0	0	0	0
IT250BILL	OHPCO	Corp Prgrm Billing - OPCO Dist	0	0	0	0	0	0	0
		OHPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT380BILL	OHTC	Corp Prgrm Billing - AEP OH Tr	0	0	0	0	0	0	0
		OHTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT386BILL	OKTC	Corp Prgrm Billing - AEP OK Tr	0	0	0	0	0	0	0
		OKTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT198BILL	PSO	Corp Prgrm Billing - PSO Gener	0	0	0	0	0	0	0
IT114BILL	PSO	Corp Prgrm Billing - PSO Trans	0	0	0	0	0	0	0
IT167BILL	PSO	Corp Prgrm Billing - PSO Distr	0	0	0	0	0	0	0
		PSO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT396BILL	RITELI	Corp Prgrm Billing - RITELine	0	0	0	0	0	0	0
		RITELI Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT440BILL	SER	Corp Prgrm Billing - AEP	0	0	0	0	0	0	0

		Wind							
		SER Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT194BILL	SWEPCO	Corp Prgrm Billing-SWEPCO Tran	0	0	0	0	0	0	0
IT168BILL	SWEPCO	Corp Prgrm Billing - SWEPCO Ge	0	0	0	0	0	0	0
IT161BILL	SWEPCO	Corp Prgrm Billing-SWEPCO TX D	0	0	0	0	0	0	0
IT159BILL	SWEPCO	Corp Prgrm Billing - SWEPCO Di	0	0	0	0	0	0	0
IT111BILL	SWEPCO	Corp Prgrm Billing-SWEPCO T TX	0	0	0	0	0	0	0
		SWEPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT388BILL	SWTC	Corp Prgrm Billing - AEP SW Tr	0	0	0	0	0	0	0
		SWTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT370BILL	TRHLD	Corp Prgrm Billing-AEP Transco	0	0	0	0	0	0	0
IT369BILL	TRHLD	Corp Prgrm Billing - AEP Trans	0	0	0	0	0	0	0
		TRHLD Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT415BILL	TRSRC	Corp Prgrm Billing-Xsource WVA	0	0	0	0	0	0	0
IT423BILL	TRSRC	Corp Prgrm Billing-Transrce PA	0	0	0	0	0	0	0
IT424BILL	TRSRC	Corp Prgrm Billing-Transrc-MD	0	0	0	0	0	0	0
IT407BILL	TRSRC	Corp Prgrm Billing-Xsource MO	0	0	0	0	0	0	0
IT403BILL	TRSRC	Corp Prgrm Billing-Transource	0	0	0	0	0	0	0
		TRSRC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT319BILL	USTI	Corp Prgrm Billing - USTI	0	0	0	0	0	0	0
		USTI Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT210BILL	WPCO	Corp Prgrm Billing - WP Distri	0	0	0	0	0	0	0
IT200BILL	WPCO	Corp Prgrm Billing - WP Transm	0	0	0	0	0	0	0
		WPCO Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
IT383BILL	WVTC	Corp Prgrm Billing - AEP WVa T	0	0	0	0	0	0	0
		WVTC Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**
		Grand Total :	**0**	**0**	**0**	**0**	**0**	**0**	**0**

Capital Program Approval Requisition

Additional Information

IR Justification:	This program is being set up to facilitate the treatment of IT corporate projects over $10M The projects that are attached will be the post-allocated billing repositories for charges approved on various IT corporate standalone projects The individual projects established under the program will have associated work orders created whenever a corporate project over $10M is approved, that meets the criteria for inclusion in this program This program will be used to allow for corporate software projects over $10M to be approved corporately, but to also have visibility at the company level as they are billed out Without this special setup, the actuals from large software projects go into the software blankets on the receiving companies and are not identifiable at that point This program will not contain any funding All the funding will be on the standalone projects when they are approved Spend adherence monitoring will be performed on each individually approved standalone, based on a pre-allocated view
Alternatives Considered:	Several alternatives were considered, but none provide the combination of corporate approval only with the ability to track the actuals through the service corp billing process
Conclusion:	This program should be approved to allow for proper treatment of IT corporate software projects over $10M

Capital Program Approval Requisition
One Page Summary

Company:	AEP SYSTEM **Version: 3**
Project:	NERCCPREG - NERC CIP Physical Security Upgrade for Regulated Plants - - Revision
Location:	Various
Description:	This program will install physical security upgrades at 29 regulated generating sites (Reference Attachment 1 under File Attachments page) These upgrades achieve compliance with the North American Electric Reliability Corporation - Critical Infrastructure Protection (NERC - CIP) Version 5 standards that require physical security measures for identified Bulk Electric System (BES) Cyber Assets The specific scope of each site is defined by AEP Security in each site's "Security Plan " For each site, the improvements may include control system modifications, room access controls (ID Card Scanners), site perimeter fencing, video/electronic surveillance and administrative procedures The initial version of this IR will request funds for Amos only, subsequent revisions will request funding for additional plants (see Attachment 2 under File Attachments page)
Reason for Revision:	Version 2 was approved for $8 8M, this version requests an additional $3 6M for a new authorized amount of $12.4M to finish and close out APCO, Wheeling Power, AEP Generating Company, KYPO, I&M, PSO, and SWEPCO components The revised amount reflects the estimate at completion for the regulated plants in each of the operating companies to offset overruns of both capital and operating company overheads Reasons for cost overruns include 1 Original contractor unable to work PSO facilities due to health and AEP safety requirements 2 Access and maintenance road installation at Oklaunion, hydro-excavation, and additional authorized gates and fencing at Mitchell were not included in initial estimate 3 Increase in AFUDC and overhead rates when compared to initial estimate 4 Program ran longer than expected These sites are all classified as containing "Low" assets only and have a revised compliance date of January 1, 2020 The NERC CIP Program is projected to finish by the end of the 1st quarter of 2019 except for Big Sandy/ Kentucky Power which is being suspended until the Big Sandy 2 Demolition Project is completed The suspension will hold out the shutting down of the Program CI until it is finished which could be until 2020

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
AEG	GEN	$147,294	$44,628	$191,922
APCO	GEN	$3,394,814	-$21,656	$3,373,158
IMPCO	GEN	$139,083	$44,628	$183,711
KYPCO	GEN	$1,083,281	$777,413	$1,860,694
PSO	GEN	$1,026,303	$1,745,325	$2,771,628
SWEPCO	GEN	$2,260,860	$276,387	$2,537,247
WPCO	GEN	$740,929	$693,823	$1,434,752
	Total	**$8,792,564**	**$3,560,548**	**$12,353,112**

Cash Flow:

	Prior Years	2018	2019	Future Years	Total
Capital	$7,324,527	$4,926,585	$102,000	$0	$12,353,112
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$7,324,527**	**$4,926,585**	**$102,000**	**$0**	**$12,353,112**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$7,324,527	$4,926,585	$102,000	$0	$12,353,112
Total Expense	$277,927	$351,506	$0	$0	$629,433

Project Dates: **Start Date :** 08/31/2015 **In Service Date :** 06/28/2019 **Completion Date:** 09/29/2019

Regulatory Recovery:

AEP Generating Company -- $0 19M (1 6%)
AEGCo is a wholly-owned subsidiary of AEP and sells the generation output of its ownership share to AEP affiliates
Appalachian Power Company -- $3 37M (27 3%)

- $1 59M (47%) APCo VA base rate case filing, TYE 12/31/19, with cost projections through 3/31/20, effective 2/1/21,
- $1 45M (43%) APCo WV base rate case filing, TYE TBD, with cost projections through TBD, effective TBD
- $0 20M (6%) KgPCo purchased power from APCo under three-year settlement agreement phase-in of generation rates through 12/31/11 remains in effect as adjusted annually by transmission pass-through for post-2011 until a new agreement is in place
- $0 13M (4%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20

Indiana Michigan Power Company -- $0 18M (1 5%)

- $0 12M (65%) I&M IN base rate case filing, TYE 12/31/18 with cost projections through 12/31/20, effective 5/31/20
- $0 02M (14%) I&M MI base rate case filing, TYE 12/31/18 with cost projections through 12/31/20, effective 7/8/19
- $0 04M (21%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20

Kentucky Power Company -- $1 86M (15 1%)

- $1 84M (99%) base rate case filing, TYE 3/31/20 with optional forecasted test year, effective 1/1/21
- $0 02M (1%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20

	Public Service Company of Oklahoma -- $2 77M (22 4%) Base rate case filing, TYE TBD, effective TBD. Southwestern Electric Power Company -- $2 54M (20 5%) • $0 46M (18%) SWP AR base rate case filing, TYE TBD, effective TBD • $0 81M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD • $0 84M (33%) SWP TX base rate case filing, TYE TBD effective TBD • $0 43M (17%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20 Wheeling Power Company -- $1 44M (11 6%) • $1 19M (82 5%) WPCo WV base rate case filing, TYE TBD, with cost projections through TBD, effective TBD • $0 25M (17.5%) Accrues to WPCo shareholders until 12/31/2020, or until such earlier date that the Company and Commission agree that growth warrants that this portion of Mitchell be reflected in WPCo rates	
Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Operating Company Presidents , Daniel V Lee, Mark C McCullough		**Approved On :** 11/13/2018

Capital Program Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2018	2019	Future Years	Total
In Forecast $	$6,061,456	$3,900,971	$70,000	$0	$10,032,427
Offsets Required	$0	$71,000	$0	$0	$71,000
Total Direct Cost	**$6,061,456**	**$3,971,971**	**$70,000**	**$0**	**$10,103,427**

Required Signatures:

Status	Name	Date
Approved	Antonio D Malachi	09/11/2018
Approved	Michael L Belter	09/12/2018
Approved	Michael W Durner	09/17/2018
Bypassed	Timothy V Riordan	09/18/2018
Approved	Monte A McMahon	09/18/2018
Approved	Timothy C Kerns	09/24/2018
Approved	Debra L Osborne	09/27/2018
Approved	Douglas J Rosenberger	09/28/2018
Approved	Tommy J Slater	09/28/2018
Approved	Michael L Bright	10/01/2018
Approved	John M McManus	10/02/2018
Approved	Franklin R Pifer	10/03/2018
Approved	Paul D Flory	10/03/2018
Approved	David A Lucas	10/03/2018
Approved	Steven H Ferguson	10/04/2018
Approved	Steven L Fate	10/08/2018
Approved	Ranie K Wohnhas	10/08/2018
Approved	Thomas P Brice Jr	10/12/2018
Approved	Daniel V Lee	10/12/2018
Approved	Toby L Thomas	10/12/2018
Approved	Christian T Beam	10/15/2018
Approved	Matthew J Satterwhite	10/16/2018
Approved	Albert M Smoak	10/18/2018
Approved	Peggy I Simmons	10/29/2018
Approved	Michael H Huggett	10/30/2018
Approved	Mark C McCullough	11/05/2018
Approved	Alesia A Austin	11/13/2018

Project Contacts:

Type	Name
Detail Provider	ELLIOTT,WILEY J
Project Manager	DILLEY,MICHAEL J

Capital Program Approval Requisition

Component CI's

Component ID	Company	Description of Work	Previously Approved ($)		This Submission ($)		Total Authorized ($)		
			Capital	Removal	Capital	Removal	Capital	Removal	Total
NRCPAEGRK	AEG	NERC CIP Physical Security AEG	139,083	0	44,628	0	183,711	0	183,711
NRCPAEGLW	AEG	NERC CIP Physical LWBG	8,211	0	0	0	8,211	0	8,211
		AEG Total :	**147,294**	**0**	**44,628**	**0**	**191,922**	**0**	**191,922**
NRCCPAPCO	APCO	NERC CIP Security Upgrade APCO	3,394,814	0	-21,656	0	3,373,158	0	3,373,158
		APCO Total :	**3,394,814**	**0**	**-21,656**	**0**	**3,373,158**	**0**	**3,373,158**
NERCCIPIM	IMPCO	NERC CIP Physical IM	139,083	0	44,628	0	183,711	0	183,711
		IMPCO Total :	**139,083**	**0**	**44,628**	**0**	**183,711**	**0**	**183,711**
NRCCPKPCO	KYPCO	NERC CIP KYPCO	1,083,281	0	777,413	0	1,860,694	0	1,860,694
		KYPCO Total :	**1,083,281**	**0**	**777,413**	**0**	**1,860,694**	**0**	**1,860,694**
NRCCIPPSO	PSO	NERC CIP PSO	1,026,303	0	1,745,325	0	2,771,628	0	2,771,628
		PSO Total :	**1,026,303**	**0**	**1,745,325**	**0**	**2,771,628**	**0**	**2,771,628**
NRCPSWPCO	SWEPCO	NERC CIP SWEPCO	2,260,860	0	276,387	0	2,537,247	0	2,537,247
		SWEPCO Total :	**2,260,860**	**0**	**276,387**	**0**	**2,537,247**	**0**	**2,537,247**
NERCCIPWP	WPCO	NERC CIP Physical WPCO	740,929	0	693,823	0	1,434,752	0	1,434,752
		WPCO Total :	**740,929**	**0**	**693,823**	**0**	**1,434,752**	**0**	**1,434,752**
		Grand Total :	**8,792,564**	**0**	**3,560,548**	**0**	**12,353,112**	**0**	**12,353,112**

Capital Program Approval Requisition

Additional Information

IR Justification:	These improvements are required for compliance with NERC-CIP version 5 standards that require physical security measures for identified Bulk Electric System (BES) Cyber Assets
Alternatives Considered:	Compliance with the standards is mandatory For each site, the lowest cost option is being determined considering factors of capital investment, O&M expenses and long term maintenance
Conclusion:	It is requested that funding be approved in order to achieve NERC-CIP compliance

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 2**
Project:	PRK12C704 - Pirkey Unit 1 - BMS, CCS, SBCS Controls Replacement - - Revision
Location:	Hallsville, TX
Description:	Pirkey Power Plant, Unit 1, is proposing to replace the Boiler Management Systems (BMS), Combustion Control Systems (CCS) and the Soot Blower Control Systems (SBCS) with a Distributed Control System platform This Distributed Control System platform will integrate these control functions seamlessly into the existing Emerson Process Management's Ovation platform that is presently controlling and monitoring the Turbine Control and Induced Fan Control systems, the Main Plant Annunciator and Data Acquisition systems and the Coal Yard Annunciator With this upgrade, the existing Ovation systems would be brought up to date to match the newest revision levels of Ovation's processors, power supplies as required, operator graphics systems and develop a seamless control system for the affected systems All costs are shown at AEP's 85 936% ownership share
Reason for Revision:	Version 1 was approved for $15 2M, this version requests an additional $2 5M for a new authorized amount of $17 7M The basis for this revision is to cover an increase of the initial estimate in three main areas of the project Construction, AEP Startup, and Architectural and Engineering This revision is also asking for additional contingency dollars to allow for any issues that may arise during the tie-in outage AEP received actual bids for the construction contract that exceeded the initial project estimates The basis for this exceedance is mainly due to underestimating the complexity of the scope but also due to several changes in scope from the initial project charter Also, the initial charter had AEP startup forecasted at a much smaller scope to reduce cost Due to the complexity of this work, the project team has now reconsidered this and has requested that AEP startup perform their typical functions as required by our project guidelines

