SOUTHWESTERN ELECTRIC POWER COMPANY
PERSONNEL ASSIGNED BY PLANT/UNIT
FOR CALENDAR YEARS 2016 THROUGH 2019

Note: Personnel are not assigned to specific units within SWEPCO plants, only to the plant as a whole.

1. Number of Company Personnel Assigned Full or Part Time

Lignite Plants	**2016**	**2017**	**2018**	**2019**
Pirkey	107	102	101	101
Total	107	102	101	101

Coal Plants	**2016**	**2017**	**2018**	**2019**
Flint Creek	86	88	86	87
Welsh	125	124	122	120
Turk	107	110	107	110
Total	318	322	315	317

Natural Gas Plants	**2016**	**2017**	**2018**	**2019**
Arsenal Hill \ Stall	26	26	26	25
Knox Lee	29	28	27	28
Lieberman	25	26	25	25
Mattison	5	5	4	5
Wilkes \ Lone Star	34	33	33	29
Total	119	118	115	112

2. Number of Contractor Personnel Assigned Full of Part Time, Shown as Full-Time Employee Equivalent

Lignite Plants	**2016**	**2017**	**2018**	**2019**
Pirkey	18	18	18	18
Total	18	18	18	18

Coal Plants	**2016**	**2017**	**2018**	**2019**
Flint Creek	13	13	13	13
Welsh	33	34	25	25
Turk	55	42	39	37
Total	101	89	77	75

Natural Gas Plants	**2016**	**2017**	**2018**	**2019**
Arsenal Hill \ Stall	1	1	1	1
Knox Lee	5	5	5	5
Lieberman	0	4	4	3
Mattison	2	2	2	2
Wilkes \ Lone Star	2	2	2	4
Total	10	14	14	15

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
PERSONNEL ASSIGNED BY PLANT/UNIT
FOR CALENDAR YEARS 2016 THROUGH 2019

Note: Personnel are not assigned to specific units within SWEPCO plants, only to the plant as a whole.

3. Other Personnel Assigned Full or Part Time

Shared SWEPCO Support	**2016**	**2017**	**2018**	**2019**
Generation	3	3	3	2
Regional Engineering	19	19	19	17
Central Maintenance Facility	13	13	12	13
Total	35	35	34	32

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
AVERAGE PERSONNEL ASSIGNED FOR THE TEST YEAR
April 1, 2019 Through March 31, 2020

1. Number of Company Personnel Assigned Full or Part Time

Fuel	Plant	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Lignite	Pirkey	102	101	102	102	102	102	102	101	101	101	102	102
Coal	Flint Creek	83	85	84	84	83	83	84	86	87	85	84	84
	Turk	108	109	109	109	109	109	108	109	110	111	111	111
	Welsh	118	116	117	118	117	116	117	119	120	120	121	121
Natural Gas	Arsenal Hill \ Stall	26	26	26	26	26	26	26	26	25	25	26	26
	Knox Lee	27	27	29	28	28	28	28	28	28	28	28	28
	Lieberman	25	26	24	24	24	26	25	25	25	25	23	22
	Mattison	5	5	5	5	5	5	5	5	5	6	6	5
	Wilkes \ Lone Star	33	33	29	29	29	29	29	29	29	29	29	29
	Total	527	528	525	525	523	524	524	528	530	530	530	528

2. Number of Contract Personnel Assigned Full or Part Time

Fuel	Plant	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Lignite	Pirkey	18	18	18	18	18	18	18	18	18	17	17	17
Coal	Flint Creek	13	13	13	13	13	13	13	13	13	13	13	13
	Turk	37	37	37	37	37	37	37	37	37	31	31	31
	Welsh	25	25	25	25	25	25	25	25	25	24	24	24
Natural Gas	Arsenal Hill \ Stall	1	1	1	1	1	1	1	1	1	1	1	1
	Knox Lee	5	5	5	5	5	5	5	5	5	5	5	5
	Lieberman	2	2	2	2	2	2	2	3	3	2	2	1
	Mattison	2	2	2	2	2	2	2	2	2	2	2	2
	Wilkes \ Lone Star	4	4	4	4	4	4	4	4	4	1	1	1
	Total	107	107	107	107	107	107	107	108	108	96	96	95

3. Other Company Personnel Assigned Full or Part Time

Organization	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Generation	2	2	2	2	2	2	2	2	2	2	2	2
Regional Engineering	19	19	19	19	18	18	18	18	17	16	16	16
Central Maintenance Facility	12	12	12	12	12	12	12	13	13	11	11	10
Total	33	33	33	33	32	32	32	33	32	29	29	28

4. Other Contractor Personnel Assigned Full or Part Time

Organization	Apr-19	May-19	Jun-19	Jul-19	Aug-19	Sep-19	Oct-19	Nov-19	Dec-19	Jan-20	Feb-20	Mar-20
Generation	0	0	0	0	0	0	0	0	0	0	0	0
Regional Engineering	1	1	1	1	1	0	0	0	0	0	0	0
Central Maintenance Facility	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	1	1	1	0	0	0	0	0	0	0

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees: 597

Akins,Nicholas K	Chairman, President & CEO	Office of CEO	AEP Service Corporation
Chodak, III Paul	EVP Generation	Generation	AEP Service Corporation
Lee,Daniel V	SVP Fossil & Hydro Generation	Generation Fleet Operations	AEP Service Corporation
Slater, Tommy J	VP Generating Assets SWEPCO	Generating Assets-SWEPCO	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Planner Sr	Arsenal Hill	SWEPCO-Generation
Agee,Jason P	Material Handling Supt	Turk Plant	SWEPCO-Generation
	Lead Operator	Arsenal Hill	SWEPCO-Generation
	O & M Plant Technician Sr	Mattison Plant	SWEPCO-Generation
Alford,James W	Material Handling Supv	Pirkey	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Sr Chemist (C)	Turk Plant	SWEPCO-Generation
	Station Industrial Electrician	Pirkey	SWEPCO-Generation
	Lead Operator	Wilkes	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Wilkes	SWEPCO-Generation
	Real Estate Agent Sr	Pirkey Fuels	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Arsenal Hill	SWEPCO-Generation
	Sr Chemist (G)	Knox Lee	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Welder Machinist	Flint Creek	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Lead Operator	Lieberman	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Industrial Electrician	Welsh	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Instrument & Controls Tech (C)	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
	Instrument Technician 3rd Yr	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Instrument & Controls Tech (G)	Lieberman	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Welsh	SWEPCO-Generation
	Car Mechanic C	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Knox Lee	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Station Industrial Electrician	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Real Estate Agent Sr	Dolet Hills	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Instrument Technician 3rd Yr	Turk Plant	SWEPCO-Generation
	Administrator	Lieberman	SWEPCO-Generation
	Fgd Operator	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
Bradshaw,Richard C	Long Range Planning Supv	Welsh	SWEPCO-Generation
Brannan,Andrew B	Plant Mgr Lieberman	Lieberman	SWEPCO-Generation
	Lead Operator	Wilkes	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Industrial Electrician	Pirkey	SWEPCO-Generation
Brice,Michael W	Environmental & Lab Supv	Welsh	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Welder Machinist	Flint Creek	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees: 597

	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Turk Plant	SWEPCO-Generation
Burgess,John C	Material Handling Supt	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Real Estate Agent Sr	Pirkey Fuels	SWEPCO-Generation
	Car Mechanic C	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Welder Machinist	Pirkey	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Knox Lee	SWEPCO-Generation
	Instrument & Controls Tech (G)	Wilkes	SWEPCO-Generation
	Lignite Equip Oper - 2nd yr	Pirkey	SWEPCO-Generation
Cameron,Howard A	Energy Production Supv	Welsh	SWEPCO-Generation
	Instrument & Controls Tech (G)	Arsenal Hill	SWEPCO-Generation
	Industrial Electrician	Welsh	SWEPCO-Generation
Cantrell,Mark A	Energy Production Supv	Mattison Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Planner	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
Chambless,Stephanie Celeste	Administrative Supv	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
Civitarese,Peter A	Plant Mgr Wilkes/Knox Lee	Wilkes	SWEPCO-Generation
	Stores Attendant-Senior	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Administrative Asst Sr	Welsh	SWEPCO-Generation
Cole,Douglas L	Energy Production Supv	Turk Plant	SWEPCO-Generation
Coleman,Laura W	Maintenance Supt	Pirkey	SWEPCO-Generation
	Coal Equip Operator - 2nd yr	Flint Creek	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Arsenal Hill	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
Collins,Dale M	Rail Car Maintenance Supv	Rail Car Maintenance-Alliance	SWEPCO-Generation
Cook II,Robert L	Energy Production Supv	Wilkes	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Industrial Electrician-3rd Yr	Pirkey	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Administrative Asst Sr	Flint Creek	SWEPCO-Generation
Craft,Eric F	Energy Production Supv	Turk Plant	SWEPCO-Generation
Craig III,Benjamin F	Maintenance Supv	Pirkey	SWEPCO-Generation
	Welder Machinist	Pirkey	SWEPCO-Generation
	Station Industrial Electrician	Welsh	SWEPCO-Generation
	Administrative Asst Sr	Flint Creek	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Instrument Technician	Flint Creek	SWEPCO-Generation
	Instrument & Electrical Tech	Lieberman	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Plant Equip Oper- aft 6 Mos	Flint Creek	SWEPCO-Generation
	Instrument & Electrical Tech	Arsenal Hill	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees. 597

Curtis,Justin Wayne	Maintenance Supv	Turk Plant	SWEPCO-Generation
	Instrument Technician	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Station Machinist (C)	Flint Creek	SWEPCO-Generation
	Real Estate Agent Sr	Dolet Hills	SWEPCO-Generation
	Welder Machinist	Wilkes	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Arsenal Hill	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Instrument Technician	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
Dickinson,Tim L	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Knox Lee	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Lieberman	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
Duffee,Donnie M	Plant Mgr Welsh	Welsh	SWEPCO-Generation
Duffee,John P	Maintenance Supv	Pirkey	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Knox Lee	SWEPCO-Generation
	Station Machinist (G)	Arsenal Hill	SWEPCO-Generation
	Station Industrial Electrician	Welsh	SWEPCO-Generation
	Industrial Electrician	Welsh	SWEPCO-Generation
Edwards,Richard S	Energy Production Supv	Welsh	SWEPCO-Generation
Elam,James R	Energy Production Supv	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Arsenal Hill	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
Endsley,Joel T	Plant Mgr Pirkey	Pirkey	SWEPCO-Generation
Epperson,Bradley R	Energy Production Supv	Pirkey	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Lieberman	SWEPCO-Generation
	Chemist 1St Yr (G)	Lieberman	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Instrument & Controls Tech (C)	Welsh	SWEPCO-Generation
Flanagan,Thomas L	Energy Production Supv	Pirkey	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Lead Operator	Lieberman	SWEPCO-Generation
Ford Jr ,John D	Energy Production Supv	Knox Lee	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
Franklin,Ronald V	Environmental & Lab Supv	Pirkey	SWEPCO-Generation
	Plant System Owner Prin	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Instrument & Electrical Tech	Knox Lee	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
Fuller,Jeffery S	Maintenance Supv	Turk Plant	SWEPCO-Generation
Garrett,Jason L	Maintenance Supv	Pirkey	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Instrument Technician 4th Yr	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Administrative Assc	Turk Plant	SWEPCO-Generation
	Welder Machinist	Flint Creek	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Wilkes	SWEPCO-Generation
	Administrative Asst Sr	Welsh	SWEPCO-Generation
	Sr Chemist (G)	Wilkes	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Turk Plant	SWEPCO-Generation
	Planner Sr	Flint Creek	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees: 597

	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
Gravitt,Barry N	Plant Mgr Arsenal Hill	Arsenal Hill	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Administrative Asst	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
Grimes,John K	Maintenance Supv	Welsh	SWEPCO-Generation
Gross,Timothy H	Plant Mgr Turk	Turk Plant	SWEPCO-Generation
	Planner Prin	Turk Plant	SWEPCO-Generation
	Outage Coordinator	Pirkey	SWEPCO-Generation
	Welder Machinist	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Arsenal Hill	SWEPCO-Generation
	Lead Operator	Wilkes	SWEPCO-Generation
	Station Industrial Electrician	Welsh	SWEPCO-Generation
Hallonquist,Larent N	Material Handling Supt	Welsh	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Knox Lee	SWEPCO-Generation
Hamilton,Randy J	Material Handling Supt	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Alliance Q/A Administrator	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Station Industrial Electrician	Welsh	SWEPCO-Generation
	Instrument Technician	Flint Creek	SWEPCO-Generation
	Operations Specialist	Flint Creek	SWEPCO-Generation
	Welder Machinist	Lieberman	SWEPCO-Generation
	Diesel Mechanic	Pirkey	SWEPCO-Generation
Hayward,Donna Mary	Administrative Supv	Wilkes	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Plant Equip Oper- aft 6 Mos	Knox Lee	SWEPCO-Generation
	Station Machinist (G)	Knox Lee	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Pirkey	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
Henry,Craig K	Maintenance Supt	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Wilkes	SWEPCO-Generation
	Lead Operator	Knox Lee	SWEPCO-Generation
	Car Mechanic C	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Laborer (C)	Pirkey	SWEPCO-Generation
	Sr Chemist (C)	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Coal Equip Operator - 1st yr	Welsh	SWEPCO-Generation
	Lead Operator	Knox Lee	SWEPCO-Generation
	Industrial Electrician	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Planner	Wilkes	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Turbine Operator	Arsenal Hill	SWEPCO-Generation
	Sr Chemist (C)	Pirkey	SWEPCO-Generation
	Plant Equip Oper- aft 6 Mos	Flint Creek	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
Howsen,Kenneth R	Land Development Mgr	Pirkey Fuels	AEP Service Corporation
	Plant Equip Operator Sr X	Turk Plant	SWEPCO-Generation
	Chemist Af 1St Yr (C)	Flint Creek	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Flint Creek	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Arsenal Hill	SWEPCO-Generation
Hull,Samuel L	Maintenance Supv	Wilkes	SWEPCO-Generation
	Plant Equip Oper- aft 6 Mos	Flint Creek	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees. 597

	Instrument & Controls Tech (C)	Flint Creek	SWEPCO-Generation
Jackson,Debra H	Administrative Supv	Arsenal Hill	SWEPCO-Generation
	Building Attendant/Plant	Lieberman	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Instrument & Electrical Tech	Knox Lee	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
Jacobs,Darryl A	Maintenance Supv	Turk Plant	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Arsenal Hill	SWEPCO-Generation
	Turbine Operator	Knox Lee	SWEPCO-Generation
	Planner Sr	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Lieberman	SWEPCO-Generation
	Station Industrial Electrician	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Wilkes	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Turbine Operator	Knox Lee	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
Kendrick,Leah M	Continuous Imprvmnt Mgr	Generating Assets-SWEPCO	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Administrative Asst	Pirkey	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Planner Sr	Pirkey	SWEPCO-Generation
	Sr Chemist (C)	Turk Plant	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
	Instrument & Electrical Tech	Welsh	SWEPCO-Generation
	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Flint Creek	SWEPCO-Generation
	Sr Chemist (C)	Turk Plant	SWEPCO-Generation
	Instrument & Electrical Tech	Welsh	SWEPCO-Generation
	Plant System Owner Sr	Flint Creek	SWEPCO-Generation
Knight,Don E	Energy Production Supt Sr	Welsh	SWEPCO-Generation
	Planner Sr	Turk Plant	SWEPCO-Generation
	Engineer Prin	Pirkey Fuels	SWEPCO-Generation
	Lead Operator	Knox Lee	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
LaBrecque,David L	Maintenance Supv	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Instrument Technician	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Welder Machinist	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Laborer (C)	Pirkey	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
Lore,William T	Railcar Maintenance Mgr	Rail Car Maintenance-Alliance	SWEPCO-Generation
Mackey,Jason W	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees. 597

	Welder Machinist	Pirkey	SWEPCO-Generation
	Diesel Mechanic	Pirkey	SWEPCO-Generation
	Operations Specialist	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Wilkes	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
Martin,Roger W	Maintenance Supv	Flint Creek	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
Martinez,Orlando	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Continuous Improvement Lead	Flint Creek	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Lead Operator	Lieberman	SWEPCO-Generation
Maxey,Mark Dowden	Maintenance Supv	Turk Plant	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Industrial Electrician-2nd Yr	Turk Plant	SWEPCO-Generation
	Instrument & Controls Tech (G)	Arsenal Hill	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Welsh	SWEPCO-Generation
McGee,Paul A	Energy Production Supv	Turk Plant	SWEPCO-Generation
	Planner Sr	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Sr Utility Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
McMahon,Michael T	Plant Environmntl Project Supv	Welsh	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Dir Land & Mineral Development	Pirkey Fuels	AEP Service Corporation
	Lead Operator	Lieberman	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Instrument Technician	Pirkey	SWEPCO-Generation
Minter,Stanley C	Maintenance Supt Sr	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Administrator	Knox Lee	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Maint Mech 3Rd Yr	Turk Plant	SWEPCO-Generation
	Sr Chemist (C)	Flint Creek	SWEPCO-Generation
Morris,Michelle Christine	Administrative Supv	Welsh	SWEPCO-Generation
Morris,Richard D	Maintenance Supv	Pirkey	SWEPCO-Generation
	Instrument Technician	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Knox Lee	SWEPCO-Generation
Myers,Troy L	Energy Production Supt	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
Neigler,Ivaunna P	Environmental & Lab Supv	Flint Creek	SWEPCO-Generation
	Turbine Operator	Lieberman	SWEPCO-Generation
	Station Machinist (C)	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Outage Coordinator	Welsh	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Chemist Af 1St Yr (C)	Pirkey	SWEPCO-Generation
	Outage Coordinator	Turk Plant	SWEPCO-Generation
	Industrial Electrician-3rd Yr	Welsh	SWEPCO-Generation
Orr,Nicholas T	Maintenance Supv	Welsh	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees 597

Ortiz,Gilberto Ulises	Maintenance Supv	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
Osborne,Richard M	Process Supv	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Administrative Asst Sr	Turk Plant	SWEPCO-Generation
Paddy,Christy W	Administrative Supv	Pirkey	SWEPCO-Generation
	Sr Chemist (G)	Arsenal Hill	SWEPCO-Generation
	Operations Specialist	Turk Plant	SWEPCO-Generation
	Sr Chemist (C)	Welsh	SWEPCO-Generation
	Maint Mech 4Th Yr	Turk Plant	SWEPCO-Generation
	Welder Machinist	Turk Plant	SWEPCO-Generation
	Lead Operator	Knox Lee	SWEPCO-Generation
	Instrument Technician	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Welder Machinist	Knox Lee	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Lead Operator	Wilkes	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Lieberman	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Lead Operator	Arsenal Hill	SWEPCO-Generation
	Welder Machinist	Turk Plant	SWEPCO-Generation
	Maint Mech 2Nd Yr	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
Pitts,Russell C	Maintenance Supv	Pirkey	SWEPCO-Generation
	Maint Mech 4Th Yr	Pirkey	SWEPCO-Generation
Plette,Leo S	Energy Production Supv Sr	Arsenal Hill	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Industrial Electrician-2nd Yr	Welsh	SWEPCO-Generation
Pound,Richard D	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Instrument Technician	Pirkey	SWEPCO-Generation
Powell,Joe B	Energy Production Supv	Welsh	SWEPCO-Generation
	Instrument Technician	Wilkes	SWEPCO-Generation
Quarles,Jerry L	Energy Production Supv	Pirkey	SWEPCO-Generation
Ramthun,Cody A	Maint Mech 3Rd Yr	Pirkey	SWEPCO-Generation
	Turbine Operator	Knox Lee	SWEPCO-Generation
	Lead Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Pirkey	SWEPCO-Generation
Redfearn,Beau Thomas	Environmental & Lab Supv	Turk Plant	SWEPCO-Generation
Redwine,Ronald R	Maintenance Supv Sr	Arsenal Hill	SWEPCO-Generation
	Continuous Improvement Lead	Pirkey	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Station Machinist (G)	Wilkes	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Flint Creek	SWEPCO-Generation
	O & M Plant Technician Sr	Mattison Plant	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
Roberts,David W	Energy Production Supt	Turk Plant	SWEPCO-Generation
	Welder Machinist	Flint Creek	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Planner Sr	Flint Creek	SWEPCO-Generation
Robertson,Damon G	Maintenance Supt	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Instrument & Controls Tech (C)	Turk Plant	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Sr Chemist (C)	Pirkey	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees. 597

Rumsey,David M	Maintenance Supv	Turk Plant	SWEPCO-Generation
	Welder Machinist	Pirkey	SWEPCO-Generation
	Station Machinist (C)	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Pirkey	SWEPCO-Generation
Santone,Brian R	Maintenance Supv	Lieberman	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Flint Creek	SWEPCO-Generation
	Sr Utility Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Plant Equip Oper- aft 6 Mos	Lieberman	SWEPCO-Generation
	Turbine Operator	Wilkes	SWEPCO-Generation
Shaw,Gary L	Maintenance Supv	Welsh	SWEPCO-Generation
	Laborer (C)	Welsh	SWEPCO-Generation
	Car Mechanic C	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
	Sr Chemist (C)	Welsh	SWEPCO-Generation
	Mine Planning Engineer Staff	Pirkey Fuels	SWEPCO-Generation
	Plant Equip Operator Sr X	Turk Plant	SWEPCO-Generation
	Lead Operator	Arsenal Hill	SWEPCO-Generation
	Control Center Operator (C)	Pirkey	SWEPCO-Generation
	Administrative Asst Sr	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Plant Equip Operator Sr X	Welsh	SWEPCO-Generation
	Lead Operator	Arsenal Hill	SWEPCO-Generation
	VP Generating Assets SWEPCO	Generating Assets-SWEPCO	SWEPCO-Generation
	Plant Equip Operator Sr X	Turk Plant	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Plant Equip Operator Sr X	Flint Creek	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Continuous Improvement Lead	Welsh	SWEPCO-Generation
	Station Industrial Electrician	Knox Lee	SWEPCO-Generation
Soules,Mac A	Maintenance Supv	Knox Lee	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Welsh	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Planner Prin	Welsh	SWEPCO-Generation
Stafford,Ryan Keith	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
Stanley,Timmy	Energy Production Supv	Lieberman	SWEPCO-Generation
	Welder Machinist	Welsh	SWEPCO-Generation
	Industrial Electrician	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Knox Lee	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Wilkes	SWEPCO-Generation
	Industrial Electrician	Turk Plant	SWEPCO-Generation
	Operations Specialist	Welsh	SWEPCO-Generation
Strawn,Jerry R	Energy Production Supv	Pirkey	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Flint Creek	SWEPCO-Generation
	Coal Equip Operator - 2nd yr	Turk Plant	SWEPCO-Generation
	Lead Operator	Knox Lee	SWEPCO-Generation
	Continuous Improvement Lead	Turk Plant	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Instrument & Electrical Tech	Wilkes	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees: 597