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$15,197,942	$2,517,229	$17,715,171
	Total	**$15,197,942**	**$2,517,229**	**$17,715,171**

Cash Flow:

	Prior Years	2019	2020	Future Years	Total
Capital	$8,709,538	$8,866,519	$0	$0	$17,576,057
Removal	$0	$139,114	$0	$0	$139,114
Total To Be Authorized	**$8,709,538**	**$9,005,633**	**$0**	**$0**	**$17,715,171**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$8,709,538	$9,005,633	$0	$0	$17,715,171
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 08/01/2016 **In Service Date :** 07/01/2019 **Completion Date:** 09/01/2019

Regulatory Recovery:

Southwestern Electric Power Company -- $17 7M (100%)

- $3 2M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $5 7M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $5 8M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $3 0M (17%) FERC Annual Formula Rate update, TYE 12/31/19, effective 6/1/20

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Daniel V Lee, Albert M Smoak, Mark C McCullough **Approved On :** 12/21/2018

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2019	2020	Future Years	Total
In Forecast $	$4,107,559	$2,872,140	$4,267,045	$0	$11,246,744
Offsets Required	$2,872,140	$4,381,918	-$4,267,045	$0	$2,987,013
Total Direct Cost	**$6,979,699**	**$7,254,058**	**$0**	**$0**	**$14,233,757**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	11/14/2018
Approved	Elizabeth B Dailey	11/27/2018
Approved	Michael W Durner	11/27/2018
Approved	Tommy J Slater	11/27/2018
Approved	John M McManus	11/29/2018
Approved	Tara D Beske	11/29/2018
Approved	Thomas P Brice Jr	12/03/2018
Approved	Daniel V Lee	12/11/2018
Approved	Albert M Smoak	12/11/2018
Approved	Michael H Huggett	12/11/2018
Approved	Mark C McCullough	12/17/2018
Approved	Douglas Adams	12/21/2018

Project Contacts:

Type	Name
Detail Provider	BURGER,KEITH J
Project Manager	BURGER,KEITH J

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The control systems that control the BMS, CCS and SBCS on SWEPCO's largest solid fuel unit are 40 years old and are obsolete to the limit of not being able to obtain replacement components on the analog control boards The vendors have long since quit supporting the systems. Board level obsolete components are scavenged from existing spare cards, eliminating those cards from future use When either one of these systems fails, it will require a total unit outage of at least 10 months to fast track an engineered, stand-alone replacement system Please see PDS on the File Attachments tab in Peoplesoft Financials
Alternatives Considered:	1 By upgrading the BMS, CCS and SBCS simultaneously to the Emerson Ovation platform, upgrading the existing Ovation Processors and the logic running on them, upgrading the graphics to a common Ovation revision level and implementing a high fidelity simulator, the plant would be able to operate for 10 plus years past 2019 without the need for any upgrades to the entire control system 2 Replace the systems in consideration with Allen Bradley Programmable Logic Control (PLC) based systems at a $390K system savings and integrate the existing Ovation systems in with the PLC systems to produce a unified Human Machine Interface (HMI)/Control strategy attempting to provide similar unit performance as a total Ovation solution The development of the system simulator would increase by approximately $750K due to having a second virtual controller server from the simulation vendor 3 Replace the systems with ABB based systems, like those installed at Welsh and Flint Creek at the same system cost as a total Ovation system, and integrate the existing Ovation systems in with the ABB systems to produce a unified HMI/Control strategy to provide similar unit performance as a total Ovation solution The development of the system simulator would be more difficult to develop and maintain adding at least $750K to the development cost Please see PDS on the File Attachments tab in Peoplesoft Financials
Conclusion:	Option #1, the integrated Ovation solution, provides the most economical replacement option for this project Plant training is reduced to a minimum versus the other two options Future software, hardware and graphics upgrades will be significantly less with one software platform and the re-integration issues that must be addressed for each upgrade Limited additional resources will be required for support of existing and future North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP) requirements Fifty percent less hardware will have to be kept in Stores for spare parts with a single integrated system This option is the least costly solution Finally, system dispatch performance will be improved 1200% to 1500% with this solution

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 2**
Project:	PRKCFGD60 - Pirkey Unit 1 - FGD Controls Upgrade - - Revision
Location:	Hallsville, TX
Description:	Pirkey Unit #1 is proposing to replace the existing Flue Gas Desulfurization (FGD), Bottom Ash and Demineralizer stand-alone control systems by integrating the systems into the existing Emerson Process Management Ovation control platform installed during the 2020 Controls Upgrade project The integrated platform will then consist of the new systems' controls as well as the retrofitted Boiler Management System, Combustion Control System and Soot Blower Ovation Controls Upgrade and the Ovation Evergreen hardware and software upgrades of the original Ovation controlled systems at Pirkey The completed Ovation upgrade will consolidate control of the systems into a common control room with unified graphics packages The upgraded systems in this project will also have local control in, or near, the existing control locations All costs are shown at AEP's 85 936% ownership share
Reason for Revision:	There are now engineering and procurement contracts in place with detailed cost forecasts These estimates provided us with a Class 2 estimate and a higher degreee of confidence around those numbers

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$8,370,405	$338,521	$8,708,926
	Total	**$8,370,405**	**$338,521**	**$8,708,926**

Cash Flow:

	Prior Years	2020	2021	Future Years	Total
Capital	$5,563,428	$3,002,217	$0	$0	$8,565,645
Removal	$0	$143,281	$0	$0	$143,281
Total To Be Authorized	**$5,563,428**	**$3,145,498**	**$0**	**$0**	**$8,708,926**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$5,563,428	$3,145,498	$0	$0	$8,708,926
Total Expense	$0	$0	$0	$0	$0

Project Dates:	**Start Date :** 09/01/2017	**In Service Date :** 04/01/2020	**Completion Date:** 07/01/2020
Regulatory Recovery:			
Funding:	**IRC Approved :** Yes	**In Budget :** Yes	
Approved By :		**Approved On :**	

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2020	2021	Future Years	Total
In Forecast $	$0	$0	$0	$0	$0
Offsets Required	$278,810	$1,757,903	$2,797,741	$2,467,224	$7,301,678
Total Direct Cost	**$278,810**	**$1,757,903**	**$2,797,741**	**$2,467,224**	**$7,301,678**

Required Signatures:

Status	Name	Date

Project Contacts:

Type	Name
Detail Provider	BURGER,KEITH J
Project Manager	BURGER,KEITH J

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The control system that controls the FGD system is the original system and is obsolete to the limit of not being able to obtain replacement board or components on the analog control boards The vendors no longer support the systems When a cell/module's control components fail in the FGD control system, Pirkey's output will be restricted 300 megawatts for at least 6 months on the first failure and at least 4-5 months when each of the additional 3 cells that have obsolete controls fail The replacement system would be a fast-tracked, engineered, stand-alone control system The Bottom Ash Control system is covered in a GAP (an AEP system that provides a process to identify, review, understand, act upon and communicate unexpected events so that they will not happen again on the fleet) identified in the last half of 2015 It is no longer being supported by the vendor and parts are being purchased from third party sources When the system fails, it will be at least a 6 month outage while a fast-tracked, engineered, stand-alone control system could be developed The Demineralizer Control System is also the original control system, except the mechanical timers that have been replaced with an older Programmable Logic Control (PLC) Replacement of the Pirkey water treatment controls is necessary due to the age of the controls and the fact that part replacement is becoming difficult The present controls use mechanical relays and cams to advance steps during operation and regeneration of the equipment The makeup water treatment ion exchange system is needed to remove the dissolved solids in the makeup water to allow the water to be used on the cycle to make steam The Pirkey water treatment system supplies makeup water to the unit and is critical to the availability and reliability of Pirkey Power Station
Alternatives Considered:	(1) By upgrading the FGD, Bottom Ash Control System, and the Demineralizer Control System simultaneously to the Emerson Ovation platform, the plant would be able to leverage the existing control and operator interface platforms This will eliminate the need for separate hardware, software and graphics packages, system training, North American Electric Reliability Corporation Critical Infrastructure Protection (NERC CIP) software tracking and annual maintenance and software support agreements With the coordinated Ovation system, the unified system will be able to operate for 10 plus years past 2020 without the need for any system upgrades to the entire control system (2) Replace with Allen Bradley PLC based systems and integrate the PLC systems with the existing Ovation systems to produce a unified Human Machine Interface (HMI)/Control strategy in an attempt to provide similar unit performance as a total Ovation solution The remainder of the project costs remain the same with the exception of the additional development costs associated with two disparate graphics support systems supplying data in a format to support AEP's High Performance Graphics standards on the Ovation platform These costs will be in the range of $500K-$750K (3) Replace with ABB based systems, at the same system cost as a total Ovation system, and integrate the existing Ovation systems to produce a unified HMI/Control strategy, in an attempt to provide similar unit performance as a total Ovation solution The remainder of the project costs would remain the same with the exception of the additional development costs associated with two disparate graphics support systems supplying data in a format to support AEP's High Performance Graphics standards on the Ovation platform This cost would, at a minimum, double the graphics develop costs which could be in the range of $500K-$750K
Conclusion:	It is the preferred and the most economical option to select Option #1 and run it concurrently with the associated IR upgrading the Boiler Management Systems, Combustion Control System, Sootblower Controls and the Evergreen project to capture the 20% hardware discount that is being additionally proposed by Emerson Process management

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	TRK2LNDFL - Turk Landfill Cell 2 Engineering, Permitting and Construction -
Location:	Fulton, AR
Description:	Turk Power Station's existing landfill space will be exhausted by early to mid 2018 and requires commissioning of the Cell 2 of the unit The scope of work includes engineering, selection of vendors, construction and final certification approval from the Arkansas Department of Environmental Quality (ADEQ) All costs shown are at AEP's ownership 73 333% share

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$4,978,824	$4,978,824
	Total	**$0**	**$4,978,824**	**$4,978,824**

Cash Flow:

	Prior Years	2017	2018	Future Years	Total
Capital	$0	$3,534,757	$1,444,067	$0	$4,978,824
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$0**	**$3,534,757**	**$1,444,067**	**$0**	**$4,978,824**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$3,534,757	$1,444,067	$0	$4,978,824
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 01/01/2017 **In Service Date :** 06/30/2018 **Completion Date:** 12/31/2018

Regulatory Recovery:

Southwestern Electric Power Company -- $4 979M (100%)

- $0 896M (18%) SWP AR base rate case filing, TYE 6/30/17 with 12-month pro forma period, effective 6/1/18
- $1 593M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $1 643M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $0 847M (17%) FERC Annual Formula Rate update, TYE 12/31/18, effective 6/1/19

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 01/27/2017

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2017	2018	Future Years	Total
In Forecast $	$0	$3,244,444	$1,081,482	$0	$4,325,926
Offsets Required	$0	$0	$0	$0	$0
Total Direct Cost	**$0**	**$3,244,444**	**$1,081,482**	**$0**	**$4,325,926**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	06/16/2016
Approved	Elizabeth B Dailey	06/17/2016
Approved	Timothy V Riordan	06/17/2016
Approved	Paul W Franklin	06/20/2016
Approved	John M McManus	06/20/2016
Approved	Steven G Orenchuk	06/20/2016
Approved	Sandra S Bennett	06/20/2016
Approved	Daniel V Lee	01/19/2017
Approved	Venita McCellon-Allen	01/20/2017
Approved	Michael H Huggett	01/23/2017
Approved	Alesia A Austin	01/27/2017

Project Contacts:

Type	Name
Detail Provider	CHAKRABARTI,SATYANANDA
Project Manager	CHAKRABARTI,SATYANANDA

Capital Improvement Approval Requisition

Additional Information

IR Justification:	Turk plant's Cell 2 is projected to be required for plant operation by 2nd or 4th quarter of 2018 Assuming a start by the middle of 2017, the construction is not expected to take longer than 18 months. Thus, a "late start" of mid-2017 of Cell 2 construction is planned The early part of the year will be spent in finalizing design and selection of a general contractor Benefits Avoid disposal to commercial landfill and have landfill available for disposal by 2018
Alternatives Considered:	Option 1 - Expand the landfill as planned The expansion will prove approximately 12 years of available storage Estimated transport and placement costs are $4 77 / ton in 2018 dollars This option includes an estimated $2 626M in 2029 dollars to address closure Option 2 - Dispose of ash at an off site facility The only location currently identified is approximately 35 miles from the site Transportation and disposal expenses are estimated at $34 81 / ton in 2018 dollars While this is listed as an alternative, concerns on available space, transportation permits, etc remain open questions The 12-Year valuation was used to match the expected lifecycle of the landfill cell The evaluation values correspond to 100% of the unit AEP's share is 73 33%
Conclusion:	The evaluation supports the project as proposed Economic Results — Net Present Value ($000s) — Internal Rate of Return 5 Year — $11,542 — 68% 10 Year — $25,323 — 74% 12 Year Estimated Life — $29,160 — 74% Simple Payback (Years) 2 5 Discount Rate for NPV calculation 7 15%

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	TRKRAILR2 - Turk Rail Replacement -
Location:	Fulton, AR
Description:	The railroad at the Turk plant has suffered from erosion and landslides over the years since the start of the unit and the record precipitation from February of 2018 exposed the potential of continuing damage In 2018 a highly vulnerable area approximately 500 feet in length was replaced for $1 8M and was completed under project TRKRAILR1 Phase 1 of this IR is requesting funding for 2019 to replace an additional 1500 feet and to assess and develop scope, cost, and schedule for replacing the remainder of the rail embankment Based on this 2019 assessment, the remaining phases will replace additional sections of the rail and embankment and are expected to continue until 2024 The revisions will be done on an as needed basis and will only authorize the amount necessary for the determined replacement The total estimated cost to replace all of the damage is estimated to be $41 0M Total costs for 2019 are expected to be $4 9M All costs are shown at AEP's 73 33% ownership share This is a Class 2 estimate (-15%/+20%)
Phase Description:	Replace 1500 ft area, develop scope, cost, schedule for remainder of project

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$4,865,982	$4,865,982
	Total	**$0**	**$4,865,982**	**$4,865,982**

Cash Flow:

	Prior Years	2019	2020	Future Years	Total
Capital	$0	$4,810,509	$0	$0	$4,810,509
Removal	$0	$55,473	$0	$0	$55,473
Total To Be Authorized	**$0**	**$4,865,982**	**$0**	**$0**	**$4,865,982**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$4,865,982	$0	$0	$4,865,982
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 03/15/2019 **In Service Date :** 12/31/2019 **Completion Date:** 12/31/2019

Regulatory Recovery:

Southwestern Electric Power Company -- $4 9M (100%)
$0.9M (18%) SWP AR base rate case filing, TYE TBD, effective TBD

$1 6M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD

$1 6M (33%) SWP TX base rate case filing, TYE TBD, effective TBD

$0 8M (17%) FERC Annual Formula Rate update, TYE 12/31/2019, effective 6/1/2020

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Albert M Smoak		**Approved On :** 04/26/2019