Taylor,David R	Energy Production Supv	Welsh	SWEPCO-Generation
	Sr Chemist (C)	Welsh	SWEPCO-Generation
	Operations Specialist	Knox Lee	SWEPCO-Generation
	O & M Plant Technician Sr	Mattison Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Wilkes	SWEPCO-Generation
	Instrument Technician	Flint Creek	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Administrative Asst Sr	Welsh	SWEPCO-Generation
	Lead Operator	Wilkes	SWEPCO-Generation
	Instrument & Controls Tech (C)	Turk Plant	SWEPCO-Generation
Timmons,Mack T	Energy Production Supv	Pirkey	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Turk Plant	SWEPCO-Generation
	Planner Assc	Turk Plant	SWEPCO-Generation
Townsend,Joel E	Energy Production Supv	Welsh	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Lieberman	SWEPCO-Generation
	Fgd Senior Operator	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Industrial Electrician	Pirkey	SWEPCO-Generation
	Lignite Equip Oper - aft 2 yrs	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
Tuck,Sherry Elaine	Administrative Supv	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Station Industrial Electrician	Flint Creek	SWEPCO-Generation
	Administrative Asst Sr	Flint Creek	SWEPCO-Generation
	Control Center Operator (C)	Welsh	SWEPCO-Generation
	Turbine Operator	Wilkes	SWEPCO-Generation
Vestfals,Sara N	Plant Mgr Flint Creek	Flint Creek	SWEPCO-Generation
	Maint Mech Aft 4Th Yr	Pirkey	SWEPCO-Generation
	Lead Operator	Lieberman	SWEPCO-Generation
	Instrument & Controls Tech (C)	Flint Creek	SWEPCO-Generation
Warren,Micah C	Maintenance Supv	Flint Creek	SWEPCO-Generation
	Station Machinist (G)	Arsenal Hill	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
Weber Jr.,Richard D	Maintenance Supv	Flint Creek	SWEPCO-Generation
Webster,Joshua A	Energy Production Supv	Flint Creek	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Flint Creek	SWEPCO-Generation
	Operations Specialist	Wilkes	SWEPCO-Generation
White,Calvin Eugene	Energy Production Supv	Turk Plant	SWEPCO-Generation
White,Gregory M	Energy Production Supv	Turk Plant	SWEPCO-Generation
	Station Machinist (C)	Turk Plant	SWEPCO-Generation
	Administrative Asst Sr	Pirkey	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Pirkey	SWEPCO-Generation
	Coal Equip Operator-aft 2 yrs	Turk Plant	SWEPCO-Generation
	Instrument Technician	Flint Creek	SWEPCO-Generation
	Turbine Oper After 5 Yrs	Arsenal Hill	SWEPCO-Generation
	Control Center Operator (C)	Turk Plant	SWEPCO-Generation
	Lead Operator	Arsenal Hill	SWEPCO-Generation
	Sr Chemist (C)	Turk Plant	SWEPCO-Generation
	Instrument Technician	Welsh	SWEPCO-Generation
	Plant Equip Operator Sr X	Wilkes	SWEPCO-Generation
	O & M Plant Technician Sr	Mattison Plant	SWEPCO-Generation
Wilson,Ronnie S	Energy Production Supv	Welsh	SWEPCO-Generation
	Planner Sr	Welsh	SWEPCO-Generation
	Control Center Operator (C)	Flint Creek	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Lieberman	SWEPCO-Generation
	Plant Equip Oper - aft 2 Yrs	Arsenal Hill	SWEPCO-Generation
	Instrument Technician	Knox Lee	SWEPCO-Generation
Wright,Mark W	Energy Production Supt	Pirkey	SWEPCO-Generation
	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER CORPORATION
PRODUCTION OPERATION AND MAINTENANCE ORGANIZATIONAL CHART

Total Employees: 597

	Station Machinist (G)	Wilkes	SWEPCO-Generation
	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Financial Analyst	Rail Car Maintenance-Alliance	SWEPCO-Generation
	Car Mechanic	Rail Car Maintenance-Alliance	SWEPCO-Generation
Smith,Tracy M	Production Mgr	Central Maintenance Facility	SWEPCO-Generation
	Cmf Maint Helper	Central Maintenance Facility	SWEPCO-Generation
	Machinist 3Rd Yr (Cmf)	Central Maintenance Facility	SWEPCO-Generation
	Cmf Machinist	Central Maintenance Facility	SWEPCO-Generation
	Cmf Team Leader	Central Maintenance Facility	SWEPCO-Generation
	Cmf Team Leader	Central Maintenance Facility	SWEPCO-Generation
	Machinist App 1St Yr (Cmf)	Central Maintenance Facility	SWEPCO-Generation
	Cmf Welder-Machinist	Central Maintenance Facility	SWEPCO-Generation
	Cmf Machinist	Central Maintenance Facility	SWEPCO-Generation
	Planner Prin	Central Maintenance Facility	SWEPCO-Generation
	Coordinator-Code Welding QC	Rso-West	AEP Service Corporation
	Coordinator-Code Welding QC	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
	Team Leader	Rso-West	AEP Service Corporation
Hatcher,Rusty H	Region Prod Support Supv	Rso-West	AEP Service Corporation
Hamil,Brian E	Region Prod Support Supv	Rso-West	AEP Service Corporation
Strange,Christopher Michael	Region Prod Support Supv	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
Ray,Terry L	Region Prod Support Supv	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
Parker,Timothy D	Region Prod Support Supv	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
	Coordinator Sr	Rso-West	AEP Service Corporation
Gedeon,Russell A	Regional Engineering Svcs Mgr	ES Plant EngrgRegion 5	AEP Service Corporation
	Administrative Asst Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Co-Op Student Engineering	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Drafter Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineering Technologist Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Predictive Maint Coord Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Regional Project Specialist Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineering Technologist Sr	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation
	Engineer Prin	ES Plant EngrgRegion 5	SWEPCO-Generation

SOUTHWESTERN ELECTRIC POWER COMPANY
Production Operations Programs

Regular Unit/Equipment Inspections:
On a regular and frequent basis, plant operations employees inspect equipment operation at all facilities to ensure that equipment is operating correctly and safely. Regular inspections include audible and visual inspection and checking for vibrations and rotating equipment such as pumps and air compressors. Based on the results of equipment inspections, the operations department is able to make recommendations for equipment repair or replacement if necessary, and can determine when it is necessary to fix equipment that is not operating properly.

Control Room Operations and System Monitoring:
SWEPCO's plants make use of control rooms that allow the unit operators to monitor and track the unit performance during operation. Critical pressure, temperature, voltage, current, opacity, and flow indicators, among other instruments, allow operators to determine if operation is out of the ordinary in a short amount of time. Many of the systems are also set to alarm automatically, notifying the operators that there a condition that is abnormal or could potentially threaten the operation of the unit. At any time, a unit is also staffed with equipment operators that can quickly verify equipment condition and operation on the unit, allowing the unit operators to determine if it is possible to continue unit operation, or whether a unit outage is necessary to prevent further damage or to maintain safe operating condition for the workers present.

Cycle Water Chemistry Program:
SWEPCO participates in AEP's program to attain World-Class Cycle Water Chemistry, which is a program with the goal of minimizing the frequency and severity of water chemistry related boiler tube and turbine blade failures. While this program has a strong basis in programs developed outside AEP (such as the Electric Power Research Institute, EPRI), AEP has tailored this program to specifically meet the needs of each power plant in SWEPCO's generating fleet. The basis of the program is the 12 characteristics developed by AEP that define world-class water chemistry. As part of this cycle water chemistry program, SWEPCO plants participate in cycle water chemistry benchmarking, which measures the performance of the plant in reaching world class status. This includes plant peer reviews, which is an internal audit of the plant's chemistry program. Each plant is required to perform quarterly sampling of all cycle water, which is sent to a central facility and analyzed independently to ensure that there are not any abnormalities in the cycle water chemistry that could lead to operational problems. This program includes Unit Specific Chemical Operating Specifications developed by AEP for each of SWEPCO's coal plants that sets limits and action levels for cycle water chemistry to protect the units from cycle chemistry upsets.

Operational Excellence Program:
SWEPCO participates in AEP's fleet program for Operational Excellence. The Operational Excellence Team is comprised of Plant Managers, Operations Superintendents, Operations Specialists, Process Improvement Specialists, and Technical Skills Specialists to find opportunities for continuous improvement of plant operations, and to help facilitate the vision of zero operational errors. Each Plant in AEP's fleet performs an assessment, using the guidelines of this program as a standard, and implements a plan and timetable to accomplish objectives to achieve the goal of operational excellence.

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
Production Operations Programs

Continuous Improvement:
What was the Lean program is now called Continuous Improvement. As part of the AEP company-wide effort to integrate continuous improvement into every aspect of the company's business, this program is ongoing at SWEPCO's generation units. Continuous Improvement includes organized engagement of employees, with the goal of identifying and implementing efficiency gains in both the Operations and Maintenance of the generating units.

Employee Training:
SWEPCO provides employee training in various manners. Employees receive training on a variety of topics such as safety rules and regulations, environmental requirements, and plant specific technical aspects of operating equipment. Operations personnel review plant piping and instrument diagrams and electrical schematics to ensure they are familiar with the plant layout and design. Much of the initial operations training is provided on a computer-based program. Supervisors are involved in the training process, providing a personal one-on-one support to ensure the employee is learning the required skills necessary for operation of the plant.

Plant Historical Data, Plant Information (PI) System, and AEP Monitoring & Diagnostics Center:
Through a system of indicators and monitors, the plant is capable of measuring performance versus historical trends to determine the condition of plant equipment without direct inspection. Instrumentation that shows temperature, pressure, flow, voltage, etc, can show developing problems with equipment at the plant. This data is also available for monitoring and analysis via the plant PI system, which allows users to analyze plant operation via the company intranet. In this manner, it is possible for AEPSC and SWEPCO employees to remotely monitor plant performance and troubleshoot equipment at many plants over a short period.

The AEP system wide Monitoring & Diagnostics Center provides data anomaly detection via Advanced Pattern Recognition software modeling of plant equipment using the plant PI data. Historic operating data is mathematically modeled to provide predictions and comparison to current values. Issues identified are indicative of failing/failed sensors, operational changes, and changes in equipment condition. These issues are communicated to plant subject matter experts for determination/remediation of the data anomaly. Issues of concern are shared among plants via the Operational Excellence Program and Employee Training.

Maximo:
Plants utilize a computerized maintenance program called Maximo, which replaced Asset Suite in August of 2019. Work requests, Preventive Maintenance, supply chain management and other maintenance related activities are all handled through this system. Operations personnel identify equipment problems and make requests for work to be done on specific equipment using Maximo. They can also check on the status of equipment work request with the system. This ensures that all identified problems are documented and the proper priority is placed on each work request.

System-wide production operations studies: No such studies exist.

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
Production Maintenance Programs

Planned Outages:
Planned outages are another important part of Production Maintenance Programs. Some types of maintenance can only be done when the unit is not operating. Examples of these types of maintenance would be boiler inspection and repairs, environmental equipment inspections and repairs, air heater inspections and repairs, high pressure valve inspection and repairs, precipitator inspection and repairs and high energy piping inspections. Another example of maintenance work requiring a planned outage would be the secondary superheater and reheater section replacements that have been performed at the Welsh units. In this case, SWEPCO is looking to replace a very large piece of equipment that may have a lead time of months to years. As the old equipment reaches the end of its life it is more susceptible to failure, and the failure of equipment such as a reheater has the capability of doing more collateral damage to other equipment at the plant. Therefore, as the performance of the existing equipment deteriorates, SWEPCO takes the responsibility of properly planning for the equipment replacement to minimize the amount of time that the plant is required to be out of service for the equipment replacement. Properly planning for replacement of equipment such as this minimizes that chance of a catastrophic failure of the equipment, and minimizes the amount of time that the unit is unavailable for electric generation. Unit outages are planned and pre-scheduled in a manner that has the units down during non-peak times of the year. System demands are taken into consideration when arranging the outage schedules. Typical planned outages may vary in length from a week to four weeks. Major overhaul outages that involve turbine / generator inspections can be eight weeks or longer, depending on the planned work to be done during the outage.

Preventive Maintenance (PM) and Predictive Maintenance (PdM) Programs:
Plants utilize Preventive Maintenance (PM) and Predictive Maintenance (PdM) Programs as a part of their maintenance strategy to protect their key assets. These programs typically perform some type of inspection or service on a specific piece of equipment to determine equipment condition. This is typically set up to be done on a set frequency based on time or equipment running time. Additionally, the Monitoring & Diagnostics Center can detect changes in equipment condition which could trigger an inspection or service requirement. PM programs can include things like lubricant replacement, drive belt inspection, clearance checks and replacement of key wear parts. PdM programs typically examine equipment for signs or indications of potential problems so that the problems can be repaired or resolved in a timely manner prior to the equipment actually falling. This allows the plant to schedule the work at an opportune time and avoids unexpected equipment failure. PdM programs may include technologies such as vibration analysis, oil analysis, acoustic monitoring or thermal imaging inspections. These advanced technologies allow for equipment condition determination while the equipment is in service, thereby reducing equipment downtime.

Routine Maintenance:

SOUTHWESTERN ELECTRIC POWER COMPANY
Production Maintenance Programs

Through SWEPCO's operation and maintenance programs, there is a great amount of planned maintenance work that is performed based on the amount of time that a specific piece of equipment has been in service at each plant. One example would be coal pulverizers, which are regularly rebuilt as the internal parts wear due to normal use. Another example would be the overhaul of a turbine, which could be based on vendor recommendations, or recommendations from the AEP Engineering Services – Turbine Generator and Piping group that projects the next recommended inspection for the HP or LP turbines by taking into account the operating hours, loading factor and number of startups. SWEPCO also relies on the Plant Reliability and Optimization program (PRO, described in more detail below) to determine the proper maintenance intervals for its turbines, with the modification that the Company assigns a single value for hot and cold turbine starts, making SWEPCO's approach more conservative that that included in the PRO program.

Maximo:
Plants utilize a computerized maintenance program called Maximo, which replaced Asset Suite in August of 2019. Work requests, Preventive Maintenance, supply chain management and other maintenance related activities are all handled through this system. Operations personnel identify equipment problems and make requests for work to be done on specific equipment using Maximo. They can also check on the status of equipment work request with the system. This ensures that all identified problems are documented and the proper priority is placed on each work request.

Plant Reliability Optimization Program:
The Plant Reliability Optimization (PRO) program is an Asset Management process that consists of making informed decisions managing the life cycle of assets to improve reliability, safety, and performance. PRO is established in SWEPCO coal and lignite plants as well as the combined cycle gas plants. The PRO program identifies equipment that is critical to plant operation and reliability, while ensuring proper prioritization of work by focusing on the most critical needs first. The PRO program places emphasis on pre planning and scheduling work to be done at least four weeks prior to the actual work being performed. It helps to ensure that parts and supplies needed to do the job are identified and on site prior to the beginning of the job, eliminating work barriers and optimizing resources. PRO also integrates the plant PM / PdM programs into one package and brings all of the available equipment condition information on a piece of equipment into one location, making evaluation and planning much more efficient.

Continuous Improvement:
What was the Lean program is now called Continuous Improvement. As part of the AEP company-wide effort to integrate continuous improvement into every aspect of the company's business, this program is ongoing at SWEPCO's generation units. Continuous Improvement includes organized engagement of employees, with the goal of

identifying and implementing efficiency gains in both the Operations and Maintenance of the generating units.

Boiler Reliability Optimization Program:
The Boiler Reliability Optimization (BRO) Program was established for the purpose of reducing boiler tube failures and subsequent unit forced outages within the AEP fossil plant fleet. A corporate team of boiler experts establish guidelines for inspection routines and repair standards. Each plant has a BRO team that inspects the boiler and is involved in the identification and implementation of repairs. The plant BRO team is also involved in pre-planning for the upcoming unit outages and documenting the work done.

GAP Program:
The GAP Program provides plants a method of documenting plant events such as forced outages or derates. These events are evaluated to determine the root cause, repair and solution to the problem. They are then shared with the rest of the fleet so that others may be aware of the lessons learned from the incident.

High Energy Piping Inspection Program: The High Energy Piping (HEP) Inspection Program is a program aimed at determining and monitoring the condition of high temperature and high pressure steam and water piping systems that are subjected to conditions that could lead to unexpected leakage or failure. The program focuses primarily on high temperature piping manufactured with longitudinal seam welds and other seamless piping systems which are subjected to high levels of stress or flow accelerated corrosion (FAC) while in service. The program includes gathering of extensive baseline condition information from the HEP longitudinal seam welds and circumferential girth welds using full volumetric ultrasonic testing equipment and from the piping sections susceptible to FAC using thickness measuring equipment during unit outages. Piping system hanger inspections and stress modeling analyses are also performed. Condition assessments provide for detection of fabrication flaws, early stage creep damage and micro cracks, or pipe wall thinning which can then be removed or repaired during scheduled outages prior to causing a through-wall leak. By finding potential blowout sections and repairing them during a scheduled outage, forced outages due to unexpected failures are prevented.

System-wide production maintenance studies: No such studies exist.

Schedule H-10

SOUTHWESTERN ELECTRIC POWER COMPANY
Nuclear Decommissioning Cost Studies
For the Test Year Ended March 31, 2020

This information is not applicable to Southwestern Electric Power Company

SOUTHWESTERN ELECTRIC POWER COMPANY
O&M Expenses per Production Plant Expenses
2015 to 2019; Test Year Ending March 31, 2020

Line No.	(1) Description	(2) Fuel Type	(3) 2015	(4) 2016	(5) 2017	(6) 2018	(7) 2019	(8) Test Year
1	Arsenal Hill	Natural Gas	15%	16%	16%	18%	22%	23%
2	Knox Lee	Natural Gas	62%	53%	76%	54%	63%	69%
3	Lieberman	Natural Gas	67%	68%	80%	63%	69%	69%
4	Lonestar	Natural Gas	62%	64%	67%	53%	52%	54%
5	Wilkes	Natural Gas	26%	29%	30%	26%	25%	27%
6	Mattison (CT)	Natural Gas	14%	7%	6%	7%	11%	11%
7	Flint Creek	Coal	23%	36%	29%	30%	30%	35%
8	Turk	Coal	29%	26%	24%	26%	25%	26%
9	Welsh	Coal	19%	27%	17%	19%	21%	24%
10	Dolet Hills	Lignite	19%	22%	34%	22%	16%	19%
11	Pirkey	Lignite	16%	15%	17%	18%	20%	21%

SOUTHWESTERN ELECTRIC POWER COMPANY
MAINTENANCE MAN-HOUR RATIO

The maintenance man-hour information below is for SWEPCO's Pirkey Plant, which is the only plant other than Welsh that has the ability to report maintenance information on such a basis.

Pirkey Power Plant

Line No.	(1) Year	(2) Work Order Type	(3) Actual Man-Hours	(4) Ratio PM/CM	(5) Ratio PM/ total	(6) Ratio CM/total
1	2017	CM	30,423	69.15%		59.12%
2		PM	21,039		40.88%	
3	2018	CM	26,353	76.31%		56.72%
4		PM	20,110		43.28%	
5	2019	CM	17,655	106.13%		48.51%
6		PM	18,737		51.49%	
9	Test Year	CM	18,871	102.76%		49.32%
10		PM	19,392		50.68%	

Note: does not include outage hours.

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
MAINTENANCE MAN-HOUR RATIO

The maintenance man-hour information below is for SWEPCO's Welsh Plant, which is the only plant other than Pirkey that has the ability to report maintenance information on such a basis.

Welsh Power Plant

Line No.	(1) Year	(2) Work Order Type	(3) Actual Man-Hours	(4) Ratio PM/CM	(5) Ratio PM/ total	(6) Ratio CM/total
1	2017	CM	36,038	44.68%		69.12%
2		PM	16,103		30.88%	
3	2018	CM	32,332	52.47%		65.59%
4		PM	16,963		34.41%	
5	2019	CM	28,890	67.63%		59.66%
6		PM	19,538		40.34%	
9	Test Year	CM	19,319	61.90%		61.77%
10		PM	11,958		38.23%	

Note: does not include outage hours.

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
O&M Cost per MWh
2015 to 2019; Test Year Ending March 31, 2020

Line No.	(1) Description	(2) Fuel Type	(3) 2015	(4) 2016	(5) 2017	(6) 2018	(7) 2019	(8) Test Year
1	Arsenal Hill	Natural Gas	$ 3.83	$ 3.92	$ 4.56	$ 5.39	$ 5.81	$ 5.37
2	Knox Lee	Natural Gas	$ 58.21	$ 43.04	$ 126.61	$ 50 13	$ 56.33	$ 63.60
3	Lieberman	Natural Gas	$ 75.14	$ 79.19	$ 163.65	$ 71.82	$ 63.91	$ 64.24
4	Lonestar	Natural Gas	$ 61.72	$ 91.38	$ 104.33	$ 65.51	$ 40.08	$ 42.62
5	Wilkes	Natural Gas	$ 13.85	$ 14.50	$ 17 19	$ 14.66	$ 11.85	$ 12.04
6	Mattison (CT)	Natural Gas	$ 60.45	$ 10.03	$ 23.31	$ 27.25	$ 8.80	$ 9.11
7	Flint Creek	Coal	$ 6.18	$ 11.65	$ 7.97	$ 8.71	$ 8.72	$ 11.38
8	Turk	Coal	$ 8.89	$ 7.75	$ 6.47	$ 7.12	$ 6.91	$ 7.56
9	Welsh	Coal	$ 5.57	$ 8.55	$ 5.03	$ 5.45	$ 6.55	$ 7.93
10	Dolet Hills	Lignite	$ 10.55	$ 14.13	$ 22.66	$ 29.55	$ 22.99	$ 28.15
11	Pirkey	Lignite	$ 7.07	$ 6.49	$ 7.17	$ 7.69	$ 10.61	$ 11.69

Sponsored by: Michael Baird and Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
O&M Cost per MWh
For the Test Year Ending March 31,2020

Line No	(1) Description	(2) Fuel Type	(3) Apr-19	(4) May-19	(5) Jun-19	(6) Jul-19	(7) Aug-19	(8) Sep-19	(9) Oct-19	(10) Nov-19	(11) Dec-19	(12) Jan-20	(13) Feb-20	(14) Mar-20	(15) Test Year
1	Arsenal Hill	Natural Gas	$ 3 05	$ 4 86	$ 3 66	$ 2 94	$ 2 73	$ 4 01	$ 36 97	$ 363 64	$ 74 36	$ 3 64	$ 1 70	$ 3 81	$ 5 37
2	Knox Lee	Natural Gas	$ 36 45	$ 31 07	$ 38 06	$ 105.86	$ 49 02	$ 16 10	$ 168.25	Note 1	Note 1	Note 1	$ 113 12	$ 72.22	$ 63 60
3	Lieberman	Natural Gas	$ 331 88	$ 80.14	$ 58 28	$ 19.40	$ 26 97	$ 28 75	$ 66.28	$ 154 29	Note 1	$ 328 55	Note 1	Note 1	$ 64 24
4	Lonestar	Natural Gas	Note 1	Note 1	Note 1	Note 1	$ 76 98	$ 17 84	$ 20 53	$ 391 82	Note 1	Note 1	Note 1	Note 1	$ 42 62
5	Wilkes	Natural Gas	$ 19 97	$ 6 62	$ 8 15	$ 9 25	$ 6 35	$ 10 59	$ 41 93	$ 9 85	$ 20 08	$ 13 61	$ 20 14	$ 19 54	$ 12 04
6	Mattison (CT)	Natural Gas	$ 2.70	$ 3.51	$ 8 93	$ 2 78	$ 15.09	$ 6 47	$ 9.30	$ 19 34	$ 1,808 99	$ 53.09	Note 1	Note 1	$ 9.11
7	Flint Creek	Coal	Note 1	$ 9.02	$ 7.74	$ 6 70	$ 7.13	$ 7 50	$ 10.01	$ 20 89	$ 18 59	$ 10.38	$ 9 09	$ 150.71	$ 11 38
8	Turk	Coal	$ 8 31	$ 29 83	$ 6 45	$ 6 68	$ 5 81	$ 7 54	$ 5 53	$ 5 74	$ 5 61	$ 7 52	$ 7 28	$ 8 12	$ 7 56
9	Welsh	Coal	$ 11 79	$ 5 68	$ 6 03	$ 5 31	$ 4 98	$ 6 56	$ 17.98	$ 4 44	$ 10 85	$ 14.49	$ 10 87	$ 11.72	$ 7 93
10	Dolet Hills	Lignite	Note 1	$ 15.55	$ 13.49	$ 8 00	$ 11.75	$ 8 15	$ 178 33	Note 1	Note 1	Note 1	Note 1	Note 1	$ 28 15
11	Pirkey	Lignite	$ 6 80	$ 8 09	$ 8.99	$ 8 65	$ 6.58	Note 1	Note 1	$ 18.49	$ 22 17	$ 8 87	$ 7 96	$ 8 78	$ 11.69