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2019	2020	Future Years	Total
In Forecast $	$0	$199,286	$0	$0	$199,286
Offsets Required	$0	$3,783,401	$0	$0	$3,783,401
Total Direct Cost	**$0**	**$3,982,687**	**$0**	**$0**	**$3,982,687**

Required Signatures:

Status	Name	Date
Approved	Stephanie L Bowman	03/27/2019
Approved	Elizabeth B Dailey	04/09/2019
Approved	Timothy V Riordan	04/09/2019
Approved	Michael L Bright	04/09/2019
Approved	John M McManus	04/09/2019
Approved	Franklin R Pifer	04/09/2019
Approved	Kimete Seferi	04/10/2019
Approved	Thomas P Brice Jr	04/11/2019
Approved	Daniel V Lee	04/14/2019
Approved	Albert M Smoak	04/17/2019
Approved	Michael H Huggett	04/18/2019
Approved	Douglas Adams	04/26/2019

Project Contacts:

Type	Name
Detail Provider	WHIPPLE,WAYNE C
Project Manager	WHIPPLE,WAYNE C

Capital Improvement Approval Requisition

Additional Information

IR Justification:	Since 2012 the railway embankment has experienced failures and storm damage There have been sixteen failures requiring spot repairs so far, with substandard soil utilization being the primary factor in the failures Continued deterioration is expected until substantial replacement efforts are completed Union Pacific will not run rail cars on a marginally safe or distressed embankment Much of the rail area is adjacent to wetlands, limiting solutions, borrow areas, and laydown areas Work in 2018 addressed the worst area that would likely not have remained stable through the winter Replacing the stretch of rail embankment scheduled for 2019 will allow full coal trains to be used during much of the remaining repair efforts scheduled to continue until 2024 Also during 2019, the remaining scope, costs, and schedule for the rest of the replacement will be determined
Alternatives Considered:	Option 1 Do nothing This was determined to not be a feasible option as continued deterioration of the embankment results in loss of service for coal supply Plant would shut down in a few years as the embankment would be, for all practical purposes, washed away Union Pacific would have to cease delivery Option 2 Develop, design, construct and commission an alternate transport plan for coal as fuel This would be a multiyear effort during which the plant will remain vulnerable to embankment damages and still require maintenance of the existing embankment until the other transport could be placed in service Option 3 A complete replacement of the embankment, eliminating unsuitable material present in the base, and lime conditioning the remaining soil to meet specifications for railway embankment material Building the embankment with lime conditioned soil in accordance with railway requirements This option creates a safe and reliable embankment for the rail that will eliminate O&M repairs
Conclusion:	Option 3 is the recommendation 500 feet of rail has already been replaced and a complete overhaul of the embankment and rail replacement is required to allow coal to be safely delivered and continued operations

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WLKCI2004 - Wilkes Unit 2 - Replace SH and RH Banks and SH Outlet Header -
Location:	Avinger, TX
Description:	Replace original reheater (RH) and superheater (SH) banks, and secondary superheater outlet header (SSHOH) during the 2018 spring outage Comparable to Wilkes Unit 3, the existing components are at the end of life with significant header borehole to borehole ligament cracking, and severe structural support and dissimilar metal failures in the SH and RH components The current plan includes material order in 2017 and replacement in fall 2018

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$9,058,292	$9,058,292
	Total	**$0**	**$9,058,292**	**$9,058,292**

Cash Flow:

	Prior Years	2016	2017	Future Years	Total
Capital	$0	$0	$3,564,185	$4,040,051	$7,604,235
Removal	$0	$0	$0	$1,454,056	$1,454,056
Total To Be Authorized	**$0**	**$0**	**$3,564,185**	**$5,494,107**	**$9,058,292**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$0	$3,564,185	$5,494,107	$9,058,292
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 10/04/2016 **In Service Date :** 12/07/2018 **Completion Date:** 12/07/2018

Regulatory Recovery:

Southwestern Electric Power Company -- $9 058M (100%)

- $1 630M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $2 899M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $2 989M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $1 540M (17%) FERC Annual Formula Rate update, TYE 12/31/18, effective 6/1/19

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 10/21/2016

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2016	2017	Future Years	Total
In Forecast $	$0	$0	$250,000	$0	$250,000
Offsets Required	$0	$0	$2,927,900	$4,715,583	$7,643,483
Total Direct Cost	**$0**	**$0**	**$3,177,900**	**$4,715,583**	**$7,893,483**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	08/12/2016
Approved	Elizabeth B Dailey	08/12/2016
Approved	Timothy V Riordan	08/13/2016
Approved	Paul W Franklin	08/22/2016
Approved	John M McManus	08/22/2016
Approved	Tara D Beske	08/22/2016
Approved	Sandra S Bennett	08/22/2016
Approved	Daniel V Lee	10/17/2016
Approved	Venita McCellon-Allen	10/17/2016
Approved	Michael H Huggett	10/17/2016
Approved	Alesia A Austin	10/21/2016

Project Contacts:

Type	Name
Detail Provider	PEARSON,JACOB I
Project Manager	MCMAHON,KEVIN M

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The Wilkes Unit 2 SH & RH banks and SSHOH are original equipment and have been in service for approximately 45 years Failure history and condition assessments of these components have found them to be at or near end of life The SSH outlet header has numerous creep and fatigue related tube stub, tube stub to header and header ligament cracks A through wall header ligament crack and numerous tube stub connection related cracks have occurred The first through wall header ligament crack occurred in 2010 Following this failure extensive testing and analysis has been performed to assess the header A recommendation for replacement and continuous monitoring of header ligament cracking was obtained from the original equipment manufacturer in 2010 The more severe header ligament cracks identified during inspections in 2010 were predicted to fail through wall via finite element analysis following approximately 3 years of service These header and header stub related failures present a significant safety concern for header vestibule casing over pressurization in people space areas The SSH bank has experienced significant overheat damage and is visibly bowed Tube failures due to dissimilar metal welds and wall support casting failures have also contributed to this banks continued deterioration Personnel safety concerns are also present when entering the furnace due to loose SSH tube alignment castings The RH bank has severe overheat and creep damage resulting in tube failures in the T22 material adjacent to the T9 material transition The RH bank has also experienced wall support failures resulting in both fallen banks and attachment related failures Forced outages due to failure of these components are anticipated to escalate at a significant rate in the next few years Ongoing annual maintenance expenditures are anticipated to be required to prolong these components remaining life
Alternatives Considered:	Forced outages due to failure of these components are anticipated to escalate at a significant rate in the next few years Ongoing annual maintenance expenditures are anticipated to be required to prolong these components remaining life Additionally, design secondary & reheat superheater finishing steam temperatures have been suppressed from 1,000 degrees Fahrenheit to 980 degrees Fahrenheit to prolong component remaining life resulting in a 60 Btu/KWhr heat rate penalty Failures and potential safety issues associated with the SSH outlet header and header tube stubs have no long term viable solution other than to replace the header • Alternative 1 Do nothing • Alternative 2 Compared to unit retirement • Alternative 3 Deferral with a temporary unit shut down until the superheater and reheat components were replaced
Conclusion:	Because of the severe condition of these components do nothing was assessed and determined the liability posed too much risk Compared to both unit retirement and deferral with temporary shutdown scenarios, there is significant economic benefit to executing the project replacement as proposed Steam Generation Equipment Engineering recommends replacement of the superheater and reheater banks and superheater outlet header as scheduled in fall of 2018

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WLKCI3004 - Wilkes Unit 3 - SSH&RH Bank and SSH Outlet Header Replacement -
Location:	Avinger, TX
Description:	The objective of this project is to replace the secondary superheater (SSH) and the reheat (RH) superheater banks and the SSH outlet header This will alleviate escalation in the Equivalent Forced Outage Rate (EFOR) and operational and maintenance costs due to component deterioration

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$8,124,321	$8,124,321
	Total	**$0**	**$8,124,321**	**$8,124,321**

Cash Flow:

	Prior Years	2016	2017	Future Years	Total
Capital	$0	$3,135,163	$3,694,435	$0	$6,829,597
Removal	$0	$0	$1,294,724	$0	$1,294,724
Total To Be Authorized	**$0**	**$3,135,163**	**$4,989,158**	**$0**	**$8,124,321**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$3,135,163	$4,989,158	$0	$8,124,321
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 12/18/2015 **In Service Date :** 06/30/2017 **Completion Date:** 06/30/2017

Regulatory Recovery:

Southwestern Electric Power Company-- $8 1M (100%)

- $1 4M (18%) SWP-AR base rate case filing, TYE TBD, effective TBD
- $2 6M (32%) SWP-LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $2 7M (33%) SWP-TX base rate case filing, TYE TBD, effective TBD
- $1 4M (17%) FERC Annual Formula Rate update, TYE 12/31/17, effective 6/1/18

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Daniel V Lee, Venita McCellon-Allen **Approved On :** 12/22/2015

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2016	2017	Future Years	Total
In Forecast $	$0	$0	$2,750,000	$4,283,262	$7,033,262
Offsets Required	$0	$2,795,375	$1,533,262	-$4,283,262	$45,375
Total Direct Cost	**$0**	**$2,795,375**	**$4,283,262**	**$0**	**$7,078,637**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	12/01/2015
Approved	Elizabeth B Dailey	12/01/2015
Approved	Timothy V Riordan	12/01/2015
Approved	Paul W Franklin	12/02/2015
Approved	John M McManus	12/02/2015
Approved	Janine E White	12/02/2015
Approved	Sandra S Bennett	12/04/2015
Approved	Daniel V Lee	12/11/2015
Approved	Venita McCellon-Allen	12/15/2015
Approved	Michael H Huggett	12/15/2015
Pushback	Teresa M Jeffers	12/16/2015
Approved	Michael H Huggett	12/16/2015
Bypassed	Teresa M Jeffers	12/16/2015
Approved	Alesia A Austin	12/22/2015

Project Contacts:

Type	Name
Detail Provider	PIANTA,JAMES R
Project Manager	MCMAHON,KEVIN M

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The Wilkes Unit 3 secondary and RH superheater banks and SSH outlet header are original equipment and have been in service for approximately 45 years Failure history and condition assessments of these components have found them to be at, or near, end of life The SSH outlet header has numerous creep and fatigue related tube stub, tube stub to header and header ligament cracks A through wall header ligament crack and numerous tube stub connection related cracks have occurred. The first through wall header ligament crack occurred in 2010 Following this failure extensive testing and analysis has been performed to assess the header A recommendation for replacement and continuous monitoring of header ligament cracking was obtained from the original equipment manufacturer in 2010 The more severe header ligament cracks identified during inspections in 2010 were predicted to fail through wall via finite element analysis These header and header stub related failures present a significant safety concern for header vestibule casing over pressurization in people space areas The SSH bank has experienced significant overheat damage and is visibly bowed Tube failures due to dissimilar metal welds and wall support casting failures have also contributed to this banks continued deterioration Personnel safety concerns are also present when entering the furnace due to loose SSH tube alignment castings The RH bank has severe overheat and creep damage resulting in tube failures in the T22 material adjacent to the T9 material transition The RH bank has also experienced wall support failures resulting in both fallen banks and attachment related failures Forced outages due to failure of these components are anticipated to escalate at a significant rate in the next few years. Ongoing annual maintenance expenditures are anticipated to be required to prolong these components remaining life
Alternatives Considered:	Forced outages due to failure of these components are anticipated to escalate at a significant rate in the next few years An equivalent forced outage rate of 5 5% is predicted by 2018 Ongoing escalating annual maintenance expenditures are anticipated to be required to prolong these components remaining life A maintenance expenditure of $538,000 is predicted to be required to perform repairs in 2018 Additionally, design secondary and reheat superheater finishing steam temperatures have been suppressed from 1,000F to 980F to prolong component remaining life resulting in a 60 Btu per KWhr heat rate penalty Failures and potential safety issues associated with the SSH outlet header and header tube stubs have no long term viable solution other than to replace the header. Major maintenance and forced outage repairs to the SSH and RH banks provide a viable solution but at a higher cost The economic comparison between the current ongoing major maintenance and replacement options resulted in a 30% IRR in favor of this proposed replacement
Conclusion:	Replacement of the secondary and reheat superheater banks and secondary superheater outlet header is recommended to be conducted in 2017

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WSHCU0019 - Rail Car Dumper Replacement -
Location:	Cason, TX
Description:	Replace existing Rotary Car Dumper (RCD) end rings, trunnions and car clamps on the platen barrel and make improvements that will extend the service life by 20 years

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$5,306,221	$5,306,221
	Total	**$0**	**$5,306,221**	**$5,306,221**

Cash Flow:

	Prior Years	2017	2018	Future Years	Total
Capital	$0	$1,446,969	$3,377,252	$0	$4,824,221
Removal	$0	$0	$482,000	$0	$482,000
Total To Be Authorized	**$0**	**$1,446,969**	**$3,859,252**	**$0**	**$5,306,221**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$1,446,969	$3,859,252	$0	$5,306,221
Total Expense	$0	$0	$300,000	$0	$300,000

Project Dates: **Start Date :** 07/01/2017 **In Service Date :** 12/31/2018 **Completion Date:** 12/31/2018

Regulatory Recovery:

Southwestern Electric Power Company -- $5 31M (100%)

- $0 96M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $1 70M (32%) SWP LA recovery through formula rate extension, or base rate case filing with TYE TBD, effective TBD
- $1 75M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $0 90M (17%) FERC Annual Formula Rate update, TYE 12/31/18, effective 6/1/19

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 07/12/2017

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2017	2018	Future Years	Total
In Forecast $	$0	$80,000	$3,482,000	$0	$3,562,000
Offsets Required	$0	$1,248,128	$0	$0	$1,248,128
Total Direct Cost	**$0**	**$1,328,128**	**$3,482,000**	**$0**	**$4,810,128**

Required Signatures:

Status	Name	Date
Approved	Maggie M Ndovi	06/15/2017
Approved	Elizabeth B Dailey	06/16/2017
Approved	Timothy V Riordan	06/19/2017
Approved	Paul W Franklin	06/19/2017
Approved	John M McManus	06/20/2017
Approved	Edward J Locigno	06/20/2017
Approved	Thomas P Brice Jr	06/26/2017
Approved	Daniel V Lee	06/27/2017
Approved	Venita McCellon-Allen	07/05/2017
Approved	Michael H Huggett	07/05/2017
Approved	Alesia A Austin	07/12/2017

Project Contacts:

Type	Name
Detail Provider	WHITE,JEFFREY D
Project Manager	WHITE,JEFFREY D

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The Rotary Car Dumper (RCD) end rings are experiencing structural cracking that require repetitive repairs because the equipment has exceeded its service life The RCD has over 1 4 million cycles of dumping 286,000 lb coal cars since it was installed in 1995 (22 years ago) A RCD's average service life is 1-million dumping cycles or 20 years The 2009 inspection report identified structural components requiring weld repair or replacement The plant tried a "fix one section at a time" approach in 2011 at a cost of $500,000 The repaired sections required weld repairs again in 2016 It was identifed in the May 2016 inspection that metal fatigue exists in the end rings and future weld repairs may not be possible The recommendation is to replace the end rings to provide a structurally reliable rail car unloading system
Alternatives Considered:	1) Do nothing This option is not recommended The RCD platen barrel has exceeded its service life of 20 years and performed over 1 4 million dumping cycles The May 2016 inspection determined that metal fatigue exists in the end rings, and that doing nothing will lead to eventual structural failure A RCD platen barrel failure prevents the plant from unloading rail delivered Powder River Basin (PRB) coal There is no alternative coal delivery method (e g truck, barge) The plant would have to shut down 18 - 24 months while a replacement RCD platen barrel is fabricated and installed at the plant 2) Repair/replace RCD platen barrel components as needed This option is not recommended The 2009 inspection report identified that the end rings required repair or replacement In 2011, the plant tried a "fix one section at a time" approach at a cost of $500,000 These repaired sections required weld repairs again in 2016 due to metal fatigue 3) Perform a full replacement of the RCD's platen barrel This option is not recommended because a structurally reliable RCD can be attained by implementing the lower cost option of replacing the end rings The recommended option is the replacement of the RCD's end rings, trunnions and car clamps to provide a reliable rail car dumping system
Conclusion:	Approval of the IR to replace the rail car dumper's end rings, trunnions and car clamps are the best option for reliable unloading rail delivered coal.