Note 1 No MWh were generated this month

Sponsored by Michael Baird and Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
O&M Cost per MWh
2015 to 2019; Test Year Ending March 31, 2020

Line No.	(1) Description	(2) Fuel Type	(3) 2015	(4) 2016	(5) 2017	(6) 2018	(7) 2019	(8) Test Year
1	Arsenal Hill	Natural Gas	$ 3.83	$ 3.92	$ 4 56	$ 5.39	$ 5.81	$ 5.37
2	Knox Lee	Natural Gas	$ 58.21	$ 43.04	$ 126.61	$ 50.13	$ 56.33	$ 63.60
3	Lieberman	Natural Gas	$ 75.14	$ 79.19	$ 163.65	$ 71.82	$ 63.91	$ 64.24
4	Lonestar	Natural Gas	$ 61.72	$ 91.38	$ 104.33	$ 65.51	$ 40.08	$ 42.62
5	Wilkes	Natural Gas	$ 13.85	$ 14.50	$ 17.19	$ 14.66	$ 11.85	$ 12.04
6	Mattison (CT)	Natural Gas	$ 60.45	$ 10.03	$ 23.31	$ 27.25	$ 8.80	$ 9.11
7	Flint Creek	Coal	$ 6.18	$ 11.65	$ 7.97	$ 8.71	$ 8.72	$ 11.38
8	Turk	Coal	$ 8.89	$ 7.75	$ 6.47	$ 7.12	$ 6.91	$ 7.56
9	Welsh	Coal	$ 5.57	$ 8.55	$ 5.03	$ 5.45	$ 6.55	$ 7.93
10	Dolet Hills	Lignite	$ 10.55	$ 14.13	$ 22.66	$ 29.55	$ 22.99	$ 28.15
11	Pirkey	Lignite	$ 7.07	$ 6.49	$ 7.17	$ 7.69	$ 10.61	$ 11.69

Sponsored by: Michael Baird and Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
O&M Cost per MWh
For the Test Year Ending March 31,2020

Line No	(1) Description	(2) Fuel Type	(3) Apr-19	(4) May-19	(5) Jun-19	(6) Jul-19	(7) Aug-19	(8) Sep-19	(9) Oct-19	(10) Nov-19	(11) Dec-19	(12) Jan-20	(13) Feb-20	(14) Mar-20	(15) Test Year
1	Arsenal Hill	Natural Gas	$ 3.05	$ 4.86	$ 3 66	$ 2.94	$ 2 73	$ 4 01	$ 36 97	$ 363 64	$ 74 36	$ 3 64	$ 1 70	$ 3.81	$ 5 37
2	Knox Lee	Natural Gas	$ 36 45	$ 31 07	$ 38 06	$ 105 86	$ 49 02	$ 16 10	$ 168 25	Note 1	Note 1	Note 1	$ 113 12	$ 72 22	$ 63 60
3	Lieberman	Natural Gas	$ 331 88	$ 80.14	$ 58.28	$ 19 40	$ 26 97	$ 28.75	$ 66 28	$ 154 29	Note 1	$ 328 55	Note 1	Note 1	$ 64.24
4	Lonestar	Natural Gas	Note 1	Note 1	Note 1	Note 1	$ 76 98	$ 17 84	$ 20 53	$ 391 82	Note 1	Note 1	Note 1	Note 1	$ 42 62
5	Wilkes	Natural Gas	$ 19 97	$ 6 62	$ 8.15	$ 9 25	$ 6 35	$ 10 59	$ 41 93	$ 9 85	$ 20 08	$ 13 61	$ 20 14	$ 19 54	$ 12 04
6	Mattison (CT)	Natural Gas	$ 2 70	$ 3.51	$ 8.93	$ 2 78	$ 15 09	$ 6.47	$ 9 30	$ 19 34	$ 1,808.99	$ 53 09	Note 1	Note 1	$ 9 11
7	Flint Creek	Coal	Note 1	$ 9 02	$ 7 74	$ 6 70	$ 7 13	$ 7 50	$ 10 01	$ 20 89	$ 18 59	$ 10.38	$ 9 09	$ 150.71	$ 11 38
8	Turk	Coal	$ 8.31	$ 29 83	$ 6 45	$ 6 68	$ 5 81	$ 7 54	$ 5 53	$ 5 74	$ 5 61	$ 7 52	$ 7 28	$ 8 12	$ 7 56
9	Welsh	Coal	$ 11 79	$ 5 68	$ 6 03	$ 5 31	$ 4 98	$ 6 56	$ 17 98	$ 4 44	$ 10 85	$ 14 49	$ 10 87	$ 11 72	$ 7 93
10	Dolet Hills	Lignite	Note 1	$ 15 55	$ 13 49	$ 8 00	$ 11 75	$ 8 15	$ 178 33	Note 1	Note 1	Note 1	Note 1	Note 1	$ 28 15
11	Pirkey	Lignite	$ 6 80	$ 8 09	$ 8 99	$ 8 65	$ 6 58	Note 1	Note 1	$ 18 49	$ 22 17	$ 8 87	$ 7 96	$ 8 78	$ 11 69

Note 1 No MWh were generated this month

Sponsored by Michael Baird and Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
SUPPLY AND LOAD DATA

SWEPCO has not filed a fuel reconciliation with its current base rate case; therefore, this schedule is not applicable.

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			MWh PRODUCTION BY UNIT											
Line No	Year	Month	AH5	KL2	KL3	KL4	KL5	LIEB1	LIEB2	LIEB3	LIEB4	LS1	MAT1	MAT2
1	2016	Jul	7,932	1,243	1,467	4,180	21,839	0	-	2,412	8,165	2,210	3,728	2,890
2		Aug	4,447	579	346	2,075	24,517	0	328	2,759	4,101	1,117	3,662	3,929
3		Sep	3,285	317	-	1,163	27,551	0	352	-	1,872	568	2,062	2,140
4		Oct	4,194	311	-	2,269	32,676	0	914	5,024	8,582	1,644	-	1,122
5		Nov	-	406	406	974	1,294	0	312	-	4,820	484	-	684
6		Dec	955	264	-	-	4,782	0	330	-	-	-	-	-
7	July - December 2016		20,812	3,120	2,219	10,661	112,659	-	2,235	10,194	27,541	6,024	9,452	10,766
8	2017	Jan	-	-	-	69	3,218	-	-	-	-	-	-	-
9		Feb	-	-	-	-	-	-	-	-	-	-	-	-
10		Mar	-	-	-	-	-	-	-	-	-	-	-	-
11		Apr	3,806	-	-	2,088	-	-	-	-	1,257	-	-	-
12		May	-	-	-	-	-	-	-	-	-	-	-	1,870
13		Jun	3,548	-	-	-	5,854	-	-	2,576	-	-	-	1,853
14		Jul	2,956	511	469	989	24,881	-	388	3,982	3,292	-	2,646	653
15		Aug	-	-	-	-	-	-	-	-	-	1,131	1,801	1,781
16		Sep	868	-	-	815	5,768	-	-	994	1,019	-	81	-
17		Oct	964	300	336	1,040	5,553	-	-	1,214	2,178	-	1,818	1,845
18		Nov	12,463	-	-	-	-	-	-	7,891	10,221	-	-	-
19		Dec	-	-	-	-	-	-	-	-	-	-	49	-
20	Total 2017		24,607	811	804	5,002	45,274	-	388	16,658	17,967	1,131	6,395	8,002
21	2018	Jan	2,949	569	223	-	21,864	-	365	1,513	4,279	583	1,394	1,376
22		Feb	-	-	-	-	-	-	-	-	-	-	-	-
23		Mar	-	-	-	-	2,794	-	-	-	-	-	-	-
24		Apr	3,221	281	-	-	2,111	-	649	2,873	4,453	1	1,910	1,923
25		May	5,506	-	-	-	41,799	-	1,280	10,914	4,513	1,897	2,330	4,750
26		Jun	2,497	247	-	-	20,256	-	-	3,491	1,292	708	-	-
27		Jul	4,752	1,013	953	-	26,058	-	1,035	5,402	5,949	2,001	2,786	2,199
28		Aug	2,254	337	-	-	13,797	-	356	6,178	4,330	-	1,109	1,376
29		Sep	2,614	-	-	-	-	-	-	-	-	-	244	322
30		Oct	-	418	-	-	-	-	-	-	552	-	-	-
31		Nov	1,733	973	459	-	3,015	-	567	-	6,718	728	2,156	2,784
32		Dec	-	-	-	-	5,688	-	-	23	-	-	-	-
33	Total 2018		25,526	3,839	1,635	-	137,382	-	4,252	30,394	32,086	5,918	11,929	14,730
34	2019	Jan	4,308	-	-	-	2,240	-	-	-	-	-	1,671	2,680
35		Feb	-	-	-	-	7,542	-	-	-	-	-	552	1,136
36		Mar	4,734	900	760	-	12,398	-	567	2,593	-	-	-	974

Sponsored by: Scott E Mertz

Schedule H-12.2
Page 1 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
			MWh PRODUCTION BY UNIT										
Line No	Year	Month	MAT3	MAT4	StallA	StallB	StallS	WKL1	WKL2	WKL3	PRK1	DH1	WSH1
1	2016	Jul	777	34	105,741	105,060	131,955	28,728	54,051	-	445,083	205,163	259,693
2		Aug	660	604	104,468	103,976	131,063	32,191	49,836	-	413,460	187,637	251,133
3		Sep	3,244	3,218	94,442	94,579	122,050	5,555	37,628	-	453,734	127,621	258,211
4		Oct	-	1,106	68	24	82	17,929	-	-	425,799	90,105	311,609
5		Nov	-	688	85,456	83,620	100,255	32,391	-	-	148,655	48,501	70,579
6		Dec	-	-	84,428	83,358	100,816	30,169	-	-	474,660	114,415	249,205
7	July - December 2016		4,681	5,650	474,603	470,617	586,221	146,962	141,514	-	2,361,392	773,442	1,400,429
8	2017	Jan	-	-	79,608	58,481	84 616	28,335	-	-	463,953	149,598	305,004
9		Feb	-	-	59,475	58,195	74,449	26,285	-	-	394,070	108,302	197,466
10		Mar	-	-	84,764	85,069	108,112	31,328	-	-	349 699	27,602	283,065
11		Apr	-	-	65,464	65,469	83,154	27,347	-	-	-	70,676	316,865
12		May	-	-	88,229	88,845	115,012	30,996	-	7,414	193,964	186,918	281,479
13		Jun	2,707	5,388	91,251	91,535	118,507	26,309	13,701	2,456	302,206	183,751	276,773
14		Jul	4,055	4,364	97,624	97,664	125,225	30,936	16,705	30,887	394,314	128,634	323,399
15		Aug	2,087	2,255	95,539	95,438	120,901	25,942	3,093	7,820	464,187	55,258	283,228
16		Sep	1,021	3,755	77,745	78,684	101,591	12,648	21,177	17,416	417,748	-	300,625
17		Oct	1,827	1,844	83,268	83,925	107,113	-	28,232	14,061	329,486	-	65,616
18		Nov	1,081	4,757	0	0	0	648	2,625	-	439,787	-	239,587
19		Dec	58	1,029	61,763	79,453	78,777	20,009	4,609	3,651	445,332	-	297,527
20	Total 2017		12,834	23,391	884,731	882,759	1,117,456	260,784	90,143	83,705	4,194,746	910,739	3,170,633
21	2018	Jan	-	1,312	95,332	94,574	109,699	20,255	18,569	-	453,947	83,285	269,420
22		Feb	-	-	80,210	79,834	93,607	28,754	-	-	383,357	69,983	206,719
23		Mar	-	-	88,748	86,850	104,843	17,168	-	3,026	438,400	-	201,343
24		Apr	-	-	63,260	62,188	75,011	33,568	-	13,182	118,156	-	169,723
25		May	2,610	2,525	87,740	89,176	111,491	22,682	-	3,573	453,634	18,568	46,751
26		Jun	1,820	1,829	95,100	92,434	121,019	-	30,341	41,437	437,269	85,190	225,938
27		Jul	2,071	2,512	102,733	85,856	119,280	24,011	43,723	59,282	383,047	80,975	273,844
28		Aug	840	1,338	92,553	88,788	116,684	26,226	18,178	12,319	464,579	86,768	264,057
29		Sep	-	-	66,693	63,784	84,854	15,754	7,038	9,667	445,140	87,508	228,128
30		Oct	552	-	16,459	15,936	20,749	11,728	13,793	10,835	333,999	56,312	309,230
31		Nov	2,437	2,450	21,710	13,997	19,767	17,519	15,445	20,529	294,796	-	312,248
32		Dec	-	-	36,523	36,924	42,725	19,122	13,720	2,119	271,382	-	318,319
33	Total 2018		10,329	11,965	847,059	810,342	1,019,730	236,789	160,807	175,969	4,477,706	568,589	2,825,721
34	2019	Jan	-	-	58,273	60,055	69,615	23,696	5,551	3,731	468,452	-	268,403
35		Feb	-	-	72,874	72,656	84,787	25,201	3,559	3,614	342,501	-	163,749
36		Mar	1,067	532	79 263	84,141	98,317	24,797	-	15,183	330,222	11,995	191,219

Sponsored by Scott E Mertz

Schedule H-12.2
Page 2 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(24)	(25)	(26)	(27)	(28)
			MWh PRODUCTION BY UNIT				
Line No	Year	Month	WSH2	WSH3	FC	TK	Sub Total
1	2016	Jul	-	224,041	140,866	220,012	1,977,271
2		Aug	-	263,565	162,879	239,110	1,988,442
3		Sep	-	225,677	169,614	239,756	1,874,641
4		Oct	-	92,226	69,648	251,883	1,317,212
5		Nov	-	245,706	75,272	179,052	1,079,554
6		Dec	-	333,461	164,501	165,196	1,806,538
7	July - December 2016		-	1,384,676	782,780	1,295,009	10,043,658
8	2017	Jan	-	294,948	143,396	243,669	1,854,895
9		Feb	-	240,447	131,002	214,370	1,504,061
10		Mar	-	18,050	158,417	240,906	1,387,013
11		Apr	-	75,978	107,873	236,799	1,056,777
12		May	-	194,172	-	130,455	1,319,355
13		Jun	-	249,782	50,101	232,985	1,661,283
14		Jul	-	318,814	151,859	253,038	2,018,286
15		Aug	-	298,575	159,451	239,930	1,858,418
16		Sep	-	69,171	116,906	234,249	1,462,281
17		Oct	-	73,172	119,485	225,784	1,149,060
18		Nov	-	290,686	126,738	221,673	1,358,158
19		Dec	-	288,345	126,145	232,849	1,639,596
20	Total 2017		-	2,412,139	1,391,373	2,706,707	18,269,182
21	2018	Jan	-	261,217	150,729	228,980	1,822,431
22		Feb	-	97,059	120,203	206,590	1,366,317
23		Mar	-	125,282	4,832	224,406	1,297,693
24		Apr	-	232,927	-	209,365	994,804
25		May	-	251,070	64,019	39,505	1,266,335
26		Jun	-	255,539	130,802	218,318	1,765,526
27		Jul	-	269,760	133,815	237,384	1,870,441
28		Aug	-	259,032	138,754	241,033	1,840,887
29		Sep	-	227,290	119,885	197,733	1,556,656
30		Oct	-	119,768	93,236	199,200	1,202,767
31		Nov	-	218,926	162,375	254,898	1,376,228
32		Dec	-	313,278	164,237	246,329	1,470,388
33	Total 2018		-	2,631,149	1,282,887	2,503,742	17,830,474
34	2019	Jan	-	260,490	159,300	235,402	1,623,867
35		Feb	-	217,973	139,048	217,464	1,352,657
36		Mar	-	254,238	121,860	244,517	1,480,276

Sponsored by: Scott E. Mertz

Schedule H-12.2
Page 3 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
			MWh PRODUCTION BY UNIT											
Line No	Year	Month	AH5	KL2	KL3	KL4	KL5	LIEB1	LIEB2	LIEB3	LIEB4	LS1	MAT1	MAT2
37		Apr	1,226	910	835	-	11,619	-	-	1,421	-	-	3,637	3,691
38		May	4,777	590	-	-	11,647	-	651	1,388	2,292	0	4,026	4,071
39		Jun	6,461	-	787	-	9,421	-	14	4,245	3,099	-	2,189	2,221
40		Jul	12,710	-	-	-	4,198	-	1,586	15,234	7,194	-	11,698	11,795
41		Aug	7,443	-	-	-	8,438	-	1,262	5,672	8,687	254	541	794
42		Sep	9,567	-	-	-	30,580	-	1,547	7,157	5,363	3,839	3,507	6,018
43		Oct	3,205	-	-	-	4,988	-	595	2,432	2,737	7,351	3,605	3,647
44		Nov	6,784	-	-	-	-	-	522	-	1,607	292	1,135	1,165
45		Dec	-	-	-	-	-	-	-	-	0	-	-	-
46	Total 2019		61,215	2,400	2,381	-	103,071	-	6,744	40,139	30,978	11,736	32,561	38,192
47	2020	Jan	-	-	-	-	-	-	-	982	313	-	-	-
48		Feb	-	-	-	-	3,036	-	-	-	-	-	-	-
49		Mar	781	-	-	-	5,820	-	-	-	-	-	-	-
50	January - March 2020		781	-	-	-	8,856	-	-	982	313	-	-	-
												-		
51	Grand Total		132,940	10,170	7,039	15,663	407,242	-	13,619	98,368	108,884	24,809	60,337	71,690

Sponsored by Scott E Mertz

Schedule H-12.2
Page 4 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)	(21)	(22)	(23)
			MWh PRODUCTION BY UNIT										
Line No	Year	Month	MAT3	MAT4	StallA	StallB	StallS	WKL1	WKL2	WKL3	PRK1	DH1	WSH1
37		Apr	10,779	13,862	76,890	75,902	93,083	24,415	-	9,997	362,837	-	69,764
38		May	9,965	6,833	66,878	61,269	78,926	35,121	21,703	13,430	323,675	38,781	247,990
39		Jun	3,007	3,093	95,868	96,120	119,630	30,172	20,588	20,517	292,083	107,916	200,925
40		Jul	6,497	5,136	105,411	105,645	130,393	24,758	17,508	36,758	295,962	114,897	225,061
41		Aug	4,771	4,637	106,175	106,569	131,973	29,089	40,339	42,109	341,162	114,425	214,065
42		Sep	2,363	5,209	101,265	100,912	125,971	8,328	19,331	20,635	-	134,158	233,668
43		Oct	2,190	1,755	14,074	14,097	17,221	3,409	7,914	11,423	-	8,574	200,443
44		Nov	2,185	2,236	0	0	0	23,752	17,668	13,418	83,132	-	208,038
45		Dec	-	84	11,330	6,039	7,924	29,971	3,221	-	150,887	-	52,824
46	Total 2019		42,825	43,375	788,301	783,405	957,842	282,709	157,383	190,814	2,990,914	530,746	2,276,149
47	2020	Jan	-	1,684	94,741	98,869	104,737	27,032	6,544	-	212,753	-	-
48		Feb	-	-	108,779	109,465	126,214	13,625	10,801	-	208,016	-	-
49		Mar	-	-	90,838	90,874	109,494	28,877	-	2,835	195,389	-	-
50	January - March 2020		-	1,684	294,358	299,208	340,445	69,534	17,345	2,835	616,158	-	-
51	Grand Total		70,669	86,065	3,289,052	3,246,331	4,021,694	996,778	567,191	453,324	14,640,915	2,783,517	9,672,933

Schedule H-12.2
Page 5 of 12

Sponsored by Scott E. Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT
JULY 2016 THROUGH MARCH 2020

			(24)	(25)	(26)	(27)	(28)
			MWh PRODUCTION BY UNIT				
Line No	Year	Month	WSH2	WSH3	FC	TK	Sub Total
37		Apr	-	164,886	-	179,899	1,105,654
38		May	-	182,656	99,828	81,373	1,297,870
39		Jun	-	189,694	112,019	199,503	1,519,572
40		Jul	-	198,470	124,455	206,275	1,661,641
41		Aug	-	205,990	117,885	203,062	1,695,340
42		Sep	-	152,631	122,260	209,663	1,303,972
43		Oct	-	33,167	76,580	202,248	621,655
44		Nov	-	214,567	46,605	220,700	843,806
45		Dec	-	193,707	53,057	211,789	720,832
46	Total 2019		-	2,268,470	1,172,897	2,411,895	15,227,141
47	2020	Jan	-	151,550	78,609	177,382	955,196
48		Feb	-	150,948	79,840	162,524	973,248
49		Mar	-	167,683	6,047	171,915	870,553
50	January - March 2020		-	470,181	164,496	511,821	2,798,997
51	Grand Total		-	9,166,615	4,794,434	9,429,174	64,169,453

Schedule H-12.2
Page 6 of 12

Sponsored by Scott E Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - COAL, LIGNITE
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			LIGNITE-FIRED PRODUCTION			COAL-FIRED PRODUCTION					
Line No.	Year	Month	PRK1	DH1	Sub Total	WSH1	WSH2	WSH3	FC	TK	Sub Total
1	2016	Jul	444,452	204,687	649,139	258,140	-	224,041	140,591	219,438	842,210
2		Aug	412,805	187.338	600,143	249,334	-	263,565	162,613	238,950	914,462
3		Sep	453,672	127,142	580,814	257,380	-	225,677	169,610	239,615	892,283
4		Oct	425,708	89,892	515,600	311,213	-	92,226	69,443	251,785	724,666
5		Nov	146,735	48,457	195,192	70,579	-	245,706	74,546	178,351	569,182
6		Dec	474,632	112,966	587,598	247,539	-	333,461	164,482	163,409	908,891
7	July - December 2016		2,358,005	770,482	3,128,487	1,394,184	-	1,384,676	781,285	1,291,548	4,851,693
8	2017	Jan	463,523	148,622	612,144	303,955	-	294,948	142,975	243,095	984,973
9		Feb	393,531	108,207	501,738	196,341	-	240,447	130,961	214,310	782,059
10		Mar	349,616	27,456	377,072	282,496	-	18,050	158,392	240,459	699,397
11		Apr	-	70,624	70,624	315,722	-	75,978	107,815	236,754	736,268
12		May	190,578	186,119	376,697	279,951	-	194,172	-	128,972	603,095
13		Jun	301,252	183,230	484,481	275,975	-	249,782	49,199	232,314	807,270
14		Jul	392,902	128,062	520,964	322,967	-	318,814	151,653	252,969	1,046,403
15		Aug	464,182	54,788	518,970	282,374	-	298,575	159,424	239,835	980,208
16		Sep	417,508	-	417,508	299,912	-	69,171	116,322	234,193	719,598
17		Oct	328,008	-	328,008	64,558	-	73,172	119,086	225,115	481,931
18		Nov	439,204	-	439,204	238,822	-	290,686	126,488	222,208	878,204
19		Dec	445,336	-	445,336	296,864	-	288,345	125,883	232,780	943,871
20	Total 2017		4,185,640	907,108	5,092,748	3,159,936	-	2,412,139	1,388,198	2,703,004	9,663,278
21	2018	Jan	453,403	83,163	536,566	268,955	-	261,217	150,687	228,257	909,116
22		Feb	382,323	64,457	446,780	206,293	-	97,059	119,664	205,782	628,799
23		Mar	438,268	-	438,268	200,416	-	125,282	4,478	224,327	554,504
24		Apr	116,663	-	116,663	169,148	-	232,927	-	209,192	611,267
25		May	453,299	18,568	471,867	44,924	-	251,070	63,035	37,103	396,132
26		Jun	437,049	83,337	520,386	225,496	-	255,539	130,528	216,868	828,431
27		Jul	381.919	80,748	462,667	273,490	-	269,760	133,517	237,973	914,740
28		Aug	464,547	85,624	550,171	263,354	-	259,032	138,710	240,990	902,087
29		Sep	445.092	86,351	531,443	227,603	-	227,290	119,776	197,802	772,472
30		Oct	333,414	55,167	388,581	308,877	-	119,768	92,752	197,105	718,501
31		Nov	294,219	-	294,219	311,249	-	218,926	162,357	254,882	947,414
32		Dec	270,561	-	270,561	318,067	-	313,278	164,206	246,264	1,041,815

Sponsored by Scott E Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - COAL, LIGNITE
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
			LIGNITE-FIRED PRODUCTION			COAL-FIRED PRODUCTION					
Line No.	Year	Month	PRK1	DH1	Sub Total	WSH1	WSH2	WSH3	FC	TK	Sub Total
33	Total 2018		4,470,757	557,415	5,028,173	2,817,873	-	2,631,149	1,279,710	2,496,546	9,225,277
34	2019	Jan	468,185	-	468,185	268,135	-	260,490	159,279	235,319	923,223
35		Feb	341,752	-	341,752	162,779	-	217,973	139,005	216,878	736,635
36		Mar	329,253	11,995	341,248	190,896	-	254,238	121,684	244,380	811,197
37		Apr	362,273	-	362,273	68,159	-	164,886	-	179,834	412,880
38		May	322,892	38,781	361,673	247,320	-	182.656	99,297	80,090	609,364
39		Jun	291,242	106,710	397,952	200,021	-	189,694	111,909	199,343	700,967
40		Jul	294,990	114,411	409,401	224,419	-	198,470	124,349	206,183	753,421
41		Aug	340,664	113,568	454,232	213,343	-	205,990	117,772	202,965	740,070
42		Sep	-	133,483	133,483	233,343	-	152,631	122,164	209,562	717,699
43		Oct	-	8,210	8,210	199,209	-	33,167	76,496	202,136	511,008
44		Nov	79,918	-	79,918	207,457	-	214,567	45,875	220,882	688,781
45		Dec	150,009	-	150,009	52,318	-	193.707	52,493	211,726	510,244
46	Total 2019		2,981,179	527,158	3,508,337	2,267,399	-	2,268,470	1,170,323	2,409,298	8,115,491
47	2020	Jan	212,753	-	212,753	-	-	151 481	78,544	177,326	407,351
48		Feb	207,174	-	207,174	-	-	150,773	79,755	162,482	393,010
49		Mar	191,706	-	191,706	-	-	167,493	6,019	171,797	345,309
50	January - March 2020		611,633	-	611,633	-	-	469,747	164,318	511,605	1,145,670
51	Grand Total		14,607,213	2,762,164	17,369,377	9,639,393	-	9,166,181	4,783,835	9,412,001	33,001,410

Sponsored by Scott E Mertz

Schedule H-12.2a, 12.2a1
Page 8 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - NATURAL GAS\OIL
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
			GAS (OIL)-FIRED PRODUCTION															
Line No	Year	Month	AH5	KL2	KL3	KL4	KL5	LIEB1	LIEB2	LIEB3	LIEB4	LS1	MAT1	MAT2	MAT3	MAT4	StallA	StallB
1		Jul	7,932	1,243	1,467	4,180	21,839	-	-	2,412	8,165	2,210	3,728	2,890	777	34	105,741	105,060
2		Aug	4,447	579	346	2,075	24,517	-	328	2,759	4,101	1,117	3,662	3,929	660	604	104,468	103,976
3		Sep	3,285	317	-	1,163	27,551	-	352	-	1,872	568	2,062	2,140	3,244	3,218	94,442	94,579
4		Oct	4,194	311	-	2,269	32,676	-	914	5,024	8,582	1,644	-	1,122	-	1,106	68	24
5		Nov	-	406	406	974	1,294	-	312	-	4,820	484	-	684	-	688	85,456	83,620
6		Dec	955	264	-	-	4,782	-	330	-	-	-	-	-	-	-	84,428	83,358
7	July - December 2016		20,812	3,120	2,219	10,661	112,659	-	2,235	10,194	27,541	6,024	9,452	10,766	4,681	5,650	474,603	470,617
8	2017	Jan	-	-	-	69	3,218	-	-	-	-	-	-	-	-	-	79,608	58,481
9		Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	59,475	58,195
10		Mar	-	-	-	-	-	-	-	-	-	-	-	-	-	-	84,764	85,069
11		Apr	3,806	-	-	2,088	-	-	-	-	1,257	-	-	-	-	-	65,464	65,469
12		May	-	-	-	-	-	-	-	-	-	-	-	1,870	-	-	88,229	88,845
13		Jun	3,548	-	-	-	5,854	-	-	2,576	-	-	-	1,853	2,707	5,388	91,251	91,535
14		Jul	2,956	511	469	989	24,881	-	388	3,982	3,292	-	2,646	653	4,055	4,364	97,624	97,664
15		Aug	-	-	-	-	-	-	-	-	-	1,131	1,801	1,781	2,087	2,255	95,539	95,438
16		Sep	868	-	-	815	5,768	-	-	994	1,019	-	81	-	1,021	3,755	77,745	78,684
17		Oct	964	300	336	1,040	5,553	-	-	1,214	2,178	-	1,818	1,845	1,827	1,844	83,268	83,925
18		Nov	12,463	-	-	-	-	-	-	7,891	10,221	-	-	-	1,081	4,757	-	-
19		Dec	-	-	-	-	-	-	-	-	-	-	49	-	58	1,029	61,763	79,453
20	Total 2017		24,607	811	804	5,002	45,274	-	388	16,658	17,967	1,131	6,395	8,002	12,834	23,391	884,731	882,759
21	2018	Jan	2,949	569	223	-	21,864	-	365	1,513	4,279	583	1,394	1,376	-	1,312	95,332	94,574
22		Feb	-	-	-	-	-	-	-	-	-	-	-	-	-	-	80,210	79,834
23		Mar	-	-	-	-	2,794	-	-	-	-	-	-	-	-	-	88,748	86,850
24		Apr	3,221	281	-	-	2,111	-	649	2,873	4,453	1	1,910	1,923	-	-	63,260	62,188
25		May	5,506	-	-	-	41,799	-	1,280	10,914	4,513	1,897	2,330	4 750	2,610	2,525	87,740	89,176
26		Jun	2,497	247	-	-	20,256	-	-	3,491	1,292	708	-	-	1,820	1,829	95,100	92,434
27		Jul	4,752	1,013	953	-	26,058	-	1,035	5,402	5,949	2,001	2,786	2,199	2,071	2,512	102,733	85,856
28		Aug	2,254	337	-	-	13,797	-	356	6,178	4,330	-	1,109	1,376	840	1,338	92,553	88,788
29		Sep	2,614	-	-	-	-	-	-	-	-	-	244	322	-	-	66,693	63,784
30		Oct	-	418	-	-	-	-	-	-	552	-	-	-	552	-	16,459	15,936
31		Nov	1,733	973	459	-	3,015	-	567	-	6,718	728	2,156	2,784	2,437	2,450	21,710	13,997
32		Dec	-	-	-	-	5,688	-	-	23	-	-	-	-	-	-	36,523	36,924
33	Total 2018		25,526	3,839	1,635	-	137,382	-	4,252	30,394	32,086	5,918	11,929	14,730	10,329	11,965	847,059	810,342

Sponsored by Scott E Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - NATURAL GAS\OIL
JULY 2016 THROUGH MARCH 2020

			(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
			GAS (OIL)-FIRED PRODUCTION									
Line No	Year	Month	StallS	WKL1	WKL2	WKL3	PRK1	DH1	WSH	FC	TK	Sub Total
1		Jul	131,955	28,728	54,051	-	631	476	1,553	275	574	485,922
2		Aug	131,063	32,191	49,836	-	655	299	1,799	266	160	473,837
3		Sep	122 050	5,555	37,628	-	62	479	831	4	141	401,543
4		Oct	82	17,929	-	-	91	213	396	205	98	76,946
5		Nov	100,255	32,391	-	-	1,920	44	-	726	701	315,180
6		Dec	100,816	30,169	-	-	28	1,449	1,666	19	1,787	310,049
7	July - December 2016		586,221	146,962	141,514	-	3,387	2,960	6,245	1,495	3,461	2,063,478
8	2017	Jan	84,616	28,335	-	-	430	976	1,049	421	574	257,778
9		Feb	74,449	26,285	-	-	539	95	1,125	41	60	220,264
10		Mar	108,112	31,328	-	-	83	146	569	25	447	310,544
11		Apr	83,154	27,347	-	-	-	52	1,143	58	45	249,884
12		May	115,012	30,996	-	7,414	3,386	799	1,528	-	1,483	339,563
13		Jun	118,507	26,309	13,701	2,456	954	521	798	902	671	369,532
14		Jul	125,225	30,936	16,705	30,887	1,412	572	432	206	69	450,919
15		Aug	120,901	25,942	3,093	7,820	5	470	854	27	95	359,239
16		Sep	101,591	12,648	21,177	17,416	240	-	713	584	56	325,175
17		Oct	107 113	-	28,232	14,061	1,478	-	1,058	399	669	339,121
18		Nov	-	648	2,625	-	583	-	765	250	(535)	40,749
19		Dec	78,777	20,009	4,609	3,651	(4)	-	663	262	69	250,389
20	Total 2017		1,117,456	260,784	90,143	83,705	9,106	3,631	10,697	3,175	3,703	3,513,156
21	2018	Jan	109,699	20,255	18,569	-	544	122	465	42	723	376,749
22		Feb	93,607	28,754	-	-	1,034	5,526	426	539	808	290,738
23		Mar	104,843	17,168	-	3,026	132	-	927	354	79	304,921
24		Apr	75 011	33,568	-	13,182	1,493	-	575	-	173	266,874
25		May	111,491	22,682	-	3,573	335	-	1,827	984	2,402	398,335
26		Jun	121,019	-	30,341	41,437	220	1,853	442	274	1,450	416,709
27		Jul	119,280	24,011	43,723	59,282	1,128	227	354	298	(589)	493,035
28		Aug	116,684	26,226	18,178	12,319	32	1,144	703	44	43	388,629
29		Sep	84 854	15,754	7,038	9,667	48	1,157	525	109	(69)	252,741
30		Oct	20,749	11,728	13,793	10,835	585	1,145	353	484	2,095	95,685
31		Nov	19,767	17,519	15 445	20,529	577	-	999	18	16	134,595
32		Dec	42,725	19,122	13,720	2,119	821	-	252	31	65	158,013
33	Total 2018		1,019,730	236,789	160,807	175,969	6,949	11,174	7,848	3,177	7,196	3,577,025

Sponsored by Scott E Mertz

Schedule H-12.2b, H-12.2b1
Page 10 of 12

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - NATURAL GAS\OIL
JULY 2016 THROUGH MARCH 2020

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
			GAS (OIL)-FIRED PRODUCTION															
Line No.	Year	Month	AH5	KL2	KL3	KL4	KL5	LIEB1	LIEB2	LIEB3	LIEB4	LS1	MAT1	MAT2	MAT3	MAT4	StallA	StallB
34	2019	Jan	4,308	-	-	-	2,240	-	-	-	-	-	1,671	2,680	-	-	58,273	60,055
35		Feb	-	-	-	-	7,542	-	-	-	-	-	552	1,136	-	-	72,874	72,656
36		Mar	4,734	900	760	-	12,398	-	567	2,593	-	-	-	974	1,067	532	79,263	84,141
37		Apr	1,226	910	835	-	11,619	-	-	1,421	-	-	3,637	3,691	10,779	13,862	76,890	75,902
38		May	4,777	590	-	-	11,647	-	651	1,388	2,292	0	4,026	4,071	9,965	6 833	66,878	61,269
39		Jun	6,461	-	787	-	9,421	-	14	4,245	3,099	-	2,189	2,221	3,007	3,093	95,868	96,120
40		Jul	12,710	-	-	-	4,198	-	1,586	15,234	7 194	-	11,698	11,795	6,497	5,136	105,411	105,645
41		Aug	7,443	-	-	-	8,438	-	1,262	5,672	8,687	254	541	794	4,771	4,637	106,175	106,569
42		Sep	9,567	-	-	-	30,580	-	1,547	7,157	5,363	3,839	3,507	6,018	2,363	5,209	101,265	100,912
43		Oct	3,205	-	-	-	4,988	-	595	2,432	2 737	7,351	3,605	3 647	2,190	1,755	14,074	14,097
44		Nov	6,784	-	-	-	-	-	522	-	1,607	292	1,135	1,165	2,185	2,236	-	-
45		Dec	-	-	-	-	-	-	-	-	0	-	-	-	-	84	11,330	6,039
46	Total 2019		61,215	2,400	2,381	-	103,071	-	6,744	40,139	30,978	11,736	32,561	38,192	42,825	43,375	788,301	783,405
47	2020	Jan	-	-	-	-	-	-	-	982	313	-	-	-	-	1,684	94,741	98,869
48		Feb	-	-	-	-	3,036	-	-	-	-	-	-	-	-	-	108,779	109,465
49		Mar	781	-	-	-	5,820	-	-	-	-	-	-	-	-	-	90,838	90,874
50	Total 2020 thru March		781	-	-	-	8,856	-	-	982	313	-	-	-	-	1,684	294,358	299,208
												-						
51	Grand Total		132,940	10,170	7,039	15,663	407,242	-	13,619	98,368	108,884	24,809	60,337	71,690	70,669	86,065	3,289,052	3,246,331

Sponsored by Scott E Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
MWh PRODUCTION BY UNIT - NATURAL GAS\OIL
JULY 2016 THROUGH MARCH 2020

			(17)	(18)	(19)	(20)	(21)	(22)	(23)	(24)	(25)	(26)
			GAS (OIL)-FIRED PRODUCTION									
Line No	Year	Month	StallS	WKL1	WKL2	WKL3	PRK1	DH1	WSH	FC	TK	Sub Total
34	2019	Jan	69,615	23,696	5,551	3,731	267	-	268	21	83	232,459
35		Feb	84,787	25,201	3,559	3,614	749	-	970	43	586	274,270
36		Mar	98,317	24,797	-	15,183	969	-	323	176	137	327,830
37		Apr	93 083	24,415	-	9,997	564	-	1,605	-	65	330,501
38		May	78,926	35,121	21,703	13,430	783	-	670	531	1,283	326,833
39		Jun	119 630	30,172	20,588	20,517	841	1,206	904	110	160	420,652
40		Jul	130,393	24,758	17,508	36,758	972	486	642	106	92	498,819
41		Aug	131,973	29,089	40,339	42,109	498	857	722	113	97	501,038
42		Sep	125,971	8,328	19,331	20,635	-	675	325	96	101	452,789
43		Oct	17,221	3,409	7,914	11,423	-	364	1,234	84	112	102,437
44		Nov	-	23,752	17,668	13,418	3,214	-	581	730	(182)	75,106
45		Dec	7,924	29,971	3,221	-	878	-	506	564	63	60,579
46	Total 2019		957,842	282,709	157,383	190,814	9,735	3,588	8,750	2,574	2,597	3,603,313
47	2020	Jan	104,737	27,032	6,544	-	-	-	69	65	56	335,092
48		Feb	126,214	13,625	10,801	-	842	-	175	85	42	373,064
49		Mar	109,494	28,877	-	2,835	3,683	-	190	28	118	333,538
50	Total 2020 thru March		340,445	69,534	17,345	2,835	4,525	-	434	178	216	1,041,694
51	Grand Total		4,021,694	996,778	567,191	453,324	33,702	21,353	33,974	10,599	17,173	13,798,666

Sponsored by Scott E Mertz

SOUTHWESTERN ELECTRIC POWER COMPANY
ARSENAL HILL UNIT #5 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0.0	0.00	0.0	0	0	NA	0 0	0 0	REDACTED
Apr-17	4,073	246	3,827	REDACTED	REDACTED	0 0	4.83	263 9	3	89	NA	49 1	49 1	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	3,756	207	3,548	REDACTED	REDACTED	0 0	4 48	26 3	1	71	NA	45 9	45 9	REDACTED
Jul-17	3,171	215	2,956	REDACTED	REDACTED	0.0	3.61	52.1	2	72	NA	39 2	39 2	REDACTED
Aug-17	0	0	0	REDACTED	REDACTED	0.0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Sep-17	935	67	868	REDACTED	REDACTED	0.0	1.10	23 1	1	26	NA	11 4	11 4	REDACTED
Oct-17	1,040	76	964	REDACTED	REDACTED	0 0	1.18	23 7	1	28	NA	12 5	12 5	REDACTED
Nov-17	13,379	915	12,463	REDACTED	REDACTED	0 0	15.71	257 6	2	296	NA	153 5	153.5	REDACTED
Dec-17	0	0	0	REDACTED	REDACTED	0 4	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-18	3,109	161	2,949	REDACTED	REDACTED	0.0	3 60	25 8	3	56	NA	33 8	33 8	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0.0	0.00	0.0	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0.0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	3,469	248	3,221	REDACTED	REDACTED	0.0	4.07	68 1	3	84	NA	34 7	34.7	REDACTED
May-18	5,933	426	5,506	REDACTED	REDACTED	0 0	6 73	120 6	4	142	NA	75 5	75 5	REDACTED
Jun-18	2,688	192	2,497	REDACTED	REDACTED	0 0	3 15	19 5	1	63	NA	33 0	33 0	REDACTED
Jul-18	5,134	381	4,752	REDACTED	REDACTED	0 0	5.81	114 3	2	131	NA	63 2	63 2	REDACTED
Aug-18	2,439	185	2,254	REDACTED	REDACTED	0.0	2.75	57 8	2	63	NA	30 9	30.9	REDACTED
Sep-18	2,801	186	2,614	REDACTED	REDACTED	0.0	3.30	45 2	2	60	NA	34 1	34.1	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0.00	0.0	0	0	NA	0.0	0 0	REDACTED
Nov-18	1,880	147	1,733	REDACTED	REDACTED	0 0	2.18	5 6	1	50	NA	22 0	22 0	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 0	0.00	0.0	0	0	NA	0 0	0 0	REDACTED
Jan-19	4,591	283	4,308	REDACTED	REDACTED	0 0	5.26	94 5	2	118	NA	54 1	54 1	REDACTED
Feb-19	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Mar-19	5,087	353	4,734	REDACTED	REDACTED	0 0	5 79	66 8	3	129	NA	65 6	65 6	REDACTED
Apr-19	1,324	98	1,226	REDACTED	REDACTED	0 1	1 55	14 0	0	33	NA	10.2	10 2	REDACTED
May-19	5,121	344	4,777	REDACTED	REDACTED	0 4	5 84	103 1	2	113	NA	52 3	52 3	REDACTED
Jun-19	6,971	509	6,462	REDACTED	REDACTED	0 0	8.16	122 4	4	173	NA	87 8	87 8	REDACTED
Jul-19	13,691	980	12,710	REDACTED	REDACTED	0.0	15.53	321 1	3	334	NA	157 5	157 5	REDACTED
Aug-19	8,038	595	7,443	REDACTED	REDACTED	0 0	9 09	187 7	3	204	NA	96 2	96 2	REDACTED
Sep-19	10,272	705	9,567	REDACTED	REDACTED	0 0	12.08	93 3	4	231	NA	121 5	121 5	REDACTED
Oct-19	3,451	246	3,205	REDACTED	REDACTED	0 0	3.92	15 9	2	82	NA	33 8	33 8	REDACTED
Nov-19	7,275	491	6,784	REDACTED	REDACTED	0 0	8.55	0 5	2	158	NA	79.5	79 5	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0.0	0.00	0.0	0	0	NA	0 0	0 0	REDACTED
Mar-20	826	45	781	REDACTED	REDACTED	0 0	0 96	0.0	1	13	NA	11 0	11 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 1 of 20

SWEPCO Ownership 40 50%

SOUTHWESTERN ELECTRIC POWER COMPANY
DOLET HILLS UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (SWEPCO Portion)			PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	22,143	0	22,143	54,673	0	54,673	REDACTED	REDACTED	0 0	11 48	0 0	0	144	NA	316 7	316 7	REDACTED
Apr-17	59,841	0	59,841	147,756	0	147,756	REDACTED	REDACTED	0 0	32 02	0 0	2	294	NA	830 1	830 1	REDACTED
May-17	154,591	0	154,591	381,705	0	381,705	REDACTED	REDACTED	0 0	80 04	0 0	0	744	NA	2,124 8	2,124 8	REDACTED
Jun-17	151,127	7	151,120	373,152	17	373,135	REDACTED	REDACTED	0 0	80 89	0 0	0	720	NA	2,090 0	2,090 0	REDACTED
Jul-17	134,242	0	134,242	331,461	0	331,461	REDACTED	REDACTED	0 0	69 54	0 0	0	744	NA	1,948 4	1,948 4	REDACTED
Aug-17	64,697	0	64,697	159,746	0	159,746	REDACTED	REDACTED	0 0	33 51	0 0	2	482	NA	974 8	974 8	REDACTED
Sep-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Nov-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-18	78,037	0	78,037	192,685	0	192,685	REDACTED	REDACTED	0 0	60 78	0 0	2	495	NA	1,108 0	1,108 0	REDACTED
Feb-18	65,050	2	65,048	160 618	5	160,613	REDACTED	REDACTED	0 0	44 55	0 0	1	563	NA	876 6	876 6	REDACTED
Mar-18	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-18	16,364	2	16,361	40,404	6	40,398	REDACTED	REDACTED	0 0	27 84	0 0	1	227	NA	258 2	258 2	REDACTED
Jun-18	89,834	0	89,834	221,812	0	221,812	REDACTED	REDACTED	0 0	47 98	0 0	0	720	NA	1,292 6	1,292 6	REDACTED
Jul-18	102,165	0	102,165	252,259	0	252,259	REDACTED	REDACTED	0 0	56 75	0 0	2	692	NA	526 4	526 4	REDACTED
Aug-18	103,572	0	103,572	255,733	0	255,733	REDACTED	REDACTED	0 0	53 53	0 0	0	744	NA	1,539 6	1,539 6	REDACTED
Sep-18	91,444	0	91,444	225,788	0	225,788	REDACTED	REDACTED	0 0	51 18	0 0	2	687	NA	1,417 6	1,417 6	REDACTED
Oct-18	54,181	0	54,181	133,781	0	133,781	REDACTED	REDACTED	0 0	46 76	0 0	1	446	NA	851 3	851 3	REDACTED
Nov-18	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-18	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0.0	REDACTED
Feb-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-19	10,521	0	10,521	25,978	0	25,978	REDACTED	REDACTED	0 0	5 45	0 0	1	87	NA	157 2	157 2	REDACTED
Apr-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-19	31,878	0	31,878	78,710	0	78,710	REDACTED	REDACTED	0 0	16 48	0 0	2	297	NA	515 4	515 4	REDACTED
Jun-19	83,884	0	83,884	207,120	0	207,120	REDACTED	REDACTED	0 0	44 77	0 0	0	720	NA	1302 0	1302 0	REDACTED
Jul-19	101,053	0	101,053	249513	0	249,513	REDACTED	REDACTED	0 0	52 20	0 0	2	729	NA	1552 7	1552 7	REDACTED
Aug-19	112,799	0	112,799	278516	0	278,516	REDACTED	REDACTED	0 0	58 26	0 0	1	700	NA	1718 4	1718 4	REDACTED
Sep-19	124,433	0	124,433	307243	0	307,243	REDACTED	REDACTED	0 0	66 42	0 0	0	720	NA	1869 5	1869 5	REDACTED
Oct-19	7,600	6	7,594	18765	15	18,750	REDACTED	REDACTED	0 0	3 92	0 0	1	75	NA	131 8	131 8	REDACTED
Nov-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes
SWEPCO Portion Based on 40 5% ownership of Dolet Hills Power Plant
(1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts
(3) SWEPCO Portion of Station Service Calculated from Total Station Service based on Ownership interest in Dolet Hills