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WSHCU1105 - Welsh Unit 1 Generator Spare Coils -
Location:	Pittsburg, TX
Description:	The objective of the Welsh Unit 1 Generator Spare Coils project is to minimize potential unplanned outage time due to a failure in the aging winding by purchasing a spare winding kit. The winding design has experienced numerous failures in the past and many windings of this design have been replaced The major cost driver is labor, longer outage durations related to investigating and repairing a bar failure, and the possibility of required long material lead times due to a failure with damage beyond repair A critical assumption is that given the current age of the winding and continued years of service, there is a significant risk of an in-service or unplanned winding failure

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$5,114,564	$5,114,564
	Total	**$0**	**$5,114,564**	**$5,114,564**

Cash Flow:

	Prior Years	2017	2018	Future Years	Total
Capital	$0	$5,114,564	$0	$0	$5,114,564
Removal	$0	$0	$0	$0	$0
Total To Be Authorized	**$0**	**$5,114,564**	**$0**	**$0**	**$5,114,564**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$5,114,564	$0	$0	$5,114,564
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 01/01/2017 **In Service Date :** 06/01/2017 **Completion Date:** 12/01/2017

Regulatory Recovery:

Southwestern Electric Power Company -- $5 1M (100%)

- $0 9M (18%) SWP AR base rate case filing, TYE TBD, effective TBD
- $1 6M (32%) SWP LA recovery through base rate case filing or formula rate extension, TYE TBD, effective TBD
- $1 7M (33%) SWP TX base rate case filing, TYE TBD, effective TBD
- $0 9M (17%) FERC Annual Formula Rate update, TYE 12/31/17, effective 6/1/18

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 03/08/2017

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2017	2018	Future Years	Total
In Forecast $	$0	$4,694,500	$0	$0	$4,694,500
Offsets Required	$0	$0	$0	$0	$0
Total Direct Cost	**$0**	**$4,694,500**	**$0**	**$0**	**$4,694,500**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	07/05/2016
Approved	Elizabeth B Dailey	07/05/2016
Approved	Timothy V Riordan	07/07/2016
Approved	Paul W Franklin	07/25/2016
Approved	John M McManus	07/25/2016
Approved	Steven G Orenchuk	07/25/2016
Approved	Sandra S Bennett	07/25/2016
Approved	Daniel V Lee	02/23/2017
Approved	Venita McCellon-Allen	03/03/2017
Approved	Michael H Huggett	03/03/2017
Approved	Alesia A Austin	03/08/2017

Project Contacts:

Type	Name
Detail Provider	AUKER,REBECCA A
Project Manager	

Capital Improvement Approval Requisition

Additional Information

IR Justification:	There was a previous bar failure on Welsh Unit 1 that was repaired in 2009 A spare coil set was purchased after the repair, but was recently used on Unit 3 for a rewind following a bar failure on that machine Because the winding kit was recently used to repair Unit 3 there is no longer a spare winding on site at Welsh Unit 1 is of similar vintage as Unit 3 and is expected to fail again in the near future Repairing a single bar failure, especially a bottom bar, requires significant time and effort Even after repairing the failed bar, the machine still holds significant risk of failing Having a spare winding kit on site can help avoid long material lead times and expedited labor costs from the manufacturer in the event of an unexpected or in service failure Owning a spare winding kit will also significantly decrease the outage time required to rewind the machine in the event of a bar failure
Alternatives Considered:	There are three options being considered as alternatives to purchasing the rewind kit 1 Do nothing There are multiple risks associated with this option Due to the current age and condition of the winding, continued operation increases the potential for a bar failure 2 Wait to repair a damaged bar after a failure If the winding should fail a bottom bar, there are 16 top bars that will need to be removed to repair a single bottom bar There are increased labor costs necessary to remove top bars and an increased risk that a bar may be damaged beyond repair while removing it The winding repair attempts of this option, in addition to being nearly as costly as a full rewind, also carry the risk of additional failures and the end result is still an old winding with the same liabilities as before the repair 3 Obtain the full rewind kit and install the kit during a future outage which is not planned at this time The labor costs for installation are approximately $2,900,000 00 The installation will require a 12 week outage Installation costs do not include any core issues discovered during the rewind, and may result in additional costs A benefit of this option would be that rewinding the generator on a planned basis would minimize the risk of a forced outage due to an in-service failure
Conclusion:	Purchase spare coil kit for Welsh Unit 1

Capital Improvement Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WSHCU3101 - Welsh U3A & 3C 5-kV Switchgear Replacement -
Location:	Pittsburg, TX
Description:	The existing 5-kV Switchgear is 1970's vintage Federal Pacific Model DST2-5-350, 5-kV, 3000Amp, 350MVA The Original Equipment Manager (OEM) is no longer in business and spare parts are obtained from third party suppliers Evaluation of existing vintage switchgear has proved difficult in troubleshooting Our only option is to replace existing switchgear with new Arc Resistance Switchgear New Arc Resistance Switchgear shall improve reliability and safety, reduce maintenance cost and avoid unexpected Unit outages Similar replacements of vintage switchgear have occurred and are planned for Flint Creek plant

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$3,966,480	$3,966,480
	Total	**$0**	**$3,966,480**	**$3,966,480**

Cash Flow:

	Prior Years	2014	2015	Future Years	Total
Capital	$0	$0	$1,199,771	$2,665,209	$3,864,980
Removal	$0	$0	$0	$101,500	$101,500
Total To Be Authorized	**$0**	**$0**	**$1,199,771**	**$2,766,709**	**$3,966,480**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$0	$1,199,771	$2,766,709	$3,966,480
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 12/31/2014 **In Service Date :** 05/20/2016 **Completion Date:** 05/31/2016

Regulatory Recovery:

Southwestern Electric Power Company-- $3 97 (100%)

- $0 83M (21%) SWP AR base rate case filing, TYE TBD, effective TBD
- $1 15M (29%) SWP LA recovery through base case filing or formula rate extension, TYE TBD, effective TBD
- $1 27M (32%) SWP TX base rate case filing, TYE 6/30/2016, effective 7/1/2017
- $0 72M (18%) FERC Annual Formula Rate update, TYE 12/31/2016, effective 6/1/2017

Funding: **IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen	**Approved On :** 12/08/2014

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2014	2015	Future Years	Total
In Forecast $	$0	$0	$1,042,320	$1,395,000	$2,437,320
Offsets Required	$0	$0	$0	$857,800	$857,800
Total Direct Cost	**$0**	**$0**	**$1,042,320**	**$2,252,800**	**$3,295,120**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	11/21/2014
Approved	Elizabeth B Dailey	11/24/2014
Approved	Timothy V Riordan	11/25/2014
Approved	Paul W Franklin	12/01/2014
Approved	John M McManus	12/01/2014
Approved	Steven G Orenchuk	12/01/2014
Approved	Sandra S Bennett	12/02/2014
Approved	Daniel V Lee	12/03/2014
Approved	Venita McCellon-Allen	12/03/2014
Approved	Michael H Huggett	12/03/2014
Approved	Alesia A Austin	12/08/2014

Project Contacts:

Type	Name
Detail Provider	BAWER,PATRICK D
Project Manager	BAWER,PATRICK D

Capital Improvement Approval Requisition

Additional Information

IR Justification:	The existing 5-kV Switchgear is 1970's vintage Federal Pacific Model DST2-5-350, 5-kV, 3000Amp, 350MVA The OEM is no longer in business and spare parts are obtained from third party suppliers. Some cells have roll-in motor starter retrofits and the switchgear is unreliable Major problems include secondary contacts not making up, trip coil failures, mechanical binding, mechanical breakage and failure to properly rack in Recently, the majority of problems were diagnosed with the breaker closed and the breaker door open Due to past and recent failures at Welsh Plant on bus 1A in 1984 and on U2 and U3 in 1999, 2000, 2012 and 2013, respectively, it was recommended to replace the vintage switchgears Most recently, between 2012 & 2013, there were approximately 41-days of Unit outages at Welsh to make repairs on failed components Our preferred option is to replace vintage switchgears at Welsh and Flint Creek Plants These issues have caused forced bus outages, unit de-rates to diagnose and repairs to circuit breakers Remote racking, made mandatory in 2009, subsequently created additional problems As sister Unit to Flint Creek Plant, we now continue to see significant increase in breaker failures, repair cost and unacceptable outage incidents To provide reliability and avoid unacceptable outages, we replaced Welsh U1A & 1C 5-kV vintage switchgear with Arc Resistance Switchgears in 2012 Welsh U1B switchgear replacement is in progress with completion during 2014 Fall scheduled outage Proposals and recommendation are in progress to replace switchgears at Flint Creek Equivalent Forced Outage Rate (EFOR) is directly attributable to Unit 3 switchgear issues Additionally, short circuit analysis performed as part of an arc flash study indicates the existing switchgear at Welsh and Flint Creek does not have sufficient short circuit capability for the increased short circuit duties available at the transmission substation
Alternatives Considered:	As an alternate, we are using old parts from Welsh 1A & 1C switchgears on remaining vintage switchgears still in service Eventually, we will run out of old parts for repairs We can also continue to replace failed components with third party equipment at higher price until funding is available but this may also add to unacceptable Unit outages and the Bus being derated Same vintage switchgear is in-service at Coal Handling and recommendation and CI preparation is in progress to replace Flint Creek and Welsh Plants switchgears Historical maintenance costs associated with U3 breakers at Welsh alone is estimated at $225K to $300K in 2014-2015
Conclusion:	Replace the vintage 5-kV switchgear Funds are allocated in 2015 for engineering and material procurement to meet in service date in spring 2016 Replacement of this vintage 5-kV switchgear will provide reliability, reduce maintenance cost and avoid unacceptable Bus outages

Capital Improvement Approval Requisition

One Page Summary

Company:	Southwestern Electric Power Company **Version: 1**
Project:	WSHCU3102 - Welsh U3B 4-kV Switchgear Replacement -
Location:	Pittsburg, TX
Description:	This project is continuation of replacement of vintage 4-kV switchgears at Welsh plant The existing 4-kV switchgear is 1970's vintage Federal Pacific Model DST2-5-350, 4-kV, 3000Amp, 350MVA The plant has seen significant component failures on vintage 4-kV switchgear The Original Equipment Manufacturer (OEM) is no longer in business, spare parts have to be obtained from third party suppliers Component failures in the switchgear have caused forced outages The unit uses de-rates to diagnose and repair circuit breakers Evaluation and repair of vintage switchgear has proven difficult in troubleshooting The circuit breakers are malfunctioning, having trip coil failures, mechanical binding and breakage, and are failing to properly rack into the cubicles Between 2012 & 2013 there were approximately 41-days of Unit outage to make repairs on failed components Switchgear replacement shall improve equipment performance and provide reliability, eliminate unwanted repair cost and meet Arc Resistance Switchgear safety requirement including remote racking Doing this work now or as scheduled shall eliminate unwanted forced outages, eliminate significant maintenance cost, and improve reliability & safety Plant has seen a reduction in maintenance cost since replacement of vintage equipment at Welsh 1A, 1B, 1C

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	Generation	$0	$2,729,948	$2,729,948
	Total	**$0**	**$2,729,948**	**$2,729,948**

Cash Flow:

	Prior Years	2015	2016	Future Years	Total
Capital	$0	$0	$726,315	$1,953,633	$2,679,948
Removal	$0	$0	$0	$50,000	$50,000
Total To Be Authorized	**$0**	**$0**	**$726,315**	**$2,003,633**	**$2,729,948**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$0	$0	$726,315	$2,003,633	$2,729,948
Total Expense	$0	$0	$25,000	$36,250	$61,250

Project Dates: **Start Date :** 01/04/2016 **In Service Date :** 04/01/2017 **Completion Date:** 04/07/2017

Regulatory Recovery:

Southwestern Electric Power Company -- $2 7M (100%)

- $0.4M (18%) SWP-AR base rate case filing, TYE TBD, effective TBD
- $0 9M (32%) SWP-LA recovery through base rate case filing or formula rate extension, TYE 12/31/17, effective 8/1/18
- $0 9M (33%) SWP-TX base rate case filing, TYE 6/30/16, effective 7/1/17
- $0 5M (17%) FERC Annual Formula Rate update, TYE 12/31/17, effective 6/1/18

Funding:	**IRC Approved :** Yes	**In Budget :** Yes
Approved By : Daniel V Lee, Venita McCellon-Allen		**Approved On :** 09/15/2015

Capital Improvement Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2015	2016	Future Years	Total
In Forecast $	$0	$0	$666,662	$1,770,546	$2,437,208
Offsets Required	$0	$666,662	$1,103,884	-$1,770,546	$0
Total Direct Cost	**$0**	**$666,662**	**$1,770,546**	**$0**	**$2,437,208**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	09/01/2015
Approved	Elizabeth B Dailey	09/01/2015
Approved	Timothy V Riordan	09/01/2015
Approved	Paul W Franklin	09/04/2015
Approved	John M McManus	09/04/2015
Approved	Janine E White	09/04/2015
Approved	Sandra S Bennett	09/08/2015
Approved	Daniel V Lee	09/08/2015
Bypassed	Venita McCellon-Allen	09/10/2015
Approved	Michael H Huggett	09/10/2015
Approved	Alesia A Austin	09/15/2015

Project Contacts:

Type	Name
Detail Provider	BAWER,PATRICK D
Project Manager	BAWER,PATRICK D

Capital Improvement Approval Requisition

Additional Information

IR Justification:	Switchgear replacement shall improve equipment performance and provide reliability, eliminate unwanted repair cost and meet Arc Resistance Switchgear safety requirement Doing this work now, or as scheduled, shall eliminate unwanted forced outages, eliminate significant maintenance cost, and improve reliability & safety This also meets new Arc Resistance Switchgear requirements, including remote racking Plants have seen reduction in maintenance cost at Welsh since replacement of vintage equipment at Welsh 1A, 1B & 1C
Alternatives Considered:	For alternatives we used old parts on remaining switchgears in service from recent replacement switchgears These old parts are now depleted Plant also used some available spare parts to repair failed or damaged components that are still in service Those spare parts have been exhausted and are no longer available to do repairs or to replace failed components
Conclusion:	Vintage switchgear replacement is a continuation of projects at Flint Creek and Welsh Plants Conclusion is to replace vintage and obsolete switchgears Funds are allocated in 2016 for engineering and material procurement to meet Spring 2017 in service date Replacement shall provide reliability, reduce maintenance cost and avoid unacceptable bus outages.