Sponsored by Monte McMahon

Schedule H-12.3a
Page 2 of 20

SWEPCO Ownership 50 00%

SOUTHWESTERN ELECTRIC POWER COMPANY
FLINT CREEK UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (SWEPCO Portion)			PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	167,790	11,465	156,325	335,579	22,930	312,649	REDACTED	REDACTED	0 0	81 55	674 6	0	743	NA	1,689 0	1,689 0	REDACTED
Apr-17	111,764	7,733	104,031	223,527	15,466	208,061	REDACTED	REDACTED	0 0	56 00	483 0	0	504	NA	1,132 0	1,132 0	REDACTED
May-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	53,461	4,004	49,456	106,921	8,009	98,912	REDACTED	REDACTED	0 0	26 62	92 8	3	289	NA	530 6	530 6	REDACTED
Jul-17	155,054	10,709	144,345	310,108	21,418	288,690	REDACTED	REDACTED	0 0	75 20	620 4	1	691	NA	1,541 0	1,541 0	REDACTED
Aug-17	164,523	11,414	153,109	329,045	22,827	306,218	REDACTED	REDACTED	0 0	79 76	670 7	0	744	NA	1,656 0	1,656 0	REDACTED
Sep-17	123,481	9,279	114,202	246,962	18,558	228,404	REDACTED	REDACTED	0 1	61 48	458 2	3	638	NA	1,225 1	1,225 1	REDACTED
Oct-17	126,782	9,009	117,773	253,564	18,017	235,547	REDACTED	REDACTED	0 0	61 36	502 9	2	595	NA	1,256 2	1,256 2	REDACTED
Nov-17	136,493	9,433	127,060	272,985	18,866	254,119	REDACTED	REDACTED	0 0	68 31	502 6	1	607	NA	1 342 7	1,342 7	REDACTED
Dec-17	138 428	9,770	128,658	276,856	19,539	257,317	REDACTED	REDACTED	0 0	67 03	538 3	1	624	NA	1 374 6	1,374 6	REDACTED
Jan-18	54,849	12,027	54,849	109,699	24,053	109,699	REDACTED	REDACTED	0 0	76 40	643 6	1	683	NA	1,690 7	1,690 7	REDACTED
Feb-18	46,803	10,367	46,803	93,607	20,734	93,607	REDACTED	REDACTED	0 0	72 17	586 9	1	603	NA	1,363 9	1,363 9	REDACTED
Mar-18	52,422	640	52,422	104,843	1,279	104,843	REDACTED	REDACTED	0 0	73 11	47 8	2	645	NA	56 5	56 5	REDACTED
Apr-18	37,506	0	37,506	75,011	0	75,011	REDACTED	REDACTED	0 0	53 98	0 0	0	457	NA	0 0	0 0	REDACTED
May-18	55,745	5,397	55,745	111,491	10,794	111,491	REDACTED	REDACTED	0 1	77 64	221 1	1	656	NA	707 5	707 5	REDACTED
Jun-18	60,509	10,683	60,509	121,019	21,367	121,019	REDACTED	REDACTED	0 0	87 09	581 0	0	720	NA	1,451 1	1,451 1	REDACTED
Jul-18	59,629	10,826	59,629	119,258	21,652	119,258	REDACTED	REDACTED	0 1	83 05	633 9	0	744	NA	1 484 5	1,484 5	REDACTED
Aug-18	58,342	11,284	58,342	116,684	22,567	116,684	REDACTED	REDACTED	0 0	81 26	716 1	1	691	NA	1,552 6	1,552 6	REDACTED
Sep-18	42,427	10,101	42 427	84,854	20,203	84,854	REDACTED	REDACTED	0 0	61 06	593 0	3	525	NA	1,350 0	1,350 0	REDACTED
Oct-18	10,375	6,937	10 375	20,749	13,873	20,749	REDACTED	REDACTED	0 0	14 45	343 5	0	120	NA	989 7	989 7	REDACTED
Nov-18	9,883	11,621	9,883	19,767	23,241	19,767	REDACTED	REDACTED	0 0	14 21	463 1	3	147	NA	1,716 2	1,716 2	REDACTED
Dec-18	21,363	12,092	21,363	42,725	24,183	42,725	REDACTED	REDACTED	0 0	29 75	501 9	3	262	NA	1,769 6	1,769 6	REDACTED
Jan-19	175,639	12,069	163,570	351,277	24,137	327,140	REDACTED	REDACTED	0 0	85 21	715 3	0	744	NA	1,727 7	1,727 7	REDACTED
Feb-19	152,588	10,644	141,944	305,176	21,288	283,888	REDACTED	REDACTED	0 0	81 87	659 5	0	672	NA	1,484 2	1,484.2	REDACTED
Mar-19	134,097	10,353	123,743	268,193	20,707	247,486	REDACTED	REDACTED	0 0	64 55	599 6	1	681	NA	1,316 3	1,316 3	REDACTED
Apr-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0.0	REDACTED
May-19	109,040	7,982	101,057	218,079	15,965	202,114	REDACTED	REDACTED	0 0	52 65	462 8	1	541	NA	1,107 0	1,107 0	REDACTED
Jun-19	124,552	9,988	114,564	249,103	19,976	229,127	REDACTED	REDACTED	0 0	61 67	663 7	0	720	NA	1,243 3	1,243 3	REDACTED
Jul-19	137,084	10,748	126,336	274,167	21,495	252,672	REDACTED	REDACTED	0 0	65 82	717.6	0	744	NA	1363 5	1,363 5	REDACTED
Aug-19	129,849	10,588	119,261	259,697	21,175	238,522	REDACTED	REDACTED	0 0	62 13	714 6	0	744	NA	1301 5	1,301 5	REDACTED
Sep-19	133,689	10,510	123,179	267,377	21,020	246,357	REDACTED	REDACTED	0 0	66 31	680 0	0	720	NA	1337 6	1,337 6	REDACTED
Oct-19	84,811	8,006	76,805	169,622	16,012	153,610	REDACTED	REDACTED	0 0	40 01	595 4	0	603	NA	857 3	857 3	REDACTED
Nov-19	49,568	4,249	45,319	99,135	8,497	90,638	REDACTED	REDACTED	0 0	24 36	272 5	2	306	NA	499.9	499 9	REDACTED
Dec-19	58,512	5,861	52,651	117,023	11,722	105,301	REDACTED	REDACTED	0 0	27.43	352 4	2	438	NA	596 5	596 5	REDACTED
Jan-20	90,042	9,791	80,251	180,084	19,582	160,502	REDACTED	REDACTED	0.0	41 81	735 5	0	744	NA	935 2	935 2	REDACTED
Feb-20	87,591	9,209	78,382	175,181	18,418	156,763	REDACTED	REDACTED	0 0	43 65	651 3	0	696	NA	911 0	911 0	REDACTED
Mar-20	6,722	669	6,053	13,444	1,338	12,106	REDACTED	REDACTED	0 3	3 16	70 9	0	51	NA	67 1	67 1	REDACTED

SWEPCO Portion Based on 50% ownership of Flint Creek Power Plant

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals.
(2) Hot and cold start data not available, only total starts
(3) SWEPCO Portion of Station Service Calculated from Total Station Service based on Ownership interest in Flint Creek

Sponsored by Monte McMahon

Schedule H-12.3a
Page 3 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE UNIT #5 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	6,234	380	5,854	REDACTED	REDACTED	0 0	2 34	6 1	1	35	NA	72 7	72 7	REDACTED
Jul-17	26,095	1,213	24,881	REDACTED	REDACTED	0 0	9 61	132 0	6	189	NA	289 3	289.3	REDACTED
Aug-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Sep-17	6,119	350	5,768	REDACTED	REDACTED	0.0	2 30	46 5	2	66	NA	76.0	76 0	REDACTED
Oct-17	5,859	307	5,553	REDACTED	REDACTED	0 0	2 14	53 2	2	61	NA	67.5	67 5	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0.00	0 2	0	0	NA	0 0	0 0	REDACTED
Dec-17	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-18	22,859	995	21,864	REDACTED	REDACTED	0 0	8 44	169 2	3	183	NA	240 8	240 8	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-18	2,963	169	2,794	REDACTED	REDACTED	0 0	1 08	32 0	1	35	NA	34.1	34 1	REDACTED
Apr-18	2,251	140	2,111	REDACTED	REDACTED	0 0	0 84	22 3	1	28	NA	28 9	28 9	REDACTED
May-18	43,981	2,181	41,800	REDACTED	REDACTED	0 0	16.14	365 1	5	412	NA	492 6	492 6	REDACTED
Jun-18	21,619	1,363	20,256	REDACTED	REDACTED	0 2	8 08	205 5	4	227	NA	241 5	241 5	REDACTED
Jul-18	27,768	1,710	26,058	REDACTED	REDACTED	0 0	10 06	255.2	5	281	NA	326 2	326 2	REDACTED
Aug-18	14,836	1,040	13,797	REDACTED	REDACTED	0 0	5 33	159 2	2	174	NA	174 6	174 6	REDACTED
Sep-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Nov-18	3,159	144	3,015	REDACTED	REDACTED	0 0	1 20	0 0	1	28	NA	55.9	55 9	REDACTED
Dec-18	5,895	207	5,688	REDACTED	REDACTED	0 2	2 20	0 0	0	37	NA	62 0	62 0	REDACTED
Jan-19	2,389	148	2,240	REDACTED	REDACTED	0 0	0 88	17 7	1	31	NA	37 4	37 4	REDACTED
Feb-19	7,955	414	7,542	REDACTED	REDACTED	0 0	3 26	71 3	2	81	NA	94 1	94 1	REDACTED
Mar-19	13,125	727	12,399	REDACTED	REDACTED	0 4	4 85	141 3	2	147	NA	165.7	165 7	REDACTED
Apr-19	12,338	719	11,619	REDACTED	REDACTED	0 0	4 69	138 2	3	147	NA	149 2	149 2	REDACTED
May-19	12,228	582	11,647	REDACTED	REDACTED	0 0	4 55	81 9	2	115	NA	130 4	130 4	REDACTED
Jun-19	10,009	589	9,421	REDACTED	REDACTED	0 2	3.80	85 4	2	117	NA	128.7	128 7	REDACTED
Jul-19	4,474	276	4,198	REDACTED	REDACTED	0 0	1 64	54 2	2	57	NA	52 9	52 9	REDACTED
Aug-19	8,821	383	8,438	REDACTED	REDACTED	0 0	3 30	22 1	2	57	NA	94.4	94 4	REDACTED
Sep-19	32,636	2,056	30,580	REDACTED	REDACTED	0 0	12 35	236 8	5	331	NA	377 4	377.4	REDACTED
Oct-19	5,278	289	4,988	REDACTED	REDACTED	0 0	1 95	45 1	0	45	NA	50.0	50.0	REDACTED
Nov-19	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0.0	0.00	0.0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Feb-20	3,185	150	3,036	REDACTED	REDACTED	0.0	1.27	9 3	1	23	NA	35 5	35.5	REDACTED
Mar-20	6,137	317	5,820	REDACTED	REDACTED	0.2	2.28	53 0	1	63	NA	70 4	70.4	REDACTED

Notes. (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 4 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN UNIT #3 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0.0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Jun-17	2,726	150	2,576	REDACTED	REDACTED	0.1	3 28	5 9	1	62	NA	32 2	32 2	REDACTED
Jul-17	4,227	244	3,982	REDACTED	REDACTED	0 0	4 91	26 6	2	97	NA	48 4	48 4	REDACTED
Aug-17	0	0	0	REDACTED	REDACTED	0 5	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Sep-17	1,060	66	994	REDACTED	REDACTED	0.1	1 27	0 0	1	29	NA	12 6	12 6	REDACTED
Oct-17	1,292	78	1,214	REDACTED	REDACTED	0 0	1.50	0 0	1	36	NA	14 9	14 9	REDACTED
Nov-17	8,404	512	7,892	REDACTED	REDACTED	0 0	10 04	3 6	2	246	NA	91 5	91 5	REDACTED
Dec-17	0	0	0	REDACTED	REDACTED	0.0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-18	1,596	83	1,513	REDACTED	REDACTED	0.0	1 87	0 0	1	33	NA	19 8	19 8	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0.0	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	3,046	173	2,873	REDACTED	REDACTED	0 0	3 66	0 0	3	76	NA	0 0	0 0	REDACTED
May-18	11,550	636	10,914	REDACTED	REDACTED	0.1	13.46	165 2	6	267	NA	119 2	119 2	REDACTED
Jun-18	3,713	222	3,491	REDACTED	REDACTED	0 0	4 45	54 9	2	93	NA	39 2	39 2	REDACTED
Jul-18	5,749	347	5,402	REDACTED	REDACTED	0 2	6 66	34.1	2	146	NA	64.5	64 5	REDACTED
Aug-18	6,579	401	6,178	REDACTED	REDACTED	0 0	7 62	94 9	2	166	NA	67 2	67 2	REDACTED
Sep-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0.0	REDACTED
Nov-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-18	24	1	23	REDACTED	REDACTED	0 0	0.03	0 0	1	1	NA	0.7	0 7	REDACTED
Jan-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-19	2,713	121	2,593	REDACTED	REDACTED	0 1	3 20	0 0	2	73	NA	33 0	33 0	REDACTED
Apr-19	1,512	92	1,420	REDACTED	REDACTED	0.0	1 81	0 3	0	39	NA	15 9	15.9	REDACTED
May-19	1,388	1	1,388	REDACTED	REDACTED	0 0	1 71	0 0	1	38	NA	16 9	16 9	REDACTED
Jun-19	4,466	221	4,245	REDACTED	REDACTED	0 0	5 41	0.0	2	125	NA	52 2	52.2	REDACTED
Jul-19	16,197	963	15,234	REDACTED	REDACTED	0 0	18.78	0 0	5	409	NA	187 9	187 9	REDACTED
Aug-19	6,038	366	5,672	REDACTED	REDACTED	0 0	6 99	0 0	3	159	NA	68 5	68 5	REDACTED
Sep-19	7,555	398	7,157	REDACTED	REDACTED	0 0	9 12	0 0	3	192	NA	88.6	88 6	REDACTED
Oct-19	2,582	150	2,432	REDACTED	REDACTED	0 1	3 00	0 0	1	62	NA	28 7	28 7	REDACTED
Nov-19	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0 0	0.0	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	1,042	60	982	REDACTED	REDACTED	0 0	1.21	0 0	3	27	NA	12 3	12 3	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0.0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by. Monte McMahon

Schedule H-12.3a
Page 5 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN UNIT #4 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0		REDACTED
Apr-17	1,317	60	1,257	REDACTED	REDACTED	0 0	1 62	15 1	1	27	NA	16.4	16 4	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jul-17	3,481	189	3,292	REDACTED	REDACTED	0 0	4 10	17 8	1	82	NA	40 0	40 0	REDACTED
Aug-17	0	0	0	REDACTED	REDACTED	0 5	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Sep-17	1,082	62	1,019	REDACTED	REDACTED	0 0	1.31	6 9	1	28	NA	12.9	12 9	REDACTED
Oct-17	2,306	130	2,176	REDACTED	REDACTED	0 1	2.71	7 3	2	59	NA	28 5	28 5	REDACTED
Nov-17	10,750	529	10,221	REDACTED	REDACTED	0 0	13 13	111 0	0	241	NA	118.6	118 6	REDACTED
Dec-17	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Jan-18	4,534	255	4,279	REDACTED	REDACTED	0.3	5.33	13.7	3	106	NA	56 1	56 1	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 3	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Apr-18	4,699	246	4,453	REDACTED	REDACTED	0 0	5 73	80 1	3	106	NA	0 0	0 0	REDACTED
May-18	4,791	278	4,513	REDACTED	REDACTED	0.3	5 62	31 6	3	124	NA	49.3	49 3	REDACTED
Jun-18	1,372	80	1,292	REDACTED	REDACTED	0 5	1 66	24 5	1	35	NA	14 5	14 5	REDACTED
Jul-18	6,313	363	5,949	REDACTED	REDACTED	0 0	7.40	61 8	4	155	NA	71 0	71.0	REDACTED
Aug-18	4,597	267	4,330	REDACTED	REDACTED	0 2	5 39	26 4	3	114	NA	47.1	47 1	REDACTED
Sep-18	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Oct-18	583	31	552	REDACTED	REDACTED	0 1	0.69	2 8	1	13	NA	6.6	6 6	REDACTED
Nov-18	7,096	377	6,718	REDACTED	REDACTED	0 4	8 63	63 9	2	162	NA	79.7	79 7	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 1	0.00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Feb-19	0	0	0	REDACTED	REDACTED	0.0	0 00	0.0	0	0	NA	0 0	0.0	REDACTED
Mar-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-19	2,370	78	2,292	REDACTED	REDACTED	0.7	2 85	0 0	1	59	NA	27.9	27.9	REDACTED
Jun-19	3,106	7	3,099	REDACTED	REDACTED	0.0	3 99	0 0	2	86	NA	38.1	38 1	REDACTED
Jul-19	7,507	313	7,194	REDACTED	REDACTED	0 0	8 95	0 0	3	187	NA	88 7	88 7	REDACTED
Aug-19	9,169	482	8,687	REDACTED	REDACTED	0 1	10 81	0 0	3	219	NA	104 9	104 9	REDACTED
Sep-19	5,544	182	5,363	REDACTED	REDACTED	0 0	6.90	0 0	2	141	NA	66.4	66 4	REDACTED
Oct-19	2,785	48	2,737	REDACTED	REDACTED	0 2	3 41	0 0	2	70	NA	32.3	32 3	REDACTED
Nov-19	1,642	90	1,552	REDACTED	REDACTED	0.1	2 06	0 0	0	40	NA	18 3	18 3	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	1	0	NA	0.0	0 0	REDACTED
Jan-20	323	10	313	REDACTED	REDACTED	0.0	0.39	0 0	1	7	NA	3.9	3 9	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0.0	0 00	0.0	0	0	NA	0.0	0 0	REDACTED