Capital Program Approval Requisition
One Page Summary

Company:	Southwestern Electric Power Company **Version: 4**
Project:	WSH00DFGD - Welsh 1&3 Activated Carbon Injection/Dry Sorbent Injection/Fabric Filter - - Revision - Phase 3
Location:	Cason, TX
Description:	Welsh Power Station is a three unit, 1584MW coal fired steam electric power station located in Cason, Texas Unit 2 is slated for retirement and is not part of this project Southwestern Electric Power Company (SWEPCO) will be required to install Activated Carbon Injection (ACI) systems and Fabric Filter (FF) on Units 1 & 3 at Welsh due to environmental regulation The Phase 0 study determined the installation of the Dry Sorbent Injection (DSI) system using sodium bicarbonate as the reagent with FF, the most technically and economically viable option to reduce SO2 emissions potentially required by the National Ambient Air Quality Standard NAAQS one-hour standard. The DSI conceptual design was completed in Phase 1, however, due to uncertainty with compliance implementation and timeline, the installation will be delayed The installation of ACI in conjunction with FF will provide for the reduction of mercury to meet the requirements of the Mercury and Air Toxic Standards (MATS) rule
Reason for Revision:	This funding request for Phase 3 of the project will consist of completion of detailed engineering and design, fabrication and delivery of materials, construction and commissioning, compliance testing, turnover to plant operations, and final project completion to support the installation of the environmental retrofit technologies required to comply with MATS by the 4/16/2016 compliance date, with one year extension The total cost estimate of $440 1 million is based on meeting an in-service date of 12/15/2015 for Unit 3 and 4/16/2016 for Unit 1 The project total estimated cost decreased from $452 million in Phase 2B to $440 1 million in Phase 3 due to realized actuals for material and labor contracts, as well as a refined cost estimate
Phase Description:	Construction, commissioning, testing, turnover to plant operations

Authorization Amount:

Company	Function	Previously Approved Amount	This Submission	Total Approved Project Cost
SWEPCO	GEN	$266,835,172	$173,284,573	$440,119,745
	Total	**$266,835,172**	**$173,284,573**	**$440,119,745**

Cash Flow:

	Prior Years	2014	2015	Future Years	Total
Capital	$32,264,649	$133,589,839	$235,763,722	$35,555,058	$437,173,268
Removal	$0	$39,370	$998,278	$1,908,829	$2,946,477
Total To Be Authorized	**$32,264,649**	**$133,629,209**	**$236,762,000**	**$37,463,887**	**$440,119,745**
Less CIAC/Other Credits	$0	$0	$0	$0	$0
Total Project Cost	$32,264,649	$133,629,209	$236,762,000	$37,463,887	$440,119,745
Total Expense	$0	$0	$0	$0	$0

Project Dates: **Start Date :** 10/09/2012 **In Service Date :** 04/16/2016 **Completion Date:** 12/31/2016

Regulatory Recovery:

Southwestern Electric Power Company -- $440 1M (100%), In-Service Unit 3 - 12/15/15, Unit 1- 4/16/16

- $92 4M (21%) SWP AR base rate case filing, TYE 6/30/15, effective 7/1/16
- $127 6M (29%) SWP LA recovery through 4-year extension of formula rate update for 2011-2014 Then base case filing or formula rate extension, TYE TBD, effective TBD
- $140 9M (32%) SWP TX base rate case filing, TYE 6/30/16, effective 7/1/17
- $79 2M (18%) FERC Annual Formula Rate update, TYE 12/31/16, effective 6/1/17

Funding: **IRC Approved :** Yes **In Budget :** Yes

Approved By : Toby L Thomas, Christian T Beam, Daniel V Lee, Venita McCellon-Allen, Mark C McCullough, Robert P Powers, Nicholas K Akins **Approved On :** 09/10/2014

Capital Program Approval Requisition

Funding and Approval

Direct Cost Funding:

	Prior Years	2014	2015	Future Years	Total
In Forecast $	$27,114,583	$114,231,950	$211,979,578	$31,620,920	$384,947,031
Offsets Required	$0	$5,699,464	-$8,957,788	$0	-$3,258,324
Total Direct Cost	**$27,114,583**	**$119,931,414**	**$203,021,790**	**$31,620,920**	**$381,688,707**

Required Signatures:

Status	Name	Date
Approved	Douglas Adams	07/31/2014
Approved	Brenda F Meyers	08/07/2014
Approved	Timothy V Riordan	08/11/2014
Approved	Jeffery D Lafleur	08/11/2014
Bypassed	John A Mazzone	08/11/2014
Bypassed	Elizabeth B Dailey	08/11/2014
Bypassed	Ranie K Wohnhas	08/11/2014
Bypassed	James H Garrett	08/11/2014
Bypassed	Toby L Thomas	08/11/2014
Bypassed	Keith M Darling	08/11/2014
Bypassed	Perry M Barton	08/11/2014
Bypassed	Paul W Franklin	08/15/2014
Approved	Franklin R Pifer	08/15/2014
Approved	John M McManus	08/15/2014
Approved	Christian T Beam	08/18/2014
Approved	Twana B Smith	08/19/2014
Approved	Sandra S Bennett	08/20/2014
Approved	Daniel V Lee	08/23/2014
Approved	Venita McCellon-Allen	08/25/2014
Approved	Michael H Huggett	08/25/2014
Approved	Mark C McCullough	08/28/2014
Approved	Lonni L Dieck	08/28/2014
Bypassed	Robert P Powers	09/09/2014
Bypassed	Nicholas K Akins	09/10/2014
Approved	Alesia A Austin	09/10/2014

Project Contacts:

Type	Name
Detail Provider	GAUDIO,JOSHUA G
Project Manager	WILLIAMS,GLEN R

Capital Program Approval Requisition

Component CI's

Component ID	Company	Description of Work	Previously Approved ($)		This Submission ($)		Total Authorized ($)		
			Capital	Removal	Capital	Removal	Capital	Removal	Total
WSHENVENG	SWEPCO	WSH U0 ACI / FF / Chimney	263,990,208	2,844,964	173,183,060	101,513	437,173,268	2,946,477	440,119,745
		SWEPCO Total :	**263,990,208**	**2,844,964**	**173,183,060**	**101,513**	**437,173,268**	**2,946,477**	**440,119,745**
		Grand Total :	**263,990,208**	**2,844,964**	**173,183,060**	**101,513**	**437,173,268**	**2,946,477**	**440,119,745**

Capital Program Approval Requisition

Additional Information

IR Justification:	The installation of new equipment and systems at Welsh Power Station Units 1 and 3 is driven by two environmental regulations The Mercury and Air Toxic Standards (MATS) rule requires the reduction of Mercury (Hg) to 1 2 lb/TBtu The National Ambient Air Quality Standard (NAAQS) one-hour SO2 standard will require a new chimney and some level of SO2 emission reduction The installation of DSI, ACI and FF on Units 1 & 3 will meet the known or expected requirements of these regulations. The installation of a DSI system using sodium bicarbonate as the reagent with a FF was determined the most technically and economically viable option during Phase 0 to reduce SO2 emissions Subsequently, the DSI conceptual design was completed as part of Phase 1 conceptual design for ACI/FF/Chimney, but will be delayed due to uncertainty with compliance implementation and timeline It is significantly more economic and prudent to install a new dual-flue, concrete shell chimney with the ACI/FF installation over the alternative of connecting the new environmental equipment with structural steel supported ductwork back to the existing individual unit exhaust ducts A new 531 foot chimney would still be needed for NAAQS one-hour SO2 standard compliance due to the height limitations of the existing steel exhaust ducts The installation of ACI in conjunction with FF will provide for the reduction of mercury to meet the requirements of the Mercury and Air Toxic Standards (MATS) rule
Alternatives Considered:	The Phase 0 studies considered NID, Spray Dryer Absorber with FF systems (SDA/FF), DSI with conversion of HESP to CESP and ACI, as well as phased installation approaches using these DFGD technologies The retirement of a Welsh Unit and replacement with a natural gas combined cycle facility was also considered
Conclusion:	Install the selected environmental retrofit technologies (FF, ACI) to meet the MATS compliance date of 4/16/2016 with one year extension The project total estimated cost is $440 1M based on meeting a ACI/FF/Chimney in-service date of 12/15/2015 for Unit 3 and 4/15/2016 for Unit 1 DSI projected in-service date is Q1 2019

Sum of ACTIVITY_COST				YEAR					
PROJ_CAT	PROJ_DESC		Description	2016	2017	2018	2019	2020	Grand Total
Asset Improvement	000007589	SEPTX-UG Cable Repl Failure	Program to replace underground primary and secondary cable sections that have failed. Scope limited to cable that has either reached end of life or has failed on multiple occasions. Scope does not include overload conditions or other conditions addressed by Distribution Planning criteria	266,427	659,244	607,239	758,380	187,611	2,478,901
Asset Improvement	000007606	SEPTX-Failed Equip No Outage	Program to replace localized failed equipment on the distribution system	843,122	1,279,990	1,430,949	2,092,177	541,487	6,187,725
Asset Improvement	000024602	SWEPCo GOABS Project Texas	Project to replace pipe-handle-operated gang operated air break switches (GOABS) due to safety and operability concerns.	2,205,773	297,956	0			2,503,729
Asset Improvement	A12102601	D/SW/PurchNewMobile SW-15-TEX	Restock reserve/spare substation transfomer due to unit being used to replace a failed unit.				2,711,479		2,711,479
Asset Improvement	B161TXSRE	D/SW/Non-Specific Work Station	Non-specific work used to ensure the reliability of the system and often involves replacements of assets/components, such as bushings, LTC's, animal fences, switches, arresters, battery replacement, HVAC replacements, LTC replacements, motor operators for switches, switch replacement regulators, ect	21,992	1,727,188	1,638,677	1,554,227	694,880	5,636,964
Asset Improvement	EDN102209	Ds-Septx-Ai Pole Replacement	Annual program to replace wooden poles on the distribution system that have failed either above-grade or below-grade inspection	694,623	4,159,563	5,179,454	4,799,803	2,370,579	17,204,022
Customer Service	DP14S03B0	SEP/TX/Morton Saline Sub D-Sta	Installation of new substation to serve industrial customer			5,870,734	28,115	27	5,898,876
Customer Service	EDN102197	Ds/Septx/Residential New	Blanket project to fund extensions and upgrades of the distribution system necessary for new residential services being added to the system	2,028,131	2,778,183	2,561,311	3,031,624	705,828	11,105,078
Customer Service	EDN102199	Ds/Septx/C&I New	Blanket project to fund extensions and upgrades of the distribution system necessary for new commercial and industrial services being added to the system	1,486,517	2,538,418	2,255,570	2,245,029	943,651	9,469,185
Customer Service	EDN102219	Ds/Septx/Public Relocation	Blanket project to fund facility relocations requested or prompted by local or state governments having jurisdiciton over rights of way	658,125	660,569	319,860	660,104	442,553	2,741,211

SOAH Docket No. 473-21-0538
PUC Docket No. 51415
CARD's 1st, Q. # CARD 1-17
Attachment 3

Transmission plant capital project descriptions having a cost in excess of $2 million

SWEPCO Line Rebuild Program - This program consists of multiple projects completed over a period of several years as part of an ongoing initiative to improve the SWEPCO Transmission System reliability and dependability. It consists of replacing deteriorated and poorly performing transmission lines and switch facilities with identified conditions that include, but are not limited to: broken, split and rotting poles, cross-arms and braces, bending of poles and cross-arms, missing hardware, broken conductor strands, woodpecker damage, etc. The lines rebuilt under this program include all or portions of the following:

- Hughes Springs to Jenkins Tap 69 kV (4.8 miles)
- Greenland to Van Buren Interconnect (VBI) North 69 kV (36.8 miles)
- North Huntington to Waldron West 69 kV (18.7 miles)
- Mt. Pleasant to New Boston 69 kV (42.1 miles)
- Clarendon to Northwest Memphis 69 kV (25.2 miles)
- Northwest Memphis to West Childress 69 kV (33.3 miles)
- Arsenal Hill to Longwood 138 kV (16.3 miles)
- Bann to Sugar Hill 69 kV (1.1 miles)
- Jenkins Tap to Lone Star Power Plant 69 kV (9.0 miles)

Inspections indicate the transmission lines and associated components continue to degrade. As transmission lines are inspected, the number of structures that do not meet the AEP guidelines due to rot, deterioration, and woodpecker damage, continue to increase. The AEP guidelines are built upon the National Electrical Safety Code, which specifies the necessary structural integrity and physical condition of a line to be maintained. On several lines, these numbers have increased to the point where a complete rebuild of the transmission line is warranted. A significant portion of

these lines are over 50 years old, with some facilities approaching 90 years old. As physical deterioration continues on the lines, the performance of the circuits will continue to degrade, and the number of momentary and permanent outages will increase. The increased outage frequencies and duration of the deteriorated lines jeopardize service reliability to customers and the reliability of surrounding areas. An increasing number of outages will have a negative reliability impact on customers served from the affected circuit, and may have a negative power quality impact on customers served from nearby circuits as well. Routine inspection and an increasing number of emergency callouts indicate that the lines and switches are frequently failing to meet AEP specifications. When these conditions are observed, corrective action must be taken to remedy the failed components by emergency replacement or repair. These unplanned activities typically result in higher than normal expenditures.

SWEPCo Station Proactive Rehab Program - This program includes projects to proactively renew transmission assets based on performance, equipment condition, and risk of failure. In light of Asset Health Center reports and field inspections, AEP Transmission determined it necessary to proactively replace equipment at multiple SWEPCO stations to prevent substantial failures that would result in lengthy outages. Among the improvements, the program will replace thirty-two aging transmission circuit breakers and seven transmission transformers at the following stations: Bann, Diana, Dyess, Northwest Texarkana, Patterson, Whitney, and Wilkes. The program also includes smaller station work such as relaying upgrades and capacitor bank replacements at the following stations: Flint Creek, Hyland, Shamrock, Siloam Springs, South Fayetteville, Southwest Shreveport, and Texarkana.

Transmission Asset Replace/Refurbish Program - These projects were part of an ongoing program to improve system reliability and dependability by replacing failed equipment and aging

station equipment that had reached the end of its serviceable life or could no longer be properly maintained due to non-availability of spare parts. This program also included projects to proactively replace deteriorating transmission structures, foundations, poles, cross-arms, conductors, insulators and associated hardware that were identified through inspections.

2013/2014 Asset Replacement Program - The projects under this program were part of an ongoing, multiyear effort to improve system reliability and dependability by replacing failed equipment and strategically replacing selected, obsolete station equipment that had reached the end of its serviceable life and could no longer be properly maintained due to non-availability of parts. In addition, the program was used to selectively replace obsolete and deteriorated transmission structures, foundations, poles, cross-arms, conductors, insulators, and associated hardware.

SWEPCo Region Failure Program - This two year program addressed failures in the Southwestern Electric Power Company (SWEPCo) region. This program only addressed station and line equipment that were indicated as failures.

Cass Tap to Roach – North Texas Electric Cooperative (NTEC) requested a new delivery point and upgrades to the existing Munz City Station. The new delivery point was connected from the West Atlanta to IPC Domino 138 kV line. AEP purchased land and constructed a new 138 kV box bay, Cass Tap Switching Station, consisting of two breakers, one tap switch, and 138 kV metering units. Munz City Station was reconfigured with the installation of two circuit breakers, a new meter and 138 kV metering transformers.

Leaside Way – This project involved the construction of a new 138/69 kV station with a four breaker 138 kV ring bus, 138/69 kV auto transformer, and a single 69 kV line exit. The new

Leaside Way Station eliminates two, three-terminal line arrangements that create relaying difficulties. The mitigation to the difficulties is to delay tripping to allow proper operation, causing longer fault clearing times. These long clearing times resulted in power quality issues for local industrial customers, causing their equipment to trip off. Completion of this project allowed the relay schemes to operate normally providing for faster clearing times and no disruption to the customers.

East Fayetteville - Arkansas Electric Cooperative Corporation (AECC) requested to expand the East Fayetteville delivery point to allow them to convert their 69 kV system in NW Arkansas to 161 kV. To accomplish this request, AEP constructed the East Fayetteville switching station on the Hyland to Osburn 161 kV line to connect to AECC's East Fayetteville Substation. AECC constructed a new AECC East Fayetteville 161 kV switching station and two 161 kV transmission lines from AECC East Fayetteville 161 kV switching station to AEP terminals in the new East Fayetteville switching station.

Hill Lake - Enterprise Products Operating LLC requested service for approximately 14 MW of new load. As a result Southwestern Electric Power Company (SWEPCO) acquired right of way (ROW) to construct a new 1/4 mile double circuit Hill Lake 138 kV Line Extension and 138 kV high side in/out switching Hill Lake Station with supervisory control and data acquisition (SCADA) switches.

Hallsville South Tap - North Texas Electric Cooperative (NTEC) requested a new delivery point. The new delivery point, Hallsville South Tap, is supplied from the Pirkey-Whitney 138 kV Line. AEP constructed a new 138 kV box bay station with a meter and 138 kV meter transformers. AEP also provided a terminal for NTEC's 138 kV line to NTEC's Gum Springs Station. An initial load

of 10 MW was projected.

Wedington Tap - Arkansas Electric Cooperative Corporation (AECC) requested a new delivery point on the Chamber Springs - South Fayetteville line. AEP installed Wedington Tap Station, including a 161 kV box bay structure on the Chamber Springs - South Fayetteville 161 kV Line. AEP provided a terminal for AECC's 161 kV line to its station. Load at the new delivery point was 6 MW.

Morton Saline Sub - SWEPCO constructed a greenfield substation called Morton Station in Grand Saline, Texas. Morton Salt was served from Grand Saline Station (#988). Grand Saline Station is comprised of two non-Load Tap Changing (non-LTC) transformers operated in parallel with a total max capacity of 19.69 Mega Volt-Amp (MVA). These transformers were forecasted to have a load of 19.39 MVA in 2016, which was 98.5% of their rated capacity. This forecast loading was due primarily to the Morton Salt facility adding equipment to increase their salt production capability at their facility in Grand Saline, Texas. The facility manager at Morton Salt sent a letter to SWEPCO requesting that a new substation be constructed in order to serve their future load. Morton Salt signed a new ten-year contract for their anticipated load. Morton Salt transferred the necessary land and easements to SWEPCO for the construction of this new Morton Station (#1169). Morton Station consists of two 25 MVA transformers. One transformer is dedicated service to Morton Salt and the other transformer serves a SWEPCO distribution feeder that will tie back into Grand Saline Circuit 967110 at Texas Highway 110. The combination of this dedicated service to Morton Salt and the distribution feeder tie to Circuit 967110 effectively reduced the loading on the Grand Saline Station to approximately 10 MVA, which would be 50.8% of the rated capacity of the station.

SWEPCo Forestry ROW Widening - This program was for danger tree removal and widening the rights-of-way for SWEPCo Transmission Lines. The NERC standard FAC 003 applies to vegetation management on transmission lines operating at 200 kV and above, plus other, lower voltage lines deemed critical by the Regional Entity to reliable operation of the transmission system. To comply with this standard, AEP Transmission implemented a multi-year plan to widen these reportable facilities to the full easement width.

Transmission Capital Blanket - This program covered projects such as transmission line work, station asset replacements due to failures, public relocation changes made mandatory by the alteration, construction, reconstruction, or relocation of all public projects carried out by a governmental body, and storm recovery costs for minor storm events. These were all projects that individually cost less than $500,000.

Welsh HVDC Tie - When the Welsh HVDC was originally constructed, both the ERCOT and SPP transmission systems in the Welsh area were tightly regulated by large base load generating plants. However, due to changes in the generation supply curve and the corresponding economic dispatch of the system, this is no longer the case. This lack of tight voltage regulation led to high voltage conditions around the Welsh HVDC and the reduction in local on-line generation also contributed to issues with 5th harmonics, leading to trips of the HVDC. In order to alleviate these conditions, SWEPCo installed reactive compensation and a 5th harmonic filter at the Welsh Station. The Welsh HVDC control system computers and software were also outdated, resulting in maintenance and functionality challenges that reduced the reliability of the HVDC under the existing and future conditions. Those systems were also replaced.

Telecom Fiber Buildout Program - This project is part of an on-going program to provide AEP

Transmission with a strong fiber based telecommunications network with the following key benefits:

- Fiber based protective relaying schemes with diverse communication paths to stations 138kV and higher;
- Fiber based Remote Terminal Unit communication paths (AEP owned and controlled; no leased circuits and associated reliability issues and monthly O&M costs);
- Bandwidth required to backhaul Phasor Measurement Unit data;
- Bandwidth required to backhaul Asset Health data (breakers, transformers, switches, etc.)
- Bandwidth required to backhaul video from multiple security cameras at a station
- North American Electric Reliability Corporation-Critical Infrastructure Protection (NERC CIP) security information (card readers, keypads, sensors, etc.) over AEP controlled telecommunications systems;
- Move AEP microwave radio based backbone telecommunication systems from primary to secondary transport systems;
- Telecommunications transport equipment vendors have been evolving away from microwave to fiber based platforms putting AEP in a position to take advantage of this evolution;
- Microwave based transport systems offer a very small fraction of the bandwidth provided by a fiber optic based system;
- Microwave based transport systems are subject to reoccurring outages due to interference and weather conditions that do not affect fiber based systems;
- Fiber based systems offer additional capacity to meet AEP's future strategic telecommunications requirements; and
- Efficient and reliable operation of the Transmission (and Distribution) systems of the future

will require the bandwidth and resiliency that only a fiber optic based telecommunications system can provide.

SWEPCO Region Major Equipment/Spares Program - The Transmission sparing strategy is based on a probabilistic model that predicts failures based on AEP specific transformer data, historical failure rates and material lead times across every operating company. This strategy creates a required target for spares for each operating company based on current inventory, kV class, and failure rates, among other things. This three-year program (2017-2019) consists of specific asset replacement projects, replacement of failed equipment, and the purchase of major spare and mobile equipment. The program is part of an ongoing effort to improve system reliability and dependability by replacing equipment that has reached the end of its serviceable life, and by purchasing long-lead-time equipment that will become system spares. The equipment purchased will mainly consist of capital spare transformers, spare reactors, spare circuit breakers, mobile transformer stations, and spare transmission line towers. A three-year program allows SWEPCo to secure equipment contracts to leverage our purchases and obtain the best prices for the needed equipment. Having these spares on hand will improve reliability to customers by enabling a quicker restoration in the event of a service interruption, either through the use of a mobile transformer or more timely replacement of failed equipment. For long-lead-time equipment, this can be particularly important as a failure can leave the transmission system in a vulnerable state until new equipment is installed.

Telecom Upgrades - This project was a multi-year effort to replace obsolete equipment that is no longer supported by telecommunication companies by replacing analog leased lines, frame relay circuits (obsolete digital leased line), and tone telemetry installations (obsolete 2-point system alarms). Telecom providers phased out these older technologies, which they will no longer

support, and which AEP Transmission will no longer be able to support due to lack of expertise and unavailability of parts. These upgrades also required the replacement of related station equipment such as older model RTUs that will not support newer technology, and in the case of obsolete tone telemetry, RTUs had to be added to support the newer Telecom technology.

Chamber Springs 345 kV Reactor -. The Chambers Spring reactor was needed to maintain voltage within the allowable range through all seasons in the Northwest Arkansas area but is most heavily needed in spring and fall. In periods of off peak loading Flint Creek generator was unable to maintain its voltage schedule. During these periods the generation unit was consuming max VARs and is still unable to maintain proper voltage. To remedy this, the Flint Creek – Brookline 345kV line had to be taken out of service under these conditions. Installation of the reactor allows SWEPCo to maintain a full intact system including this 345kV tie line and still maintain proper voltage. In order to alleviate the voltage issue, a 345 kV reactor bank and circuit breaker were added at Chamber Spring Substation. The station was expanded on AEP property in order to accommodate the reactor bank.

Valliant to Northwest Texarkana 345 kV Line - This project was mandated by the SPP RTO as a part of their "High Priority Projects" Study and subsequent recommendations. This project provides reliability and economic benefits to the region by increasing west – east transfer capability and enabling more efficient operation of the region's generation supply.

The Longview Heights to Marshall 69 kV Line - The SPP identified the Longview Heights - Marshall 69 kV line overloaded under contingency conditions. The project received an NTC (Notification to Construct) and was mandatory for regional reliability network upgrades. To remediate the overload condition, this project rebuilt 17.8 miles of the 69 kV line from Longview

Heights – Marshall.

The Brownlee Road to North Market 69 kV Line - The SPP identified and mandated a reliability project to rebuild approximately 4.7 miles of 69 kV transmission line from Brownlee Road to North Market. The existing line overloaded during contingency outage conditions. In addition to the line rebuild, upgrades were completed at the Brownlee Road and North Market Stations.

Evenside to Northwest Henderson 69 kV Line - This is a SPP mandated reliability project needed to address a single contingency overload for the outage of the Northwest (NW) Henderson to Poynter 69 kV line. The project involved the rebuild of the Evenside to Northwest Henderson 69 kV line.

Chamber Springs to Farmington 161 kV Line - This is an SPP mandated reliability project needed to address a single contingency thermal overload. The project involves a rebuild of the 11.1 miles of 161 kV line from Chamber Springs to Farmington. In addition to the line rebuild, terminal equipment was upgraded at the Chamber Springs and South Fayetteville stations.

Broadmoor - Fort Humbug 69 kV - The Southwest Power Pool identified and mandated a reliability project to rebuild approximately 1.7 miles of 69 kV transmission line from Broadmoor to Fort Humbug. The existing line overloaded during contingency outage conditions. In addition to the line rebuild, upgrades were completed at the Broadmoor and Fort Humbug stations.

Ellerbe Road – Lucas 69 kV - This project was mandated by SPP to address the overload of the Ellerbe Road - Lucas 69 kV line for the outage of the South Shreveport - Wallace Lake 138 kV line. To alleviate the overload, AEP rebuilt approximately 3 miles of 69 kV line from Ellerbe Road Station to Lucas Station. Ellerbe Road Station scope included the replacement of the existing

69 kV breaker, installation of a three-phase set of capacitor voltage transformers (CCVT's), and replacement of both arresters and line/breaker relays. Lucas Station scope included the addition of arresters to the 69 kV circuit to Ellerbe Road Station and conduit for fiber from the dead-end structure to the pre-cast cable trench.

Siloam- W Siloam 161kV Rebuild - Southwest Power Pool (SPP) identified in the 2017 SPP Integrated Transmission Planning (ITP) assessment that the Siloam Springs-Siloam Springs City 161 kV will experience overloads during the outage of the Flint Creek-Tonnece 345 kV line. To remediate the overload condition, this project rebuilt 2.1 miles of the 161 kV line from Siloam Springs-West Siloam Springs and remote end work at Siloam Springs Station was required.

Linwood - South Shreveport Line - This project was to rebuild the Linwood to South Shreveport 138 kV transmission line as part of a SPP mandatory project to address the overload that will occur on the line during the outage of the Arsenal Hill to Fort Humbug 69 kV transmission line. During this project, 2.42 miles of the 138 kV line from Linwood to South Shreveport was rebuilt with Aluminum Composite Steel Reinforced (ACSR) conductor wire. Circuit breakers, switches, jumpers and relays were upgraded to at least 2000A at Linwood Station and South Shreveport Station.

Brooks Street - Edwards Street 69 kV Line - This is a SPP mandatory project to address the overload of the Brooks Street - Edwards Street 69 kV line for the outage of the Arsenal Hill - Fort Humbug 138 kV line. The overload was addressed by rebuilding approximately one mile from Brooks Street - Edwards Street. Additionally, Brooks Street Station and Edwards Street Station were upgraded with jumpers, switches, relays, and a new drop in control module was installed at each station.

Daingerfield - Jenkins Tap 69 kV Line - This is a SPP mandatory project for regional reliability network upgrades. SWEPCo rebuilt 1.3 miles of the Daingerfield to Jenkins 69 kV transmission line. The rebuild was needed to address the overload of the Daingerfield to Jenkins transmission line caused by the outage of the Lone Star South to Pittsburgh 138 kV or Welsh Reserve to Wilkes 138 kV.

Messick 500/230kV Station - The Southwest Power Pool has identified and mandated a 2012 Integrated Transmission Planning Near-Term (ITPNT) project to build a new 500/230kV station at Messick. The new station addresses the overload of IP Mansfield to Wallace Lake 138 kV line, which overloads to 108% for the loss of the Dolet Hills to South Shreveport 345 kV line.

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-18:

Provide SWEPCO's transmission O&M expenses by FERC account for each of the last four calendar years, the test year, and as requested in rates in this case.

Response No. CARD 1-18:

Please see CARD 1-18 Attachment 1 which provides SWEPCO's O&M expenses by FERC account for each of the last four calendar years. The test year amounts and the amounts requested in rates in this case are contained on RFP Schedule G-15.