Notes. (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 6 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jul-17	2,646	0	2,646	REDACTED	REDACTED	0 0	4 56	0 0	1	37	NA	32 5	32 5	REDACTED
Aug-17	1,801	0	1,801	REDACTED	REDACTED	0 0	3 10	0 0	3	29	NA	26 3	26 3	REDACTED
Sep-17	81	0	81	REDACTED	REDACTED	0 0	0 14	0 0	1	6	NA	1 0	1 0	REDACTED
Oct-17	1,818	0	1,818	REDACTED	REDACTED	0 0	3 13	0 0	1	25	NA	24 9	24 9	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	49	0	49	REDACTED	REDACTED	0 0	0 08	0 0	1	1	NA	0 6	0 6	REDACTED
Jan-18	1,394	0	1,394	REDACTED	REDACTED	0 0	2 40	0 00	1	24	NA	18 5	18 5	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Apr-18	1,910	0	1,910	REDACTED	REDACTED	0 0	3 40	0 00	1	25	NA	22 5	22 5	REDACTED
May-18	2,330	0	2,330	REDACTED	REDACTED	0 0	4 01	0 00	1	32	NA	28 1	28 1	REDACTED
Jun-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Jul-18	2,791	0	2,791	REDACTED	REDACTED	0 0	4 81	0 00	2	39	NA	33 9	33 9	REDACTED
Aug-18	550	0	550	REDACTED	REDACTED	0 0	0 95	0 00	1	8	NA	12 0	12 0	REDACTED
Sep-18	244	0	244	REDACTED	REDACTED	0 0	0 43	0 00	1	4	NA	3 2	3 2	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Nov-18	2,156	0	2,156	REDACTED	REDACTED	0 0	3 83	0 00	1	25	NA	24 7	24 7	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Jan-19	1,671	0	1,671	REDACTED	REDACTED	0 0	2 88	0 00	2	19	NA	22 0	22 0	REDACTED
Feb-19	552	0	552	REDACTED	REDACTED	0 0	1 05	0 00	1	6	NA	6 4	6 4	REDACTED
Mar-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Apr-19	3,637	0	3,637	REDACTED	REDACTED	0 0	6 48	0 00	2	49	NA	43 6	43 6	REDACTED
May-19	4,026	0	4,026	REDACTED	REDACTED	0 0	6 94	0 00	1	55	NA	48 9	48 9	REDACTED
Jun-19	2,189	0	2,189	REDACTED	REDACTED	0 0	3 90	0 00	1	30	NA	26 8	26 8	REDACTED
Jul-19	11,698	0	11,698	REDACTED	REDACTED	0 0	20 16	0 00	2	161	NA	141 1	141 1	REDACTED
Aug-19	541	0	541	REDACTED	REDACTED	0 0	0 93	0 00	1	8	NA	6.6	6 6	REDACTED
Sep-19	3,507	0	3,507	REDACTED	REDACTED	0 1	6 24	0 00	3	50	NA	42 5	42 5	REDACTED
Oct-19	3,605	0	3,605	REDACTED	REDACTED	0 0	6 21	0 00	2	46	NA	44 8	44 8	REDACTED
Nov-19	1,135	0	1,135	REDACTED	REDACTED	0 0	2 02	0 00	1	13	NA	13 1	13 1	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 00	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 7 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON UNIT #2 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	1,870	0	1,870	REDACTED	REDACTED	0 0	3 22	0 0	1	24	NA	22 3	22 3	REDACTED
Jun-17	1,853	0	1,853	REDACTED	REDACTED	0 0	3 30	0 0	1	26	NA	22 2	22 2	REDACTED
Jul-17	653	0	653	REDACTED	REDACTED	0 0	1 13	0 0	2	9	NA	8 0	8 0	REDACTED
Aug-17	990	0	990	REDACTED	REDACTED	0 0	1 71	0 0	3	29	NA	14 5	14 5	REDACTED
Sep-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-17	1,845	0	1,845	REDACTED	REDACTED	0 0	3 18	0 0	1	25	NA	25 2	25 2	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-18	1,376	0	1,376	REDACTED	REDACTED	0 0	2 37	0 0	1	24	NA	18 3	18 3	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	1,923	0	1,923	REDACTED	REDACTED	0 0	3 42	0 0	1	25	NA	22 7	22 7	REDACTED
May-18	4,750	0	4,750	REDACTED	REDACTED	0 0	8 18	0 0	2	64	NA	57 3	57 3	REDACTED
Jun-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jul-18	2,199	0	2,199	REDACTED	REDACTED	0 0	3 79	0 0	1	29	NA	26.7	26 7	REDACTED
Aug-18	1,376	0	1,376	REDACTED	REDACTED	0 0	2 37	0 0	2	19	NA	14 9	14 9	REDACTED
Sep-18	322	0	322	REDACTED	REDACTED	0 0	0 57	0 0	1	5	NA	4 2	4 2	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Nov-18	2,784	0	2 784	REDACTED	REDACTED	0 0	4 95	0 0	1	31	NA	31 9	31 9	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-19	2,142	0	2,142	REDACTED	REDACTED	0 0	3 69	0 0	3	30	NA	28 3	28 3	REDACTED
Feb-19	1,136	0	1,136	REDACTED	REDACTED	0 0	2 17	0 0	1	13	NA	13 3	13 3	REDACTED
Mar-19	974	0	974	REDACTED	REDACTED	0 0	1 68	0 0	1	11	NA	181 7	181 7	REDACTED
Apr-19	3,691	0	3,691	REDACTED	REDACTED	0 0	6 57	0 0	2	49	NA	44 3	44 3	REDACTED
May-19	4,071	0	4,071	REDACTED	REDACTED	0 0	7 01	0 0	1	55	NA	49 5	49 5	REDACTED
Jun-19	2,221	0	2,221	REDACTED	REDACTED	0 0	3 95	0 0	1	30	NA	27 2	27.2	REDACTED
Jul-19	11,796	0	11,796	REDACTED	REDACTED	0 0	20 33	0 0	2	161	NA	142 3	142 3	REDACTED
Aug-19	794	0	794	REDACTED	REDACTED	0 0	1 37	0 0	1	11	NA	9 7	9 7	REDACTED
Sep-19	6,018	0	6,018	REDACTED	REDACTED	0 1	10 72	0 0	1	83	NA	72 9	72 9	REDACTED
Oct-19	3,647	0	3,647	REDACTED	REDACTED	0 0	6 28	0 0	2	46	NA	45 4	45 4	REDACTED
Nov-19	1,165	0	1,165	REDACTED	REDACTED	0 0	2 07	0 0	1	13	NA	13 4	13 4	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 8 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON UNIT #3 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	2,707	0	2 707	REDACTED	REDACTED	0 0	4 76	0 0	1	37	NA	32 5	32 5	REDACTED
Jul-17	4,055	0	4,055	REDACTED	REDACTED	0 0	6 90	0.0	2	56	NA	49 8	49 8	REDACTED
Aug-17	1,887	0	1,887	REDACTED	REDACTED	0 0	3 21	0 0	3	35	NA	27 6	27 6	REDACTED
Sep-17	1,021	0	1,021	REDACTED	REDACTED	0 0	1 80	0 0	1	14	NA	12 5	12 5	REDACTED
Oct-17	1,827	0	1,827	REDACTED	REDACTED	0 0	3 11	0 0	1	24	NA	25 0	25 0	REDACTED
Nov-17	1,081	0	1,081	REDACTED	REDACTED	0 1	1 90	0 0	1	14	NA	12 7	12 7	REDACTED
Dec-17	58	0	58	REDACTED	REDACTED	0 0	0 10	0 0	1	1	NA	0 7	0 7	REDACTED
Jan-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-18	2,610	0	2,610	REDACTED	REDACTED	0 0	4 44	0 0	2	36	NA	31 5	31 5	REDACTED
Jun-18	1,820	0	1,820	REDACTED	REDACTED	0 0	3 20	0 0	1	25	NA	21 9	21 9	REDACTED
Jul-18	2,071	0	2,071	REDACTED	REDACTED	0 0	3 52	0 0	1	29	NA	25 2	25 2	REDACTED
Aug-18	840	0	840	REDACTED	REDACTED	0 0	1 43	0 0	2	12	NA	9 1	9 1	REDACTED
Sep-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-18	552	0	552	REDACTED	REDACTED	0 0	0 94	0.0	1	8	NA	6.7	6 7	REDACTED
Nov-18	2,437	0	2,437	REDACTED	REDACTED	0 0	4 28	0 0	1	28	NA	27 9	27 9	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-19	1,067	0	1,067	REDACTED	REDACTED	0 0	1 82	0 0	2	13	NA	199 2	199 2	REDACTED
Apr-19	10,779	0	10,779	REDACTED	REDACTED	0 0	18 95	0 0	12	143	NA	129 2	129 2	REDACTED
May-19	9,965	0	9,965	REDACTED	REDACTED	0 0	16 95	0 0	14	136	NA	121 1	121 1	REDACTED
Jun-19	3,007	0	3,007	REDACTED	REDACTED	0 0	5 29	0 0	6	43	NA	36 8	36 8	REDACTED
Jul-19	6,497	0	6,497	REDACTED	REDACTED	0 0	11 05	0 0	9	90	NA	78 4	78 4	REDACTED
Aug-19	4,771	0	4,771	REDACTED	REDACTED	0 0	8 12	0 0	9	78	NA	58 3	58 3	REDACTED
Sep-19	2,363	0	2,363	REDACTED	REDACTED	0 1	4 15	0 0	5	34	NA	28 6	28 6	REDACTED
Oct-19	1,760	0	1,760	REDACTED	REDACTED	0 0	2 99	0 0	3	30	NA	21 9	21 9	REDACTED
Nov-19	2,185	0	2,185	REDACTED	REDACTED	0 0	3 84	0 0	1	25	NA	25 2	25 2	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 9 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON UNIT #4 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	Net Heat Rate BTU/kWh
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	5,388	0	5,388	REDACTED	REDACTED	0 0	9 35	0 0	2	73	NA	64 6	64 6	REDACTED
Jul-17	4,364	0	4,364	REDACTED	REDACTED	0 0	7 33	0 0	1	61	NA	53 6	53 6	REDACTED
Aug-17	2,265	0	2,265	REDACTED	REDACTED	0 0	3 81	0 0	3	36	NA	33 1	33 1	REDACTED
Sep-17	3,755	0	3,755	REDACTED	REDACTED	0 0	6 52	0 0	2	47	NA	46 1	46 1	REDACTED
Oct-17	1,844	0	1,844	REDACTED	REDACTED	0 0	3 10	0 0	1	25	NA	25 2	25 2	REDACTED
Nov-17	4,757	0	4,757	REDACTED	REDACTED	0 0	8 25	0 0	1	59	NA	55 9	55 9	REDACTED
Dec-17	1,029	0	1,029	REDACTED	REDACTED	0 0	1 73	0 0	1	13	NA	12 4	12 4	REDACTED
Jan-18	1,312	0	1,312	REDACTED	REDACTED	0 0	2 20	0 0	2	23	NA	17 4	17 4	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-18	2,525	0	2,525	REDACTED	REDACTED	0 0	4 24	0 0	2	35	NA	30 5	30 5	REDACTED
Jun-18	1,829	0	1,829	REDACTED	REDACTED	0 0	3 17	0 0	1	25	NA	22 0	22 0	REDACTED
Jul-18	2,512	0	2,512	REDACTED	REDACTED	0 0	4 22	0 0	1	35	NA	30 5	30 5	REDACTED
Aug-18	1,338	0	1,338	REDACTED	REDACTED	0 0	2 25	0 0	2	19	NA	14 5	14 5	REDACTED
Sep-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Nov-18	2,450	0	2,450	REDACTED	REDACTED	0 0	4 25	0 0	1	28	NA	28 1	28 1	REDACTED
Dec-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-19	532	0	532	REDACTED	REDACTED	0 0	0 90	0 0	1	7	NA	99 3	99 3	REDACTED
Apr-19	13,862	0	13,862	REDACTED	REDACTED	0 0	24 07	0 0	15	182	NA	166 2	166 2	REDACTED
May-19	6,833	0	6,833	REDACTED	REDACTED	0 0	11 48	0 0	8	93	NA	83 1	83 1	REDACTED
Jun-19	3,093	0	3,093	REDACTED	REDACTED	0 0	5 37	0 0	6	43	NA	37 9	37 9	REDACTED
Jul-19	5,136	0	5,136	REDACTED	REDACTED	0 0	8 63	0 0	10	73	NA	62 0	62 0	REDACTED
Aug-19	4,637	0	4,637	REDACTED	REDACTED	0 0	7 79	0 0	9	65	NA	56 7	56 7	REDACTED
Sep-19	5,209	0	5,209	REDACTED	REDACTED	0 1	9 04	0 0	3	72	NA	63 1	63 1	REDACTED
Oct-19	1,755	0	1,755	REDACTED	REDACTED	0 0	2 95	0 0	2	24	NA	21 8	21 8	REDACTED
Nov-19	2,236	0	2,236	REDACTED	REDACTED	0 0	3 88	0 0	1	25	NA	25 8	25 8	REDACTED
Dec-19	84	0	84	REDACTED	REDACTED	0 0	0 14	0 0	1	1	NA	1 4	1 4	REDACTED
Jan-20	1,684	0	1,684	REDACTED	REDACTED	0 0	2 83	0 0	3	29	NA	22 0	22 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 10 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
STALL PLANT (ARESENAL HILL UNIT #6A) GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	84,764	0	84,764	REDACTED	REDACTED	0 0	67 51	518 1	2	658	NA	989 9	989 9	REDACTED
Apr-17	65,464	0	65,464	REDACTED	REDACTED	0 0	53 80	306 2	1	498	NA	786 8	786 8	REDACTED
May-17	88,220	0	88,220	REDACTED	REDACTED	0 0	70 16	507 7	2	712	NA	1,056 1	1,056 1	REDACTED
Jun-17	91,251	0	91,251	REDACTED	REDACTED	0 0	74 99	443 6	0	720	NA	1,092 5	1,092 5	REDACTED
Jul-17	97,624	0	97,624	REDACTED	REDACTED	0 0	77 64	327 7	0	744	NA	1,153 7	1,153 7	REDACTED
Aug-17	95,539	0	95,539	REDACTED	REDACTED	0 0	75 98	350 2	0	744	NA	1,141 3	1,141 3	REDACTED
Sep-17	77,745	0	77,745	REDACTED	REDACTED	0 0	63 89	282 4	1	618	NA	932 0	932 0	REDACTED
Oct-17	83,268	0	83,268	REDACTED	REDACTED	0 0	66 22	430 4	1	645	NA	972 9	972 9	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	61,928	0	61,928	REDACTED	REDACTED	0 0	49 25	359 6	5	443	NA	731 8	731 8	REDACTED
Jan-18	95,332	0	95,332	REDACTED	REDACTED	0 0	75 82	505 8	1	682	NA	1,100 4	1,100 4	REDACTED
Feb-18	80,210	0	80,210	REDACTED	REDACTED	0 1	70 63	438 6	1	571	NA	930 9	930 9	REDACTED
Mar-18	88,748	0	88,748	REDACTED	REDACTED	0 0	70 68	441 6	2	647	NA	1,035 5	1,035 5	REDACTED
Apr-18	63,260	0	63,260	REDACTED	REDACTED	0 0	51 99	325 9	0	457	NA	722 3	722 3	REDACTED
May-18	87,740	0	87,740	REDACTED	REDACTED	0 0	69 78	249 7	3	639	NA	1,039 0	1,039 0	REDACTED
Jun-18	95,100	0	95,100	REDACTED	REDACTED	0 0	78 16	345 4	0	720	NA	1,129 2	1,129 2	REDACTED
Jul-18	102,708	0	102,708	REDACTED	REDACTED	0 0	81 69	284 0	0	744	NA	1,212 6	1,212 6	REDACTED
Aug-18	92,553	0	92,553	REDACTED	REDACTED	0 0	73 61	313 4	1	693	NA	1,099 0	1,099 0	REDACTED
Sep-18	66,693	0	66,693	REDACTED	REDACTED	0 0	54 81	299 3	3	530	NA	802 2	802 2	REDACTED
Oct-18	16,459	0	16,459	REDACTED	REDACTED	0 0	13 09	44 8	0	120	NA	182 4	182 4	REDACTED
Nov-18	21,710	0	21,710	REDACTED	REDACTED	0 0	17 82	100 6	4	156	NA	249 9	249 9	REDACTED
Dec-18	36,523	0	36,523	REDACTED	REDACTED	0 2	29 05	142 7	4	261	NA	419 3	419 3	REDACTED
Jan-19	58,273	0	58,273	REDACTED	REDACTED	0 0	46 35	298 1	4	418	NA	687 3	687 3	REDACTED
Feb-19	72,874	0	72,874	REDACTED	REDACTED	0 0	64 17	297 6	2	486	NA	829 9	829 9	REDACTED
Mar-19	79,263	0	79,263	REDACTED	REDACTED	0 1	63 12	326 1	2	560	NA	912 7	912 7	REDACTED
Apr-19	76,890	0	76,890	REDACTED	REDACTED	0 0	63 19	303 0	3	550	NA	886 2	886 2	REDACTED
May-19	66,878	0	66,878	REDACTED	REDACTED	0 0	53 19	233 3	1	468	NA	772 4	772 4	REDACTED
Jun-19	95,868	0	95,868	REDACTED	REDACTED	0 0	78 79	366 7	1	691	NA	1,116 1	1,116 1	REDACTED
Jul-19	105,411	0	105,411	REDACTED	REDACTED	0 0	83 84	398 7	0	744	NA	1,220 3	1,220 3	REDACTED
Aug-19	106,175	0	106,175	REDACTED	REDACTED	0 0	84 44	412 7	0	744	NA	1,230 7	1,230 7	REDACTED
Sep-19	101,265	0	101,265	REDACTED	REDACTED	0 0	83 22	504 6	1	714	NA	1,181 1	1,181 1	REDACTED
Oct-19	14,074	0	14,074	REDACTED	REDACTED	0 0	11 19	55 6	0	95	NA	149 8	149 8	REDACTED
Nov-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-19	11,330	0	11,330	REDACTED	REDACTED	0 0	9 01	37 2	3	94	NA	142 3	142 3	REDACTED
Jan-20	94,741	0	94,741	REDACTED	REDACTED	0 1	75 35	276 2	4	614	NA	1107 7	1107 7	REDACTED
Feb-20	108,779	0	108,779	REDACTED	REDACTED	0 0	92 48	337 7	2	693	NA	1214 0	1214 0	REDACTED
Mar-20	90,838	0	90,838	REDACTED	REDACTED	0 0	72 34	451 1	2	629	NA	1042 0	1042 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 11 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
STALL PLANT (ARESENAL HILL UNIT #6B) GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	85,069	0	85,069	REDACTED	REDACTED	0 0	66 57	518 1	2	662	NA	993 4	993 4	REDACTED
Apr-17	65,469	0	65,469	REDACTED	REDACTED	0 0	52 87	306 2	1	501	NA	786 9	786 9	REDACTED
May-17	88,833	0	88,833	REDACTED	REDACTED	0 0	69 42	507 7	1	715	NA	1,063 4	1,063 4	REDACTED
Jun-17	91,535	0	91,535	REDACTED	REDACTED	0 0	73 91	443 6	0	720	NA	1,095 9	1,095 9	REDACTED
Jul-17	97,664	0	97,664	REDACTED	REDACTED	0 0	76 32	327 7	0	744	NA	1,154 2	1,154 2	REDACTED
Aug-17	95,438	0	95,438	REDACTED	REDACTED	0 0	74 58	350 2	0	744	NA	1,140 0	1,140 0	REDACTED
Sep-17	78,684	0	78,684	REDACTED	REDACTED	0 0	63 54	282 4	1	621	NA	943 3	943 3	REDACTED
Oct-17	83,925	0	83,925	REDACTED	REDACTED	0 0	65 58	430 4	0	648	NA	980 6	980 6	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	79,619	0	79,619	REDACTED	REDACTED	0 0	62 22	359 6	3	563	NA	940 9	940 9	REDACTED
Jan-18	94,574	0	94,574	REDACTED	REDACTED	0 0	73 90	505 8	2	685	NA	1,091 6	1,091 6	REDACTED
Feb-18	79,835	0	79,835	REDACTED	REDACTED	0 0	69 07	438 6	2	579	NA	926 6	926 6	REDACTED
Mar-18	86,850	0	86,850	REDACTED	REDACTED	0 0	67 96	441 6	2	640	NA	1,013 3	1,013 3	REDACTED
Apr-18	62,188	0	62,188	REDACTED	REDACTED	0 0	50 22	325 9	0	457	NA	710 0	710 0	REDACTED
May-18	89,176	0	89,176	REDACTED	REDACTED	0 0	69 69	249 7	1	660	NA	1,056 0	1,056 0	REDACTED
Jun-18	92,434	0	92,434	REDACTED	REDACTED	0 0	74 64	345 4	0	720	NA	1,097 6	1,097 6	REDACTED
Jul-18	85,799	0	85,799	REDACTED	REDACTED	0 0	67 05	284 0	1	648	NA	1,013 4	1,013 4	REDACTED
Aug-18	88,788	0	88,788	REDACTED	REDACTED	0 0	69 38	313 4	1	690	NA	1,054 3	1 054 3	REDACTED
Sep-18	63,784	0	63,784	REDACTED	REDACTED	0 0	51 51	299 3	3	516	NA	767 2	767 2	REDACTED
Oct-18	15,936	0	15,936	REDACTED	REDACTED	0 0	12 45	44 8	0	120	NA	176.7	176.7	REDACTED
Nov-18	13,997	0	13,997	REDACTED	REDACTED	0 0	11 29	100 6	2	102	NA	161 1	161 1	REDACTED
Dec-18	36,924	0	36,924	REDACTED	REDACTED	0 2	28 85	142 7	3	256	NA	423 9	423 9	REDACTED
Jan-19	60,055	0	60,055	REDACTED	REDACTED	0 1	46 93	298 1	4	436	NA	708 3	708 3	REDACTED
Feb-19	72,657	0	72,657	REDACTED	REDACTED	0 0	62 86	297 6	2	479	NA	827 5	827 5	REDACTED
Mar-19	84,141	0	84,141	REDACTED	REDACTED	0 1	65 84	326 1	1	593	NA	968 9	968 9	REDACTED
Apr-19	75,902	0	75,902	REDACTED	REDACTED	0 0	61 29	303 0	3	541	NA	874 8	874 8	REDACTED
May-19	61,269	0	61,269	REDACTED	REDACTED	0 0	47 88	233 3	2	430	NA	707 7	707 7	REDACTED
Jun-19	96,120	0	96,120	REDACTED	REDACTED	0 0	77 62	366 7	1	689	NA	1,119 0	1,119 0	REDACTED
Jul-19	105,645	0	105 645	REDACTED	REDACTED	0 0	82 56	398 7	0	744	NA	1,223 0	1,223 0	REDACTED
Aug-19	106,569	0	106,569	REDACTED	REDACTED	0 0	83 28	412 7	0	744	NA	1,235 3	1,235 3	REDACTED
Sep-19	100,912	0	100,912	REDACTED	REDACTED	0 0	81 49	504 6	0	720	NA	1,177 0	1,177 0	REDACTED
Oct-19	14,097	0	14,097	REDACTED	REDACTED	0 0	11 02	55 6	0	85	NA	150 1	150 1	REDACTED
Nov-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-19	6,039	0	6,039	REDACTED	REDACTED	0 0	4 72	37 2	2	49	NA	75 9	75 9	REDACTED
Jan-20	98,869	0	98,869	REDACTED	REDACTED	0 1	77 26	276 2	2	637	NA	1155 9	1155 9	REDACTED
Feb-20	109,465	0	109,465	REDACTED	REDACTED	0 0	91 44	337 7	0	696	NA	1221 7	1221 7	REDACTED
Mar-20	90,874	0	90,874	REDACTED	REDACTED	0 0	71 11	451 1	1	628	NA	1042 4	1042 4	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 12 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
STALL PLANT (ARESENAL HILL UNIT #6S) GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	108,112	0	108,112	REDACTED	REDACTED	0 0	75 39	518 1	2	661	NA	0 0	0 0	REDACTED
Apr-17	83,154	0	83,154	REDACTED	REDACTED	0 0	59 84	306 2	1	499	NA	0 0	0 0	REDACTED
May-17	115,023	0	115,023	REDACTED	REDACTED	0 0	80 10	507 7	1	714	NA	0 0	0 0	REDACTED
Jun-17	118,507	0	118,507	REDACTED	REDACTED	0 0	85 28	443 6	0	720	NA	0 0	0 0	REDACTED
Jul-17	125 225	0	125,225	REDACTED	REDACTED	0 0	87 21	327 7	0	744	NA	0 0	0 0	REDACTED
Aug-17	120,901	0	120,901	REDACTED	REDACTED	0 0	84 20	350 2	1	727	NA	0 0	0 0	REDACTED
Sep-17	101,591	0	101,591	REDACTED	REDACTED	0 0	73 11	282 4	1	620	NA	0 0	0 0	REDACTED
Oct-17	107.113	0	107,113	REDACTED	REDACTED	0 0	74 60	430 4	0	649	NA	0 0	0 0	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	78,955	0	78,955	REDACTED	REDACTED	0 0	54 99	359 6	4	553	NA	0 0	0 0	REDACTED
Jan-18	109,699	0	109,699	REDACTED	REDACTED	0 0	76 40	505 8	1	683	NA	0 0	0 0	REDACTED
Feb-18	93,607	0	93,607	REDACTED	REDACTED	0 0	72 17	438 6	1	603	NA	0 0	0 0	REDACTED
Mar-18	104,843	0	104,843	REDACTED	REDACTED	0 0	73 11	441 6	2	645	NA	0 0	0 0	REDACTED
Apr-18	75,011	0	75,011	REDACTED	REDACTED	0 0	53 98	325 9	0	457	NA	0 0	0 0	REDACTED
May-18	111,491	0	111,491	REDACTED	REDACTED	0 0	77 64	249 7	1	656	NA	0 0	0 0	REDACTED
Jun-18	121,019	0	121,019	REDACTED	REDACTED	0 0	87 09	345 4	0	720	NA	0 0	0 0	REDACTED
Jul-18	119,258	0	119,258	REDACTED	REDACTED	0 0	83 05	284 0	0	744	NA	0 0	0 0	REDACTED
Aug-18	116,684	0	116,684	REDACTED	REDACTED	0 0	81 26	313 4	1	691	NA	0 0	0 0	REDACTED
Sep-18	84,854	0	84,854	REDACTED	REDACTED	0 0	61 06	299 3	3	525	NA	0 0	0 0	REDACTED
Oct-18	20,749	0	20,749	REDACTED	REDACTED	0 0	14 45	44 8	0	120	NA	0 0	0 0	REDACTED
Nov-18	19,767	0	19,767	REDACTED	REDACTED	0 0	14 21	100 6	3	147	NA	0 0	0 0	REDACTED
Dec-18	42,725	0	42,725	REDACTED	REDACTED	0 2	29 75	142 7	3	262	NA	0 0	0 0	REDACTED
Jan-19	69,528	0	69,528	REDACTED	REDACTED	0 0	48 42	298 1	5	427	NA	0 0	0 0	REDACTED
Feb-19	84,787	0	84,787	REDACTED	REDACTED	0 0	65 37	297 6	2	483	NA	0 0	0 0	REDACTED
Mar-19	98,317	0	98,317	REDACTED	REDACTED	0 1	68 56	326 1	1	591	NA	0 0	0 0	REDACTED
Apr-19	93,126	0	93,126	REDACTED	REDACTED	0 0	67 02	303 0	3	548	NA	0 0	0 0	REDACTED
May-19	78,926	0	78,926	REDACTED	REDACTED	0 0	54 97	233 3	1	468	NA	0 0	0 0	REDACTED
Jun-19	119,631	0	119,631	REDACTED	REDACTED	0 0	86 09	366 7	1	690	NA	0 0	0 0	REDACTED
Jul-19	130 399	0	130,399	REDACTED	REDACTED	0 0	90 81	398 7	0	744	NA	0 0	0 0	REDACTED
Aug-19	131,974	0	131,974	REDACTED	REDACTED	0 0	91 91	412 7	0	744	NA	0 0	0 0	REDACTED
Sep-19	126,014	0	126,014	REDACTED	REDACTED	0 0	90 68	504 6	0	720	NA	0 0	0 0	REDACTED
Oct-19	17,221	0	17,221	REDACTED	REDACTED	0 0	11 99	55 6	0	95	NA	0 0	0 0	REDACTED
Nov-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-19	7,924	0	7,924	REDACTED	REDACTED	0 0	5 52	37 2	4	67	NA	0 0	0 0	REDACTED
Jan-20	104,737	0	104,737	REDACTED	REDACTED	0 0	72 94	276 2	3	596	NA	0 0	0 0	REDACTED
Feb-20	126,214	0	126,214	REDACTED	REDACTED	0 0	93 96	337 7	0	696	NA	0 0	0 0	REDACTED
Mar-20	109,494	0	109,494	REDACTED	REDACTED	0 0	76 36	451 1	1	629	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 13 of 20

SWEPCO Ownership 85 90%

SOUTHWESTERN ELECTRIC POWER COMPANY
H W PIRKEY UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (SWEPCO Portion)			PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	329,518	21,950	307,568	383,607	25,553	358,054	REDACTED	REDACTED	0 0	71 39	0 0	0	577	NA	1,878 8	1,878 8	REDACTED
Apr-17	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	185,046	14,392	170,654	215,421	16,754	198,666	REDACTED	REDACTED	0 0	39 56	0.0	4	397	NA	1,279 2	1,279 2	REDACTED
Jun-17	285,461	19,530	265,932	332,318	22,735	309,583	REDACTED	REDACTED	0 0	63 70	0 0	2	505	NA	1,621 5	1,621 5	REDACTED
Jul-17	372,766	25,937	346,829	433,953	30,195	403,759	REDACTED	REDACTED	0 1	80 40	0 0	3	656	NA	2,120 3	2,120 3	REDACTED
Aug-17	438,473	30,163	408,310	510,446	35,114	475,332	REDACTED	REDACTED	0 0	94 65	0 0	0	744	NA	2,484 0	2,484 0	REDACTED
Sep-17	395,082	27,591	367,491	459,933	32,120	427,813	REDACTED	REDACTED	0 0	88 03	0 0	0	699	NA	2,237 0	2,237 0	REDACTED
Oct-17	310,918	21,092	289,825	361,953	24,555	337,398	REDACTED	REDACTED	0 1	67 18	0 0	2	556	NA	1,756 5	1,756 5	REDACTED
Nov-17	414,178	27,325	386,853	482,163	31,811	450,352	REDACTED	REDACTED	0 0	92 54	0 0	1	714	NA	2,493 4	2,493 4	REDACTED
Dec-17	420,663	28,620	392,043	489,713	33,318	456,395	REDACTED	REDACTED	0 0	90 88	0 0	0	744	NA	2,364 4	2,364 4	REDACTED
Jan-18	428,268	29,063	399,205	498,566	33,834	464,732	REDACTED	REDACTED	0 0	92 54	0 0	1	733	NA	2,063 1	2,063 1	REDACTED
Feb-18	362,284	25,024	337,261	421,751	29,131	392,620	REDACTED	REDACTED	0 0	86 56	0 0	0	632	NA	2,040 0	2,040 0	REDACTED
Mar-18	414,031	28,352	385,679	481,992	33,005	448,986	REDACTED	REDACTED	0 0	89 52	0 0	1	722	NA	2,166 3	2,166 3	REDACTED
Apr-18	112,042	8,016	104,026	130,433	9,331	121,102	REDACTED	REDACTED	0 1	24 92	0 0	4	222	NA	636 5	636 5	REDACTED
May-18	427,800	28,669	399,131	498,021	33,375	464,646	REDACTED	REDACTED	0 0	92 52	0 0	0	744	NA	2,449 4	2,449 4	REDACTED
Jun-18	413,413	28,726	384,687	481,272	33,441	447,831	REDACTED	REDACTED	0 0	92 15	0 0	0	720	NA	2,341 6	2,341 6	REDACTED
Jul-18	361,764	24,942	336,822	421,146	29,036	392,110	REDACTED	REDACTED	0 2	78 08	0 0	1	623	NA	2,037 2	2,037 2	REDACTED
Aug-18	437,974	29,353	408,621	509,865	34,171	475,694	REDACTED	REDACTED	0 0	94 72	0 0	0	744	NA	2,460 7	2,460 7	REDACTED
Sep-18	420,487	28,886	391,602	489,508	33,627	455,881	REDACTED	REDACTED	0 0	93 80	0 0	0	720	NA	2,363 7	2,363 7	REDACTED
Oct-18	316,148	22,307	293,841	368,042	25,969	342,073	REDACTED	REDACTED	0 2	68 11	0 0	1	609	NA	1,796 4	1,796 4	REDACTED
Nov-18	277,716	18,452	259,264	323,302	21,481	301,821	REDACTED	REDACTED	0 1	62 02	0 0	1	477	NA	1,562 8	1,562 8	REDACTED
Dec-18	255,211	16,622	238,589	297,102	19,350	277,752	REDACTED	REDACTED	0 0	55 31	0 0	1	439	NA	1,444 5	1,444 5	REDACTED
Jan-19	440,706	28,814	411,891	513,045	33,544	479,501	REDACTED	REDACTED	0 0	95 48	0 0	0	744	NA	2,500 3	2,500 3	REDACTED
Feb-19	322,498	21,336	301,162	375,434	24,838	350,596	REDACTED	REDACTED	0 0	77 29	0 0	1	555	NA	1,835 2	1,835 2	REDACTED
Mar-19	310,923	20,435	290,487	361,959	23,790	338,169	REDACTED	REDACTED	0 0	67 43	0 0	1	540	NA	1,768 2	1,768 2	REDACTED
Apr-19	345,672	25,328	320,343	402,412	29,486	372,926	REDACTED	REDACTED	0 0	76 73	0 0	1	703	NA	2,003 6	2,003 6	REDACTED
May-19	307,075	22,027	285,048	357,480	25,643	331,837	REDACTED	REDACTED	0 2	66 08	0 0	1	568	NA	1,762 0	1,762 0	REDACTED
Jun-19	280,286	22,066	258,220	326,293	25,688	300,605	REDACTED	REDACTED	0 2	61 85	0 0	1	605	NA	1,639 9	1,639 9	REDACTED
Jul-19	285,069	23,248	261,822	331,862	27,064	304,798	REDACTED	REDACTED	0 0	60 69	0 0	1	615	NA	1,679 7	1,679 7	REDACTED
Aug-19	329,522	27,477	302,045	383,611	31,987	351,624	REDACTED	REDACTED	0 0	70 02	0 0	0	722	NA	1,942 9	1,942 9	REDACTED
Sep-19	0	0	0	0	0	0	REDACTED	REDACTED	0 2	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Oct-19	0	0	0	0	0	0	REDACTED	REDACTED	0 0	0 00	0 1	0	0	NA	0 0	0 0	REDACTED
Nov-19	80,456	7,264	73,192	93,662	8,457	85,205	REDACTED	REDACTED	0 0	17 51	0 0	3	243	NA	486 5	486 5	REDACTED
Dec-19	145,313	11,401	133,911	169,165	13,273	155,892	REDACTED	REDACTED	0 0	31 04	88 1	3	352	NA	869 1	869 1	REDACTED
Jan-20	232,400	214,065	18,335	270,547	249,203	21,344	REDACTED	REDACTED	0 0	49 62	367 0	1	565	NA	1,368 4	1,368 4	REDACTED
Feb-20	229,877	210,399	19,478	267,610	244,935	22,675	REDACTED	REDACTED	0 1	52 14	439 2	2	614	NA	1,376 2	1,376 2	REDACTED
Mar-20	215,837	197,640	18,196	251,265	230,082	21,183	REDACTED	REDACTED	0 2	45 88	547 3	1	613	NA	1,289 1	1,289 1	REDACTED

SWEPCO Portion Based on 85 9% ownership of Pirkey Power Plant

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals
(2) Hot and cold start data not available, only total starts
(3) SWEPCO Portion of Station Service Calculated from Total Station Service based on Ownership interest in Pirkey

Sponsored by Monte McMahon

Schedule H-12.3a
Page 14 of 20

SWEPCO Ownership 73 30%

SOUTHWESTERN ELECTRIC POWER COMPANY
John W Turk Jr UNIT #1T GENERATING UNIT DATA

	PRODUCTION MWh (SWEPCO Portion)			PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	Net Heat Rate BTU/kWh
Mar-17	302,893	17,404	285,490	413,224	23,743	389,481	REDACTED	REDACTED	0 0	80 65	604 3	1	737	NA	1,785 5	1,785 5	REDACTED
Apr-17	300,564	16,617	283,946	410,046	22,670	387,376	REDACTED	REDACTED	0 0	82 77	350 7	0	673	NA	1,769 4	1,769 4	REDACTED
May-17	164,333	9,547	154,786	224,192	13,024	211,168	REDACTED	REDACTED	0 0	43 67	304 1	2	416	NA	950 1	950 1	REDACTED
Jun-17	294,635	16,948	277,688	401,958	23,121	378,837	REDACTED	REDACTED	0 0	80 95	486 6	0	720	NA	1,737 4	1,737 4	REDACTED
Jul-17	321,348	18,185	303,163	438,401	24,809	413,592	REDACTED	REDACTED	0 0	85 52	366 1	0	744	NA	1,867 7	1,867 7	REDACTED
Aug-17	308,004	17,968	290,036	420,196	24,513	395,683	REDACTED	REDACTED	0 0	81 82	412 9	0	744	NA	1,811 4	1,811 4	REDACTED
Sep-17	300,924	17,493	283,431	410,538	23,865	386,673	REDACTED	REDACTED	0 0	82.62	432 9	0	720	NA	1,735 1	1,735 1	REDACTED
Oct-17	290,813	16,742	274,071	396,744	22,841	373,903	REDACTED	REDACTED	0 0	77 32	469 9	1	718	NA	1,676 4	1,676 4	REDACTED
Nov-17	282,447	16,562	265,885	385,330	22,595	362,735	REDACTED	REDACTED	0 0	77 40	623 1	0	721	NA	1,650 5	1,650 5	REDACTED
Dec-17	299,518	17,219	282,300	408,620	23,491	385,129	REDACTED	REDACTED	0 0	79 64	564 3	0	744	NA	1,744 7	1,744 7	REDACTED
Jan-18	296,147	16,845	279,302	404,020	22,981	381,039	REDACTED	REDACTED	0 0	78 79	447 2	1	719	NA	1,715 7	1,715 7	REDACTED
Feb-18	266,318	15,389	250,929	363,326	20,994	342,332	REDACTED	REDACTED	0 0	78 37	390 0	1	657	NA	1,550 5	1,550 5	REDACTED
Mar-18	289,542	17,036	272,507	395,010	23,241	371,769	REDACTED	REDACTED	0 0	76 98	576 9	0	743	NA	1,671 2	1,671 2	REDACTED
Apr-18	273,013	15,487	257,526	372,460	21,128	351,332	REDACTED	REDACTED	0 0	75 07	337 6	1	641	NA	1,567 2	1,567 2	REDACTED
May-18	51,460	3,111	48,349	70,204	4,244	65,960	REDACTED	REDACTED	0 0	13 64	112 4	1	128	NA	307 1	307 1	REDACTED
Jun-18	285,250	17,060	268,190	389,154	23,274	365,880	REDACTED	REDACTED	0 0	78 18	720 0	3	696	NA	1,666 4	1,666 4	REDACTED
Jul-18	309,427	18,277	291,150	422,138	24,935	397,203	REDACTED	REDACTED	0 0	82 13	479 3	1	724	NA	1,801 6	1,801 6	REDACTED
Aug-18	313,256	18,495	294,761	427,362	25,232	402,130	REDACTED	REDACTED	0 0	83 15	390 9	0	744	NA	1,832 1	1,832 1	REDACTED
Sep-18	260,372	15,897	244,475	355,214	21,688	333,526	REDACTED	REDACTED	0 0	71.27	477 9	0	673	NA	1,550 1	1,550 1	REDACTED
Oct-18	259,417	14,830	244,587	353,911	20,231	333,680	REDACTED	REDACTED	0 0	69 00	197 0	3	598	NA	1,542 7	1,542 7	REDACTED
Nov-18	330,955	17,917	313,039	451,508	24,443	427,065	REDACTED	REDACTED	0 0	91 13	190 7	0	721	NA	1,891 9	1,891 9	REDACTED
Dec-18	323,090	18,033	305,057	440,778	24,602	416,176	REDACTED	REDACTED	0 0	86 06	307 9	0	744	NA	1,855 3	1,855 3	REDACTED
Jan-19	308,722	17,703	291,019	421,176	24,151	397,025	REDACTED	REDACTED	0 0	82 10	570 5	0	744	NA	1,789 3	1,789 3	REDACTED
Feb-19	280,686	15,974	264,712	382,927	21,793	361,134	REDACTED	REDACTED	0 0	82 68	614 2	1	657	NA	1,601 8	1,601 8	REDACTED
Mar-19	315,433	17,914	297,518	430,331	24,439	405,892	REDACTED	REDACTED	0 0	84 04	719 7	0	743	NA	1,832.3	1,832 3	REDACTED
Apr-19	232,421	14,241	218,180	317,082	19,428	297,654	REDACTED	REDACTED	0 0	63 60	616 7	0	625	NA	1,360 7	1,360 7	REDACTED
May-19	106,622	6,546	100,076	145,460	8,931	136,529	REDACTED	REDACTED	0 0	28 23	285 3	1	286	NA	624 8	624 8	REDACTED
Jun-19	261,659	16,443	245,216	356,970	22,432	334,538	REDACTED	REDACTED	0 0	71 48	650 2	0	720	NA	1,555 9	1,555 9	REDACTED
Jul-19	269,764	17,102	252,661	368,027	23,332	344,695	REDACTED	REDACTED	0 0	71 28	728 4	0	744	NA	1,572 9	1,572.9	REDACTED
Aug-19	265,756	16,962	248,795	362,560	23,140	339,420	REDACTED	REDACTED	0 0	70 19	737 2	0	744	NA	1,542 1	1,542 1	REDACTED
Sep-19	273,446	16,712	256,734	373,050	22,799	350,251	REDACTED	REDACTED	0 0	74 84	709 7	0	720	NA	1,601 6	1,601 6	REDACTED
Oct-19	264,790	16,407	248,384	361,242	22,383	338,859	REDACTED	REDACTED	0 0	70 07	696 8	0	744	NA	1,539 8	1,539 8	REDACTED
Nov-19	282,511	16,449	266,062	385,418	22,441	362,977	REDACTED	REDACTED	0 0	77 45	699 8	0	721	NA	1,648 9	1,648 9	REDACTED
Dec-19	270,064	16,387	253,677	368,436	22,356	346,080	REDACTED	REDACTED	0 0	71 56	741 3	0	744	NA	1,563 8	1,563 8	REDACTED
Jan-20	231,102	15,260	215,841	315,282	20,819	294,463	REDACTED	REDACTED	0.0	60 89	731 2	0	744	NA	1,372 0	1,372 0	REDACTED
Feb-20	212,107	14,320	197,787	289,368	19,536	269,832	REDACTED	REDACTED	0 0	59 64	669 4	0	696	NA	1,257 6	1,257 6	REDACTED
Mar-20	224,593	15,296	209,296	306,402	20,868	285,534	REDACTED	REDACTED	0 0	59 12	739 2	0	743	NA	1,323 4	1,323 4	REDACTED

SWEPCO Portion Based on 73 3% ownership of Turk Power Plant

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts
(3) SWEPCO Portion of Station Service Calculated from Total Station Service based on Ownership interest in Turk
(4) Turk data begins with the Unit's date of commercial operation (12/20/12)