Prepared By: Randall W. Hamlett	Title: Dir Regulatory Acctg Svcs
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Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) ☐ An Original (2) ☒ A Resubmission	04/23/2020	End of 2019/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
1	1. POWER PRODUCTION EXPENSES		
2	A Steam Power Generation		
3	Operation		
4	(500) Operation Supervision and Engineering	22,588,759	19,360,120
5	(501) Fuel	450,435,723	504,115,118
6	(502) Steam Expenses	19,965,648	23,302,367
7	(503) Steam from Other Sources		
8	(Less) (504) Steam Transferred-Cr.		
9	(505) Electric Expenses	10,998,126	10,597,190
10	(506) Miscellaneous Steam Power Expenses	15,805,675	18,473,969
11	(507) Rents	3,199	3,204
12	(509) Allowances	485,759	283,673
13	TOTAL Operation (Enter Total of Lines 4 thru 12)	520,282,889	576,135,641
14	Maintenance		
15	(510) Maintenance Supervision and Engineering	5,917,815	6,204,980
16	(511) Maintenance of Structures	5,817,297	6,302,212
17	(512) Maintenance of Boiler Plant	37,141,894	39,923,750
18	(513) Maintenance of Electric Plant	7,931,562	11,774,321
19	(514) Maintenance of Miscellaneous Steam Plant	6,695,908	7,046,189
20	TOTAL Maintenance (Enter Total of Lines 15 thru 19)	63,504,476	71,251,452
21	TOTAL Power Production Expenses-Steam Power (Entr Tot lines 13 & 20)	583,787,365	647,387,093
22	B. Nuclear Power Generation		
23	Operation		
24	(517) Operation Supervision and Engineering		
25	(518) Fuel		
26	(519) Coolants and Water		
27	(520) Steam Expenses		
28	(521) Steam from Other Sources		
29	(Less) (522) Steam Transferred-Cr.		
30	(523) Electric Expenses		
31	(524) Miscellaneous Nuclear Power Expenses		
32	(525) Rents		
33	TOTAL Operation (Enter Total of lines 24 thru 32)		
34	Maintenance		
35	(528) Maintenance Supervision and Engineering		
36	(529) Maintenance of Structures		
37	(530) Maintenance of Reactor Plant Equipment		
38	(531) Maintenance of Electric Plant		
39	(532) Maintenance of Miscellaneous Nuclear Plant		
40	TOTAL Maintenance (Enter Total of lines 35 thru 39)		
41	TOTAL Power Production Expenses-Nuc Power (Entr tot lines 33 & 40)		
42	C. Hydraulic Power Generation		
43	Operation		
44	(535) Operation Supervision and Engineering		
45	(536) Water for Power		
46	(537) Hydraulic Expenses		
47	(538) Electric Expenses		
48	(539) Miscellaneous Hydraulic Power Generation Expenses		
49	(540) Rents		
50	TOTAL Operation (Enter Total of Lines 44 thru 49)		
51	C. Hydraulic Power Generation (Continued)		
52	Maintenance		
53	(541) Mainentance Supervision and Engineering		
54	(542) Maintenance of Structures		
55	(543) Maintenance of Reservoirs, Dams, and Waterways		
56	(544) Maintenance of Electric Plant		
57	(545) Maintenance of Miscellaneous Hydraulic Plant		
58	TOTAL Maintenance (Enter Total of lines 53 thru 57)		
59	TOTAL Power Production Expenses-Hydraulic Power (tot of lines 50 & 58)		

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [ ] An Original (2) [X] A Resubmission	04/23/2020	End of 2019/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
60	D Other Power Generation		
61	Operation		
62	(546) Operation Supervision and Engineering		7,559
63	(547) Fuel	10,811,202	17,695,644
64	(548) Generation Expenses	246,146	202,730
65	(549) Miscellaneous Other Power Generation Expenses	165	7
66	(550) Rents		
67	TOTAL Operation (Enter Total of lines 62 thru 66)	11,057,513	17,905,940
68	Maintenance		
69	(551) Maintenance Supervision and Engineering	-2,186	2,152
70	(552) Maintenance of Structures	961	
71	(553) Maintenance of Generating and Electric Plant	870,833	871,026
72	(554) Maintenance of Miscellaneous Other Power Generation Plant	59,749	26,796
73	TOTAL Maintenance (Enter Total of lines 69 thru 72)	929,357	899,974
74	TOTAL Power Production Expenses-Other Power (Enter Tot of 67 & 73)	11,986,870	18,805,914
75	E. Other Power Supply Expenses		
76	(555) Purchased Power	201,250,688	199,128,679
77	(556) System Control and Load Dispatching	1,544,717	1,860,318
78	(557) Other Expenses	6,657,850	554,453
79	TOTAL Other Power Supply Exp (Enter Total of lines 76 thru 78)	209,453,255	201,543,450
80	TOTAL Power Production Expenses (Total of lines 21, 41, 59, 74 & 79)	805,227,490	867,736,457
81	2 TRANSMISSION EXPENSES		
82	Operation		
83	(560) Operation Supervision and Engineering	10,762,479	9,557,026
84			
85	(561.1) Load Dispatch-Reliability		51
86	(561.2) Load Dispatch-Monitor and Operate Transmission System	1,090,040	871,793
87	(561 3) Load Dispatch-Transmission Service and Scheduling	421	628
88	(561.4) Scheduling, System Control and Dispatch Services	11,196,593	11,376,592
89	(561.5) Reliability, Planning and Standards Development	228,259	141,004
90	(561.6) Transmission Service Studies		40
91	(561.7) Generation Interconnection Studies		
92	(561 8) Reliability, Planning and Standards Development Services	888,378	1,080,029
93	(562) Station Expenses	1,277,877	838,463
94	(563) Overhead Lines Expenses	429,369	599,463
95	(564) Underground Lines Expenses	1,593	
96	(565) Transmission of Electricity by Others	73,617,390	96,961,392
97	(566) Miscellaneous Transmission Expenses	2,520,739	2,750,754
98	(567) Rents	24,986	36,806
99	TOTAL Operation (Enter Total of lines 83 thru 98)	102,038,124	124,214,041
100	Maintenance		
101	(568) Maintenance Supervision and Engineering	13,477	41,795
102	(569) Maintenance of Structures	30,212	63,061
103	(569.1) Maintenance of Computer Hardware	10,317	6,617
104	(569 2) Maintenance of Computer Software	532,513	483,741
105	(569 3) Maintenance of Communication Equipment	52,629	44,836
106	(569.4) Maintenance of Miscellaneous Regional Transmission Plant		
107	(570) Maintenance of Station Equipment	2,738,012	1,938,144
108	(571) Maintenance of Overhead Lines	12,830,711	10,213,187
109	(572) Maintenance of Underground Lines	11,111	918
110	(573) Maintenance of Miscellaneous Transmission Plant	118,731	50,107
111	TOTAL Maintenance (Total of lines 101 thru 110)	16,337,713	12,842,406
112	TOTAL Transmission Expenses (Total of lines 99 and 111)	118,375,837	137,056,447

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [ ] An Original (2) [X] A Resubmission	04/23/2020	End of 2019/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
113	3. REGIONAL MARKET EXPENSES		
114	Operation		
115	(575.1) Operation Supervision		
116	(575 2) Day-Ahead and Real-Time Market Facilitation		
117	(575 3) Transmission Rights Market Facilitation		
118	(575 4) Capacity Market Facilitation		
119	(575.5) Ancillary Services Market Facilitation		
120	(575 6) Market Monitoring and Compliance		
121	(575.7) Market Facilitation, Monitoring and Compliance Services	2,068,105	1,631,782
122	(575.8) Rents		
123	Total Operation (Lines 115 thru 122)	2,068,105	1,631,782
124	Maintenance		
125	(576 1) Maintenance of Structures and Improvements		
126	(576 2) Maintenance of Computer Hardware		
127	(576 3) Maintenance of Computer Software		
128	(576 4) Maintenance of Communication Equipment		
129	(576 5) Maintenance of Miscellaneous Market Operation Plant		
130	Total Maintenance (Lines 125 thru 129)		
131	TOTAL Regional Transmission and Market Op Expns (Total 123 and 130)	2,068,105	1,631,782
132	4. DISTRIBUTION EXPENSES		
133	Operation		
134	(580) Operation Supervision and Engineering	2,461,118	2,003,498
135	(581) Load Dispatching	67,232	74,567
136	(582) Station Expenses	817,751	733,808
137	(583) Overhead Line Expenses	1,626,600	3,215,059
138	(584) Underground Line Expenses	1,440,718	1,654,245
139	(585) Street Lighting and Signal System Expenses	154,863	149,076
140	(586) Meter Expenses	3,768,417	3,790,935
141	(587) Customer Installations Expenses	420,931	566,984
142	(588) Miscellaneous Expenses	20,533,989	21,261,610
143	(589) Rents	920,131	901,626
144	TOTAL Operation (Enter Total of lines 134 thru 143)	32,211,750	34,351,408
145	Maintenance		
146	(590) Maintenance Supervision and Engineering	195,184	259,593
147	(591) Maintenance of Structures	49,890	25,998
148	(592) Maintenance of Station Equipment	1,781,835	941,677
149	(593) Maintenance of Overhead Lines	54,168,818	45,924,177
150	(594) Maintenance of Underground Lines	621,425	777,600
151	(595) Maintenance of Line Transformers	171,199	291,742
152	(596) Maintenance of Street Lighting and Signal Systems	306,737	436,438
153	(597) Maintenance of Meters	438,798	492,934
154	(598) Maintenance of Miscellaneous Distribution Plant	371,094	297,693
155	TOTAL Maintenance (Total of lines 146 thru 154)	58,104,980	49,447,852
156	TOTAL Distribution Expenses (Total of lines 144 and 155)	90,316,730	83,799,260
157	5 CUSTOMER ACCOUNTS EXPENSES		
158	Operation		
159	(901) Supervision	732,013	707,382
160	(902) Meter Reading Expenses	2,505,363	2,343,229
161	(903) Customer Records and Collection Expenses	18,332,952	17,712,145
162	(904) Uncollectible Accounts	1,013,745	-374,725
163	(905) Miscellaneous Customer Accounts Expenses	126,871	78,323
164	TOTAL Customer Accounts Expenses (Total of lines 159 thru 163)	22,710,944	20,466,354

Name of Respondent	This Report Is.	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) ☐ An Original (2) ☒ A Resubmission	04/23/2020	End of 2019/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
165	6 CUSTOMER SERVICE AND INFORMATIONAL EXPENSES		
166	Operation		
167	(907) Supervision	7,286,056	7,198,139
168	(908) Customer Assistance Expenses	15,164,996	15,638,373
169	(909) Informational and Instructional Expenses		193
170	(910) Miscellaneous Customer Service and Informational Expenses	18,435	9,148
171	TOTAL Customer Service and Information Expenses (Total 167 thru 170)	22,469,487	22,845,853
172	7 SALES EXPENSES		
173	Operation		
174	(911) Supervision	2,039	8
175	(912) Demonstrating and Selling Expenses	250,934	181,439
176	(913) Advertising Expenses		
177	(916) Miscellaneous Sales Expenses		
178	TOTAL Sales Expenses (Enter Total of lines 174 thru 177)	252,973	181,447
179	8. ADMINISTRATIVE AND GENERAL EXPENSES		
180	Operation		
181	(920) Administrative and General Salaries	31,629,550	29,305,703
182	(921) Office Supplies and Expenses	3,080,584	2,700,872
183	(Less) (922) Administrative Expenses Transferred-Credit	4,404,484	4,318,157
184	(923) Outside Services Employed	6,380,703	8,770,478
185	(924) Property Insurance	2,813,656	2,663,756
186	(925) Injuries and Damages	3,442,989	5,390,984
187	(926) Employee Pensions and Benefits	9,809,640	10,768,142
188	(927) Franchise Requirements		
189	(928) Regulatory Commission Expenses	3,558,171	4,043,074
190	(929) (Less) Duplicate Charges-Cr		
191	(930.1) General Advertising Expenses	282,852	283,725
192	(930.2) Miscellaneous General Expenses	1,482,974	1,227,621
193	(931) Rents	862,136	780,698
194	TOTAL Operation (Enter Total of lines 181 thru 193)	58,938,771	61,616,896
195	Maintenance		
196	(935) Maintenance of General Plant	6,698,698	7,032,948
197	TOTAL Administrative & General Expenses (Total of lines 194 and 196)	65,637,469	68,649,844
198	TOTAL Elec Op and Maint Expns (Total 80,112,131,156,164,171,178,197)	1,127,059,035	1,202,367,444

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [X] An Original (2) [ ] A Resubmission	/ /	End of 2017/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
1	1. POWER PRODUCTION EXPENSES		
2	A. Steam Power Generation		
3	Operation		
4	(500) Operation Supervision and Engineering	17,305,120	17,009,801
5	(501) Fuel	484,586,582	510,519,872
6	(502) Steam Expenses	21,031,222	22,613,627
7	(503) Steam from Other Sources		
8	(Less) (504) Steam Transferred-Cr.		
9	(505) Electric Expenses	8,979,009	9,504,996
10	(506) Miscellaneous Steam Power Expenses	18,654,211	18,272,258
11	(507) Rents	180,405	530,604
12	(509) Allowances	315,590	200,952
13	TOTAL Operation (Enter Total of Lines 4 thru 12)	551,052,139	578,652,110
14	Maintenance		
15	(510) Maintenance Supervision and Engineering	5,934,645	6,197,466
16	(511) Maintenance of Structures	6,643,126	8,901,219
17	(512) Maintenance of Boiler Plant	37,902,122	50,057,506
18	(513) Maintenance of Electric Plant	14,191,157	12,839,583
19	(514) Maintenance of Miscellaneous Steam Plant	7,312,765	7,873,525
20	TOTAL Maintenance (Enter Total of Lines 15 thru 19)	71,983,815	85,869,299
21	TOTAL Power Production Expenses-Steam Power (Entr Tot lines 13 & 20)	623,035,954	664,521,409
22	B. Nuclear Power Generation		
23	Operation		
24	(517) Operation Supervision and Engineering		
25	(518) Fuel		
26	(519) Coolants and Water		
27	(520) Steam Expenses		
28	(521) Steam from Other Sources		
29	(Less) (522) Steam Transferred-Cr.		
30	(523) Electric Expenses		
31	(524) Miscellaneous Nuclear Power Expenses		
32	(525) Rents		
33	TOTAL Operation (Enter Total of lines 24 thru 32)		
34	Maintenance		
35	(528) Maintenance Supervision and Engineering		
36	(529) Maintenance of Structures		
37	(530) Maintenance of Reactor Plant Equipment		
38	(531) Maintenance of Electric Plant		
39	(532) Maintenance of Miscellaneous Nuclear Plant		
40	TOTAL Maintenance (Enter Total of lines 35 thru 39)		
41	TOTAL Power Production Expenses-Nuc. Power (Entr tot lines 33 & 40)		
42	C. Hydraulic Power Generation		
43	Operation		
44	(535) Operation Supervision and Engineering		
45	(536) Water for Power		
46	(537) Hydraulic Expenses		
47	(538) Electric Expenses		
48	(539) Miscellaneous Hydraulic Power Generation Expenses		
49	(540) Rents		
50	TOTAL Operation (Enter Total of Lines 44 thru 49)		
51	C. Hydraulic Power Generation (Continued)		
52	Maintenance		
53	(541) Mainentance Supervision and Engineering		
54	(542) Maintenance of Structures		
55	(543) Maintenance of Reservoirs, Dams, and Waterways		
56	(544) Maintenance of Electric Plant		
57	(545) Maintenance of Miscellaneous Hydraulic Plant		
58	TOTAL Maintenance (Enter Total of lines 53 thru 57)		
59	TOTAL Power Production Expenses-Hydraulic Power (tot of lines 50 & 58)		

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [X] An Original (2) [ ] A Resubmission	/ /	End of 2017/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
60	D. Other Power Generation		
61	Operation		
62	(546) Operation Supervision and Engineering	9,044	5,858
63	(547) Fuel	19,143,622	15,099,280
64	(548) Generation Expenses	177,779	214,575
65	(549) Miscellaneous Other Power Generation Expenses		
66	(550) Rents		
67	TOTAL Operation (Enter Total of lines 62 thru 66)	19,330,445	15,319,713
68	Maintenance		
69	(551) Maintenance Supervision and Engineering		
70	(552) Maintenance of Structures		
71	(553) Maintenance of Generating and Electric Plant	786,915	816,619
72	(554) Maintenance of Miscellaneous Other Power Generation Plant	29,303	18,083
73	TOTAL Maintenance (Enter Total of lines 69 thru 72)	816,218	834,702
74	TOTAL Power Production Expenses-Other Power (Enter Tot of 67 & 73)	20,146,663	16,154,415
75	E. Other Power Supply Expenses		
76	(555) Purchased Power	188,914,443	159,427,126
77	(556) System Control and Load Dispatching	1,677,405	1,880,465
78	(557) Other Expenses	6,634,287	3,236,433
79	TOTAL Other Power Supply Exp (Enter Total of lines 76 thru 78)	197,226,135	164,544,024
80	TOTAL Power Production Expenses (Total of lines 21, 41, 59, 74 & 79)	840,408,752	845,219,848
81	2. TRANSMISSION EXPENSES		
82	Operation		
83	(560) Operation Supervision and Engineering	7,229,054	4,711,396
84			
85	(561.1) Load Dispatch-Reliability	4,944	38,666
86	(561.2) Load Dispatch-Monitor and Operate Transmission System	995,896	3,029,374
87	(561 3) Load Dispatch-Transmission Service and Scheduling	759	516
88	(561.4) Scheduling, System Control and Dispatch Services	11,810,664	10,563,316
89	(561 5) Reliability, Planning and Standards Development	126,146	180,576
90	(561.6) Transmission Service Studies	10	
91	(561.7) Generation Interconnection Studies		
92	(561 8) Reliability, Planning and Standards Development Services	1,046,345	948,464
93	(562) Station Expenses	589,211	587,167
94	(563) Overhead Lines Expenses	313,248	535,362
95	(564) Underground Lines Expenses		254
96	(565) Transmission of Electricity by Others	83,536,970	85,130,852
97	(566) Miscellaneous Transmission Expenses	2,668,395	4,639,889
98	(567) Rents	95,119	23,445
99	TOTAL Operation (Enter Total of lines 83 thru 98)	108,416,761	110,389,277
100	Maintenance		
101	(568) Maintenance Supervision and Engineering	1,656	28,644
102	(569) Maintenance of Structures	111,919	59,555
103	(569.1) Maintenance of Computer Hardware	3,813	2,334
104	(569 2) Maintenance of Computer Software	456,734	962,663
105	(569 3) Maintenance of Communication Equipment	25,122	76,754
106	(569.4) Maintenance of Miscellaneous Regional Transmission Plant		
107	(570) Maintenance of Station Equipment	2,491,428	2,305,985
108	(571) Maintenance of Overhead Lines	8,217,455	6,344,241
109	(572) Maintenance of Underground Lines	617	132
110	(573) Maintenance of Miscellaneous Transmission Plant	46,781	131,201
111	TOTAL Maintenance (Total of lines 101 thru 110)	11,355,525	9,911,509
112	TOTAL Transmission Expenses (Total of lines 99 and 111)	119,772,286	120,300,786

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [X] An Original (2) [ ] A Resubmission	/ /	End of 2017/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
113	3. REGIONAL MARKET EXPENSES		
114	Operation		
115	(575 1) Operation Supervision		
116	(575 2) Day-Ahead and Real-Time Market Facilitation		
117	(575 3) Transmission Rights Market Facilitation		
118	(575 4) Capacity Market Facilitation		
119	(575.5) Ancillary Services Market Facilitation		
120	(575 6) Market Monitoring and Compliance		
121	(575.7) Market Facilitation, Monitoring and Compliance Services	1,118,077	1,141,446
122	(575.8) Rents		
123	Total Operation (Lines 115 thru 122)	1,118,077	1,141,446
124	Maintenance		
125	(576 1) Maintenance of Structures and Improvements		
126	(576.2) Maintenance of Computer Hardware		
127	(576.3) Maintenance of Computer Software		
128	(576.4) Maintenance of Communication Equipment		
129	(576.5) Maintenance of Miscellaneous Market Operation Plant		
130	Total Maintenance (Lines 125 thru 129)		
131	TOTAL Regional Transmission and Market Op Expns (Total 123 and 130)	1,118,077	1,141,446
132	4. DISTRIBUTION EXPENSES		
133	Operation		
134	(580) Operation Supervision and Engineering	2,241,206	1,731,148
135	(581) Load Dispatching	70,614	133,632
136	(582) Station Expenses	779,379	672,573
137	(583) Overhead Line Expenses	3,744,245	2,370,811
138	(584) Underground Line Expenses	1,616,096	1,728,973
139	(585) Street Lighting and Signal System Expenses	213,709	349,691
140	(586) Meter Expenses	3,755,625	3,432,426
141	(587) Customer Installations Expenses	581,212	716,791
142	(588) Miscellaneous Expenses	19,840,543	20,617,686
143	(589) Rents	887,373	869,816
144	TOTAL Operation (Enter Total of lines 134 thru 143)	33,730,002	32,623,547
145	Maintenance		
146	(590) Maintenance Supervision and Engineering	227,732	268,706
147	(591) Maintenance of Structures	118,212	70,672
148	(592) Maintenance of Station Equipment	1,279,043	1,250,958
149	(593) Maintenance of Overhead Lines	47,752,854	40,019,822
150	(594) Maintenance of Underground Lines	1,134,197	1,426,954
151	(595) Maintenance of Line Transformers	287,928	298,982
152	(596) Maintenance of Street Lighting and Signal Systems	622,328	406,014
153	(597) Maintenance of Meters	476,953	511,599
154	(598) Maintenance of Miscellaneous Distribution Plant	283,523	320,574
155	TOTAL Maintenance (Total of lines 146 thru 154)	52,182,770	44,574,281
156	TOTAL Distribution Expenses (Total of lines 144 and 155)	85,912,772	77,197,828
157	5. CUSTOMER ACCOUNTS EXPENSES		
158	Operation		
159	(901) Supervision	712,899	705,614
160	(902) Meter Reading Expenses	2,002,340	2,244,201
161	(903) Customer Records and Collection Expenses	16,689,326	17,182,385
162	(904) Uncollectible Accounts	450,349	223,225
163	(905) Miscellaneous Customer Accounts Expenses	92,675	119,566
164	TOTAL Customer Accounts Expenses (Total of lines 159 thru 163)	19,947,589	20,474,991

Name of Respondent	This Report Is:	Date of Report (Mo, Da, Yr)	Year/Period of Report
Southwestern Electric Power Company	(1) [X] An Original (2) [ ] A Resubmission	/ /	End of 2017/Q4

ELECTRIC OPERATION AND MAINTENANCE EXPENSES (Continued)

If the amount for previous year is not derived from previously reported figures, explain in footnote.

Line No.	Account (a)	Amount for Current Year (b)	Amount for Previous Year (c)
165	6 CUSTOMER SERVICE AND INFORMATIONAL EXPENSES		
166	Operation		
167	(907) Supervision	6,138,595	6,469,188
168	(908) Customer Assistance Expenses	9,100,464	10,714,986
169	(909) Informational and Instructional Expenses		5,940
170	(910) Miscellaneous Customer Service and Informational Expenses	122,696	78,201
171	TOTAL Customer Service and Information Expenses (Total 167 thru 170)	15,361,755	17,268,315
172	7. SALES EXPENSES		
173	Operation		
174	(911) Supervision	1,165	348
175	(912) Demonstrating and Selling Expenses	152,044	117,061
176	(913) Advertising Expenses		1,013
177	(916) Miscellaneous Sales Expenses		
178	TOTAL Sales Expenses (Enter Total of lines 174 thru 177)	153,209	118,422
179	8. ADMINISTRATIVE AND GENERAL EXPENSES		
180	Operation		
181	(920) Administrative and General Salaries	27,861,379	28,787,046
182	(921) Office Supplies and Expenses	2,610,192	2,407,848
183	(Less) (922) Administrative Expenses Transferred-Credit	2,019,161	4,189,272
184	(923) Outside Services Employed	5,954,465	6,542,451
185	(924) Property Insurance	1,144,529	2,813,734
186	(925) Injuries and Damages	4,352,353	5,224,155
187	(926) Employee Pensions and Benefits	14,899,931	16,722,409
188	(927) Franchise Requirements		154
189	(928) Regulatory Commission Expenses	4,297,337	5,976,323
190	(929) (Less) Duplicate Charges-Cr.		
191	(930 1) General Advertising Expenses	192,913	277,627
192	(930.2) Miscellaneous General Expenses	1,106,370	1,362,395
193	(931) Rents	926,697	1,190,028
194	TOTAL Operation (Enter Total of lines 181 thru 193)	61,327,005	67,114,898
195	Maintenance		
196	(935) Maintenance of General Plant	7,157,233	8,502,218
197	TOTAL Administrative & General Expenses (Total of lines 194 and 196)	68,484,238	75,617,116
198	TOTAL Elec Op and Maint Expns (Total 80,112,131,156,164,171,178,197)	1,151,158,678	1,157,338,752

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-19:

Provide total SWEPCO transmission capital expenditures for each of the last four calendar years, the test year, and as requested in rates for the first time in this case.

Response No. CARD 1-19:

The following is the total SWEPCO transmission capital additions for each of the last four calendar years, the test year ending March 31, 2020, and the amount requested in rates for the first time.

Year	Cost
2016	$110,336,391
2017	$113,429,935
2018	$203,250,870
2019	$190,591,442
Test Year	$164,541,551

The amount requested in rates for the first time in this case is $298,762,061, which is the amount of transmission capital additions placed in service that was not reviewed in SWEPCO's last TCRF case, Docket No. 49042.

Notes:
1. Year 2016 is for the period of 7/1 - 12/31, 2016, which includes the additions since the end of the last SWEPCO Texas Base Case.

2. Test Year is for the period of 4/1/2019 through 3/31/2020.

Prepared By: William M. Romine Title: Regulatory Consultant Staff

Sponsored By: Wayman L. Smith Title: Dir Trans Planning

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-20:

Provide SWEPCO's distribution O&M expenses by FERC account for each of the last four calendar years, the test year, and as requested in rates in this case.

Response No. CARD 1-20:

Please see the response to CARD 1-18 for the requested O&M data.

Prepared By: Randall W. Hamlett	Title: Dir Regulatory Acctg Svcs
Sponsored By: Drew W. Seidel	Title: VP Dist Region Opers
Sponsored By: Michael A. Baird	Title: Mng Dir Acctng Policy & Rsrch

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-21:

Provide total SWEPCO distribution capital expenditures for each of the last four calendar years, the test year, and as requested in rates for the first time in this case.

Response No. CARD 1-21:

The following is the total SWEPCO Texas distribution capital additions for each of the last four calendar years, the test year ending March 31, 2020, and as requested in rates for the first time.

Year	Cost
2016*	$ 18,170,808
2017	$ 32,844,358
2018	$ 38,071,599
2019	$ 42,509,360
Test Year**	$ 48,826,825

* Year 2016 is for the period of 7/1 - 12/31, 2016, which includes the addition since the end of the last SWEPCO Texas Base Case.

** The Test Year is the twelve-month period ending March 31, 2020.

The amount requested in rates for the first time in this case is $56,988,704, which is the amount of distribution capital additions placed in service that was not addressed in SWEPCO's last DCRF case, Docket No. 49041.

Prepared By: Paul D. Flory Title: Regulatory Consultant Sr

Sponsored By: Drew W. Seidel Title: VP Dist Region Opers

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-22:

Provide SWEPCO's annual SAIDI and SAIFI for the Company's Texas service area with and without major storms for each of the last four years and for the test year in this case.

Response No. CARD 1-22:

Please see CARD 1-22 Attachment 1 for SWEPCO's annual SAIDI and SAIFI for the Company's Texas service area with major storms. For SWEPCO's annual SAIDI and SAIFI for the Company's Texas service area without major storms, please see Schedule H-13.3.

Prepared By: Paul D. Flory	Title: Regulatory Consultant Sr
Sponsored By: Drew W. Seidel	Title: VP Dist Region Opers

SWEPCO TX, Data Includes Major Storms

Year	State ID	SAIDI	SAIFI
2016	TEXAS	248.73	1.89
2017	TEXAS	746.43	2.14
2018	TEXAS	319.01	2.00
2019	TEXAS	781.05	2.45
Test Year	TEXAS	774.54	2.39

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-23:

Provide SWEPCO's total system annual SAIDI and SAIFI with and without major storms for each of the last four years and for the test year in this case.

Response No. CARD 1-23:

Please see CARD 1-23 Attachment 1 for SWEPCO's total company annual SAIDI and SAIFI with and without major storms.

Prepared By: Paul D. Flory	Title: Regulatory Consultant Sr
Sponsored By: Drew W. Seidel	Title: VP Dist Region Opers

Data Includes Major Storms

Year	OpUnit	SAIDI	SAIFI
2016	SWEPCO	307.80	1.90
2017	SWEPCO	573.52	2.12
2018	SWEPCO	334.26	1.89
2019	SWEPCO	644.08	2.29
Test Year	SWEPCO	668.39	2.31

Data Does Not Include Major Storms

Year	Operating Unit ID	SAIDI	SAIFI
2016	SWEPCO	179.26	1.62
2017	SWEPCO	205.87	1.65
2018	SWEPCO	257.70	1.78
2019	SWEPCO	238.17	1.67
Test Year	SWEPCO	263.39	1.69

SOAH DOCKET NO. 473-21-0538
PUC DOCKET NO. 51415

SOUTHWESTERN ELECTRIC POWER COMPANY'S RESPONSE TO CITIES ADVOCATING REASONABLE DEREGULATION'S FIRST SET OF REQUESTS FOR INFORMATION

Question No. CARD 1-24:

Identify the docket number, jurisdiction and final order date of each base rate case filed by SWEPCO in the last three calendar years.

Response No. CARD 1-24:

AR: Docket No. 19-008-U, Arkansas Public Service Commission, final order issued on 12/20/19, with the order approving tariffs issued on 12/27/19

Prepared By: Christopher N. Martel	Title: Regulatory Consultant Sr
Sponsored By: Lynn M. Ferry-Nelson	Title: Dir Regulatory Svcs