Sponsored by Monte McMahon

Schedule H-12.3a
Page 15 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	300,689	17,623	283,065	REDACTED	REDACTED	0 0	72.57	702 4	0	743	NA	1,478 9	1,478 9	REDACTED
Apr-17	335,204	18,339	316,865	REDACTED	REDACTED	0 0	83 83	667 5	0	720	NA	1,593 9	1,593 9	REDACTED
May-17	300,014	18,535	281,479	REDACTED	REDACTED	0 0	72 06	696 2	0	744	NA	1,404 7	1,404 7	REDACTED
Jun-17	295,647	18,874	276,773	REDACTED	REDACTED	0 0	73 22	642 3	1	706	NA	1,523 9	1,523 9	REDACTED
Jul-17	344,414	21,107	323,306	REDACTED	REDACTED	0 0	82 77	726 0	0	744	NA	1,792 9	1,792 9	REDACTED
Aug-17	302,317	19,088	283,229	REDACTED	REDACTED	0 0	72 51	646 6	2	688	NA	1,575 9	1,575 9	REDACTED
Sep-17	320,788	20,163	300,625	REDACTED	REDACTED	0 0	79 53	673 5	0	720	NA	1,635 8	1,635 8	REDACTED
Oct-17	69,762	4,146	65,616	REDACTED	REDACTED	0 0	16 80	132.9	0	144	NA	354 3	354 3	REDACTED
Nov-17	254,307	14,719	239,588	REDACTED	REDACTED	0 0	63 30	521 8	2	578	NA	1,306 6	1,306 6	REDACTED
Dec-17	316,378	18,944	297,434	REDACTED	REDACTED	0 0	76 15	718 5	0	744	NA	1,620 6	1,620 6	REDACTED
Jan-18	287,757	18,337	269,421	REDACTED	REDACTED	0 0	68 98	712 6	0	744	NA	1,478 8	1,478 8	REDACTED
Feb-18	222,152	15,433	206,720	REDACTED	REDACTED	0 0	58 59	565 9	0	672	NA	1,148 7	1,148 7	REDACTED
Mar-18	217,086	16,020	201,066	REDACTED	REDACTED	0 0	51 55	542 5	0	743	NA	1,141 5	1,141 5	REDACTED
Apr-18	181,182	11,459	169,723	REDACTED	REDACTED	0 0	44 90	427 4	0	480	NA	935 8	935 8	REDACTED
May-18	50,275	3,524	46,751	REDACTED	REDACTED	0 0	11 97	115 0	3	139	NA	256 7	256 7	REDACTED
Jun-18	243,671	17,732	225,939	REDACTED	REDACTED	0 0	59 77	416 6	0	720	NA	1,231 8	1,231 8	REDACTED
Jul-18	293,632	20,013	273,620	REDACTED	REDACTED	0 0	70 05	681 9	0	744	NA	1,435 0	1,435 0	REDACTED
Aug-18	283,512	19,458	264,055	REDACTED	REDACTED	0 0	67 60	689 9	0	744	NA	1,401 6	1,401 6	REDACTED
Sep-18	246,027	17,899	228,128	REDACTED	REDACTED	0 0	60 35	712 7	0	720	NA	1,275 7	1,275 7	REDACTED
Oct-18	330,529	21,299	309,230	REDACTED	REDACTED	0 0	79 17	725 6	0	744	NA	1,766 8	1,766 8	REDACTED
Nov-18	333,636	21,387	312,249	REDACTED	REDACTED	0 0	82 49	673 1	0	721	NA	1,827 0	1,827 0	REDACTED
Dec-18	338,709	20,390	318,319	REDACTED	REDACTED	0 0	81 49	707 1	0	744	NA	1,812 7	1,812 7	REDACTED
Jan-19	286,467	18,063	268,403	REDACTED	REDACTED	0 0	68 72	737 9	0	744	NA	1 534 4	1,534 4	REDACTED
Feb-19	175,052	11,303	163,749	REDACTED	REDACTED	0 3	46 41	457 5	2	482	NA	915 5	915 5	REDACTED
Mar-19	204,148	12,929	191,219	REDACTED	REDACTED	0 0	49 02	514 1	0	523	NA	1,058 2	1,058 2	REDACTED
Apr-19	75,116	5,352	69,765	REDACTED	REDACTED	0 0	18 46	226 6	1	244	NA	397 5	397 5	REDACTED
May-19	265,919	17,929	247,990	REDACTED	REDACTED	0 0	63 49	706 5	0	744	NA	1,428 5	1,428 5	REDACTED
Jun-19	216,929	16,003	200,926	REDACTED	REDACTED	0 0	53 15	668 5	1	688	NA	1,167 4	1,167 4	REDACTED
Jul-19	244,012	18,769	225,243	REDACTED	REDACTED	0 0	57 67	704 5	0	744	NA	1,278 7	1,278 7	REDACTED
Aug-19	232,734	18,669	214,065	REDACTED	REDACTED	0 0	54 80	733 2	0	744	NA	1,209 1	1,209 1	REDACTED
Sep-19	252,452	18,784	233,668	REDACTED	REDACTED	0 0	61 82	711 5	0	720	NA	1,278 5	1,278 5	REDACTED
Oct-19	218,126	17,606	200,519	REDACTED	REDACTED	0 0	51 34	716 2	1	734	NA	1,158 9	1,158 9	REDACTED
Nov-19	223,643	15,605	208,039	REDACTED	REDACTED	0 0	54 96	652 4	0	659	NA	1,181 6	1,181 6	REDACTED
Dec-19	57,342	4,518	52 824	REDACTED	REDACTED	0 3	13 52	201 0	1	207	NA	305 9	305 9	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 3	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 16 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH UNIT #3 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	19,176	1,127	18,050	REDACTED	REDACTED	0 2	4 60	57 2	0	56	NA	100 6	100 6	REDACTED
Apr-17	80,175	4,198	75,978	REDACTED	REDACTED	0 0	19 99	156 3	3	191	NA	414 0	414 0	REDACTED
May-17	205,366	11,194	194,172	REDACTED	REDACTED	0 1	49 43	458 9	2	529	NA	1,064 1	1,064 1	REDACTED
Jun-17	264,094	14,311	249,783	REDACTED	REDACTED	0 1	65 70	598 7	1	651	NA	1,358 9	1,358 9	REDACTED
Jul-17	336,850	18,036	318,814	REDACTED	REDACTED	0 0	81 16	696 5	0	744	NA	1,739 1	1,739 1	REDACTED
Aug-17	316,122	17,546	298,575	REDACTED	REDACTED	0 0	76 01	698 1	0	744	NA	1,635 7	1,635 7	REDACTED
Sep-17	73,456	4,285	69,171	REDACTED	REDACTED	0 0	18 20	185 5	0	194	NA	379 4	379 4	REDACTED
Oct-17	77,652	4,480	73,172	REDACTED	REDACTED	0 0	18 63	153 6	2	206	NA	403 3	403 3	REDACTED
Nov-17	306,779	16,093	290,686	REDACTED	REDACTED	0 0	76 36	698 2	0	721	NA	1,557 7	1,557 7	REDACTED
Dec-17	304,579	16,324	288,256	REDACTED	REDACTED	0 0	73 38	719 9	0	744	NA	1,547 9	1,547 9	REDACTED
Jan-18	277,085	15,868	261,217	REDACTED	REDACTED	0 0	66 50	710 9	0	744	NA	1,413 8	1,413 8	REDACTED
Feb-18	103,799	6,740	97,059	REDACTED	REDACTED	0 5	27 35	298 7	0	338	NA	538 6	538 6	REDACTED
Mar-18	134,252	8,970	125,283	REDACTED	REDACTED	0 2	31 94	318 7	1	476	NA	705 1	705 1	REDACTED
Apr-18	247,293	14,366	232,928	REDACTED	REDACTED	0 0	61 27	625 6	1	716	NA	1,281 6	1,281 6	REDACTED
May-18	267,082	16,012	251,070	REDACTED	REDACTED	0 0	63 91	672 8	1	742	NA	1,374 0	1,374 0	REDACTED
Jun-18	271,591	16,051	255,540	REDACTED	REDACTED	0 0	67 22	652 1	1	716	NA	1,411 2	1,411 2	REDACTED
Jul-18	286,841	17,080	269,760	REDACTED	REDACTED	0 0	68 67	713 0	0	744	NA	1,505 8	1,505 8	REDACTED
Aug-18	275,397	16,364	259,033	REDACTED	REDACTED	0 0	65 94	710 6	2	739	NA	1,446 8	1,446 8	REDACTED
Sep-18	242,543	15,252	227,291	REDACTED	REDACTED	0 0	59 79	708 7	0	720	NA	1,281 8	1,281 8	REDACTED
Oct-18	126,650	6,882	119,768	REDACTED	REDACTED	0 0	30 49	286 1	0	290	NA	657.9	657 9	REDACTED
Nov-18	230,890	11,964	218,926	REDACTED	REDACTED	0 0	57.51	466 6	1	500	NA	1,226 8	1,226 8	REDACTED
Dec-18	330,379	17,102	313,278	REDACTED	REDACTED	0 0	79 75	725 2	0	744	NA	1,704 5	1,704 5	REDACTED
Jan-19	275,931	15,441	260,490	REDACTED	REDACTED	0 0	66 31	741 1	0	744	NA	1,427 4	1,427 4	REDACTED
Feb-19	231,290	13,317	217,974	REDACTED	REDACTED	0 0	61 43	648 1	0	672	NA	1,196 9	1,196 9	REDACTED
Mar-19	269,458	15,219	254,238	REDACTED	REDACTED	0 0	64 81	715 9	0	743	NA	1,409 7	1,409 7	REDACTED
Apr-19	176,543	11,657	164,887	REDACTED	REDACTED	0 0	43 37	592 8	4	641	NA	943 1	943 1	REDACTED
May-19	194,139	11,482	182,657	REDACTED	REDACTED	0 0	46 50	542 3	1	567	NA	1,036 0	1,036 0	REDACTED
Jun-19	204,030	14,335	189,694	REDACTED	REDACTED	0 0	49 90	574 7	2	706	NA	1,107 3	1,107 3	REDACTED
Jul-19	212,700	14,230	198,471	REDACTED	REDACTED	0 0	50 52	639 1	1	661	NA	1,137 0	1,137 0	REDACTED
Aug-19	221,094	15,103	205,991	REDACTED	REDACTED	0 0	52 44	660 1	1	710	NA	1,192 7	1,192 7	REDACTED
Sep-19	163,232	10,601	152,631	REDACTED	REDACTED	0 0	40 15	467 3	0	478	NA	861 1	861 1	REDACTED
Oct-19	35,035	1,868	33,167	REDACTED	REDACTED	0 0	8 44	72 2	1	89	NA	184 9	184 9	REDACTED
Nov-19	227,720	13,153	214,567	REDACTED	REDACTED	0 0	56 36	640 2	1	661	NA	1,208 2	1,208 2	REDACTED
Dec-19	208,342	14,635	193,708	REDACTED	REDACTED	0 0	49 31	738 3	0	744	NA	1,132 2	1,132 2	REDACTED
Jan-20	165,412	13,862	151,550	REDACTED	REDACTED	0 0	38 58	738 6	0	744	NA	932 7	932 7	REDACTED
Feb-20	164,025	13,077	150,948	REDACTED	REDACTED	0 0	41 08	659 0	0	696	NA	923 9	923 9	REDACTED
Mar-20	181,385	13,521	167,864	REDACTED	REDACTED	0 0	42 79	727 1	0	743	NA	1016 3	1016 3	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 17 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES UNIT #1 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	33,995	2,667	31,329	REDACTED	REDACTED	0 0	25 10	728 6	0	743	NA	368 9	368 9	REDACTED
Apr-17	29,301	1,953	27,347	REDACTED	REDACTED	0 3	22 61	468 1	3	487	NA	314 5	314 5	REDACTED
May-17	33,678	2,682	30,997	REDACTED	REDACTED	0 0	24 80	740 0	0	744	NA	365 4	365 4	REDACTED
Jun-17	28,848	2,538	26,309	REDACTED	REDACTED	0 0	21 75	709 7	0	720	NA	327 7	327 7	REDACTED
Jul-17	33,753	2,817	30,937	REDACTED	REDACTED	0 0	24.75	719 8	0	744	NA	372 3	372 3	REDACTED
Aug-17	28,558	2,616	25,942	REDACTED	REDACTED	0 0	20 75	737 3	0	744	NA	332 7	332 7	REDACTED
Sep-17	13,847	1,199	12,648	REDACTED	REDACTED	0 0	10 46	321 1	2	326	NA	148 9	148 9	REDACTED
Oct-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Nov-17	708	60	648	REDACTED	REDACTED	0 0	0 54	0 0	2	17	NA	8 8	8 8	REDACTED
Dec-17	21,902	1,893	20,010	REDACTED	REDACTED	0 2	16 01	482 9	3	545	NA	266 2	266 2	REDACTED
Jan-18	22,126	1,870	20,255	REDACTED	REDACTED	0 0	16 21	434 8	1	501	NA	232 7	232 7	REDACTED
Feb-18	31,141	2,387	28,754	REDACTED	REDACTED	0 0	26 09	645 2	1	656	NA	332 1	332 1	REDACTED
Mar-18	18,753	1,585	17,169	REDACTED	REDACTED	0 2	14 09	449 0	1	458	NA	207 1	207 1	REDACTED
Apr-18	36,303	2,734	33,569	REDACTED	REDACTED	0 0	28 43	699 2	0	720	NA	398 6	398 6	REDACTED
May-18	24,580	1,897	22,683	REDACTED	REDACTED	0 0	18 59	460 3	2	487	NA	269 8	269 8	REDACTED
Jun-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jul-18	26,326	2,315	24,011	REDACTED	REDACTED	0 0	19 68	437 6	1	611	NA	276 0	276 0	REDACTED
Aug-18	28,937	2,710	26,227	REDACTED	REDACTED	0 0	21 49	722 4	1	730	NA	320 9	320 9	REDACTED
Sep-18	17,015	1,261	15,754	REDACTED	REDACTED	0 0	13 34	324 4	1	342	NA	166 7	166 7	REDACTED
Oct-18	12,830	1,102	11,728	REDACTED	REDACTED	0 0	9 61	283 0	1	300	NA	140 9	140 9	REDACTED
Nov-18	19,159	1,640	17,519	REDACTED	REDACTED	0 2	14 82	427 0	2	444	NA	211 0	211 0	REDACTED
Dec-18	21,045	1,922	19,123	REDACTED	REDACTED	0 0	15 67	482 1	4	525	NA	242 0	242 0	REDACTED
Jan-19	25,913	2,217	23,696	REDACTED	REDACTED	0 0	19 42	591 3	1	599	NA	282 6	282 6	REDACTED
Feb-19	27,581	2,380	25,201	REDACTED	REDACTED	0 0	22 87	663 3	0	672	NA	296 5	296 5	REDACTED
Mar-19	27,099	2,302	24,797	REDACTED	REDACTED	0 0	20 35	640 9	1	649	NA	297 9	297 9	REDACTED
Apr-19	26,689	2,274	24,416	REDACTED	REDACTED	0 1	20 68	624 5	1	629	NA	305 2	305 2	REDACTED
May-19	38,037	2,915	35,122	REDACTED	REDACTED	0 0	28 78	720 7	0	744	NA	415 2	415 2	REDACTED
Jun-19	32,890	2,718	30,172	REDACTED	REDACTED	0 0	25 55	711 4	0	720	NA	364 3	364 3	REDACTED
Jul-19	27,444	2,685	24,758	REDACTED	REDACTED	0 1	20 29	666 5	1	673	NA	299 1	299 1	REDACTED
Aug-19	31,901	2,811	29,090	REDACTED	REDACTED	0 0	23 84	650 2	0	744	NA	290 8	290 8	REDACTED
Sep-19	8,928	599	8,329	REDACTED	REDACTED	0 0	7 05	0 0	0	142	NA	98 8	98 8	REDACTED
Oct-19	3,712	303	3,409	REDACTED	REDACTED	0 7	2 79	71 6	3	78	NA	43 5	43 5	REDACTED
Nov-19	25,929	2,176	23,753	REDACTED	REDACTED	0 1	20 09	592 3	3	622	NA	266 8	266 8	REDACTED
Dec-19	32,730	2,760	29,971	REDACTED	REDACTED	0 0	24 56	719 7	2	736	NA	381 4	381 4	REDACTED
Jan-20	29,696	2,663	27,032	REDACTED	REDACTED	0 0	22 15	743 3	0	744	NA	316 3	316 3	REDACTED
Feb-20	14,957	1,332	13,625	REDACTED	REDACTED	0 5	11 94	340 6	1	369	NA	160 2	160 2	REDACTED
Mar-20	31,567	2,690	28,877	REDACTED	REDACTED	0 0	23 70	739 7	0	743	NA	310 8	310 8	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 18 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES UNIT #2 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	0	0	0	REDACTED	REDACTED	0.0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-17	14,522	821	13,701	REDACTED	REDACTED	0 0	5 21	28 1	3	201	NA	170.7	170 7	REDACTED
Jul-17	17,622	916	16,705	REDACTED	REDACTED	0 0	6 15	96 3	2	219	NA	201 0	201 0	REDACTED
Aug-17	3,331	238	3,094	REDACTED	REDACTED	0 0	1 14	8 0	1	59	NA	39.7	39 7	REDACTED
Sep-17	22,128	951	21,177	REDACTED	REDACTED	0.0	8.06	55 6	3	209	NA	249 3	249 3	REDACTED
Oct-17	29,640	1,408	28,232	REDACTED	REDACTED	0 0	10 40	81 4	5	320	NA	316.1	316 1	REDACTED
Nov-17	2,857	232	2,625	REDACTED	REDACTED	0 0	1 00	0 1	1	55	NA	35.6	35 6	REDACTED
Dec-17	4,888	279	4,609	REDACTED	REDACTED	0 3	1.70	1 7	4	66	NA	61 3	61 3	REDACTED
Jan-18	19,567	998	18,569	REDACTED	REDACTED	0 6	6 84	38 8	2	219	NA	213 4	213 4	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 1	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Mar-18	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
May-18	0	0	0	REDACTED	REDACTED	0 0	0.00	0 0	0	0	NA	0 0	0 0	REDACTED
Jun-18	31,780	1,438	30,341	REDACTED	REDACTED	0 2	11 55	38 3	2	315	NA	360.6	360 6	REDACTED
Jul-18	45,898	2,175	43,723	REDACTED	REDACTED	0 0	16 10	53 8	2	486	NA	502 5	502 5	REDACTED
Aug-18	19,401	1,223	18,178	REDACTED	REDACTED	0 0	6 69	30 1	2	291	NA	222 4	222 4	REDACTED
Sep-18	7,330	292	7,038	REDACTED	REDACTED	0 0	2.68	10.9	1	62	NA	74 5	74 5	REDACTED
Oct-18	14,268	475	13,793	REDACTED	REDACTED	0 0	5.08	18 1	1	91	NA	165.7	165 7	REDACTED
Nov-18	16,387	942	15,446	REDACTED	REDACTED	0 0	5.87	18 5	3	219	NA	186 0	186 0	REDACTED
Dec-18	14,779	1,060	13,720	REDACTED	REDACTED	0 0	5.05	16.2	4	247	NA	173.6	173 6	REDACTED
Jan-19	5,859	308	5,551	REDACTED	REDACTED	0 0	2 04	11 9	1	70	NA	66.2	66 2	REDACTED
Feb-19	3,787	228	3,559	REDACTED	REDACTED	0 0	1 45	6 6	1	52	NA	41 9	41 9	REDACTED
Mar-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0.0	0 0	REDACTED
Apr-19	0	0	0	REDACTED	REDACTED	0 2	0.00	0 0	0	0	NA	0.0	0 0	REDACTED
May-19	23,140	1,436	21,703	REDACTED	REDACTED	0 2	7 99	30 4	3	352	NA	256 6	256 6	REDACTED
Jun-19	21,815	1,227	20,588	REDACTED	REDACTED	0 0	7 83	33 3	3	284	NA	248 6	248 6	REDACTED
Jul-19	18,495	987	17,508	REDACTED	REDACTED	0 0	6 45	53 1	2	229	NA	211 5	211 5	REDACTED
Aug-19	42,327	1,988	40,339	REDACTED	REDACTED	0 2	14.85	143 2	1	446	NA	403 2	403 2	REDACTED
Sep-19	20,516	1,185	19,331	REDACTED	REDACTED	0 1	7 36	47 6	3	263	NA	229.2	229 2	REDACTED
Oct-19	8,319	405	7,914	REDACTED	REDACTED	0.0	2.91	13 9	2	93	NA	101.1	101 1	REDACTED
Nov-19	18,194	525	17,668	REDACTED	REDACTED	0 0	6 71	38 9	2	182	NA	198.5	198 5	REDACTED
Dec-19	3,517	296	3,221	REDACTED	REDACTED	0 0	1 19	0 0	2	70	NA	41.0	41.0	REDACTED
Jan-20	6,718	174	6,544	REDACTED	REDACTED	0.0	2 41	10 2	1	124	NA	76 6	76 6	REDACTED
Feb-20	11,372	571	10,801	REDACTED	REDACTED	0 0	4 25	27 8	2	137	NA	127.0	127 0	REDACTED
Mar-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals;
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 19 of 20

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES UNIT #3 GENERATING UNIT DATA

	PRODUCTION MWh (Total)			OPERATING STATISTICS (%)							FUEL CONSUMPTION (Total) Billion BTU			Net Heat Rate BTU/kWh
Month and Year	Gross Unit Output	Station Service	Net Unit Output	Equivalent Availability Factor	Forced Outage Rate	Scheduled Outage Factor	Net Capacity Factor	Time on AGC	# of Starts	Hours Connected to Load	Cold or Hot Start	Operations	Total	
Mar-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Apr-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
May-17	7,725	312	7,414	REDACTED	REDACTED	0 2	2 77	1 3	1	58	NA	87 4	87 4	REDACTED
Jun-17	2,597	141	2,456	REDACTED	REDACTED	0 2	0 95	6 2	1	29	NA	30 6	30 6	REDACTED
Jul-17	32,425	1,538	30,887	REDACTED	REDACTED	0 0	11 53	41 9	3	303	NA	371 7	371 7	REDACTED
Aug-17	8,358	537	7,820	REDACTED	REDACTED	0 0	2 92	23 5	2	115	NA	100 3	100 3	REDACTED
Sep-17	18,416	1,001	17,416	REDACTED	REDACTED	0 0	6 72	38 3	2	210	NA	205 0	205 0	REDACTED
Oct-17	14,883	822	14,061	REDACTED	REDACTED	0 0	5 25	32 9	3	170	NA	157 5	157 5	REDACTED
Nov-17	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Dec-17	3,969	317	3,651	REDACTED	REDACTED	0 0	1 36	5 1	1	64	NA	48 6	48 6	REDACTED
Jan-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-18	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-18	3,230	205	3,026	REDACTED	REDACTED	0 1	1 13	3 3	1	58	NA	36 5	36 5	REDACTED
Apr-18	14,172	990	13,182	REDACTED	REDACTED	0 4	5 09	16 4	3	211	NA	156 5	156 5	REDACTED
May-18	3,755	182	3,573	REDACTED	REDACTED	0 3	1 33	6 2	2	34	NA	42 5	42 5	REDACTED
Jun-18	43,849	2,411	41,437	REDACTED	REDACTED	0 0	15 99	62 4	4	506	NA	492 4	492 4	REDACTED
Jul-18	62,527	3,245	59,282	REDACTED	REDACTED	0 0	22 13	86 6	2	672	NA	681 3	681 3	REDACTED
Aug-18	13,028	710	12,319	REDACTED	REDACTED	0 0	4 60	27 4	2	145	NA	150 7	150 7	REDACTED
Sep-18	10,101	434	9,667	REDACTED	REDACTED	0 0	3 73	23 8	1	88	NA	102 3	102 3	REDACTED
Oct-18	11,871	1,036	10,835	REDACTED	REDACTED	0 0	4 05	2 6	3	225	NA	130 2	130 2	REDACTED
Nov-18	21,900	1,371	20,529	REDACTED	REDACTED	0 0	7 91	27 3	6	314	NA	247 2	247 2	REDACTED
Dec-18	2,360	241	2,119	REDACTED	REDACTED	0 0	0 79	0 0	1	51	NA	26 8	26 8	REDACTED
Jan-19	3,964	233	3,731	REDACTED	REDACTED	0 1	1 39	11 4	1	47	NA	44 5	44 5	REDACTED
Feb-19	3,879	265	3,614	REDACTED	REDACTED	0 0	1 49	6 6	1	55	NA	42 5	42 5	REDACTED
Mar-19	16,320	1,137	15,183	REDACTED	REDACTED	0 1	5 68	22 3	3	241	NA	182 4	182 4	REDACTED
Apr-19	10,800	804	9,997	REDACTED	REDACTED	0 3	3 86	17 0	4	173	NA	125 0	125 0	REDACTED
May-19	14,163	734	13,430	REDACTED	REDACTED	0 0	5 01	46 3	1	157	NA	158 8	158 8	REDACTED
Jun-19	21,716	1,200	20,517	REDACTED	REDACTED	0 0	7 92	63 1	3	250	NA	247 7	247 7	REDACTED
Jul-19	38,660	1,902	36,758	REDACTED	REDACTED	0 0	13 72	81 5	2	392	NA	444 0	444 0	REDACTED
Aug-19	44,456	2,347	42,110	REDACTED	REDACTED	0 0	15 72	94 1	1	488	NA	420 9	420 9	REDACTED
Sep-19	21,881	1,246	20,635	REDACTED	REDACTED	0 1	7 96	47 8	3	265	NA	244 7	244 7	REDACTED
Oct-19	12,123	701	11,423	REDACTED	REDACTED	0 0	4 26	12 7	3	150	NA	145 9	145 9	REDACTED
Nov-19	14,046	628	13,418	REDACTED	REDACTED	0 0	5 17	32 8	2	174	NA	150 7	150 7	REDACTED
Dec-19	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Jan-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Feb-20	0	0	0	REDACTED	REDACTED	0 0	0 00	0 0	0	0	NA	0 0	0 0	REDACTED
Mar-20	3,113	278	2,835	REDACTED	REDACTED	0 0	1 06	1 5	1	61	NA	30 5	30 5	REDACTED

Notes (1) Fuel consumption values are estimates based on heat rate and generation, and may not agree with accounting actuals,
(2) Hot and cold start data not available, only total starts

Sponsored by Monte McMahon

Schedule H-12.3a
Page 20 of 20

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
ARSENAL HILL #5 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, non-reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1450 psig
4 NUMBER OF FEEDWATER HEATERS	Four
5. LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6. GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	147,059 KVA, 0.85 PF, 15,500 volts
8. MAXIMUM NET CAPABILITY	110 MW
9. TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Combustion Engineering
6. TYPE OF BOILER	Pressurized furnace, natural circulation, non-reheat
7 TYPE OF FUEL FIRING	Not Applicable
8 DESCRIPTION OF BURNER LAYOUT	Corner fired
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6 TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*0.0976 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12 PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13 PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Louisiana Department of Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Louisiana Department of Environmental Quality regulations
16. MANUF OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Cooling pond with mist sprays
2. MANUFACTURER OF COOLING WATER SYS	Marley (spray system)
3 PEAK MW LOAD OF COOLING WATER SYS	0.9 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Allis Chalmers (motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	2 2 MW
7 DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fans), Allis Chalmers (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	1 0 MW
10. DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative
11 MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12 PEAK MW LOAD OF AIR PREHEATER	0 01 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15 PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
Stall Plant (ARSENAL HILL #6) GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	6A & 6B Combustion Tubines (CT): Siemens, 6S Steam Turbine: GE
2. TURBINE DESCRIPTION	CT. 6A & 6B Siemens 501FD2-Class, 6S: GE D11 Two casing, tandem compound flow, two flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	Steam Turbine 6S 1050F / 1882 psi design
4 NUMBER OF FEEDWATER HEATERS	Not Applicable
5 LAST ROW OF BLADING SIZE / RPMs	6A & 6B: 25 0 " - 3600 rpm 6S: 33.5"- 3600 rpm
6 GENERATOR MANUFACTURER	6A & 6B Siemens AreoPac II 6S: GE
7 NAMEPLATE RATINGS	6A & 6B CTs. 217 MVA, 0.85 PF, 15,000 VAC, 6S 301.2 MVA, .85 PF, 18,000 VAC
8 MAXIMUM NET CAPABILITY	534 MW
9 TYPE OF COOLING	6A & 6B - Closed loop air 6S. Hydrogen
10. TYPE OF EXCITATION	6A & 6B Brushless Rotating Rectifier - DC Exciter 6S. Static DC Exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Not Applicable
2. DESCRIPTION OF ALTERNATE FUEL	Not Applicable
3. MW DERATING - ALTER FUEL USE	Not Applicable
4 STARTUP FUEL	Not Applicable
5 BOILER MANUFACTURER	65A & 6B. Nooter-Eriksen
6. TYPE OF BOILER	6A & 6B: Heat Recovery Steam Generator
7. TYPE OF FUEL FIRING	6A & 6B· Natural Gas
8 DESCRIPTION OF BURNER LAYOUT	6A & 6B: DLN Combustion Turbine - Natural Gas
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	6A & 6B· Peerless Mfg Company - Cormetech SCR
5 TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	6A & 6B. SCR with 19% aqueous ammonia and DLN Combustion Fuel Nozzles
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9 CURRENT LEVEL OF SO2	*6A & 6B 0.0006 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*6A & 6B 0 0109 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12 PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13 PEAK MW LOAD OF NOx SYSTEM	6A & 6B: 0 2 Mw
14. APPLICABLE WATER POLLUTION REG	Not Applicable
15. APPLICABLE WASTE DISPOSAL REG	Not Applicable
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17 TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Mechanical Draft Cooling Tower - 10 Cells, 2 Circ Water Pumps
2 MANUFACTURER OF COOLING WATER SYS	SPX
3 PEAK MW LOAD OF COOLING WATER SYS	4.7 Mw
4. DESCRIPTION OF BOILER FEEDPUMP SYS	6A & 6B: Motor Driven Boiler Feed Pump 6S· Not Applicable
5 MANUFACTURER OF BOILER FEEDPUMP SYS	6A & 6B: Motor - GE, Pump - Sulzer
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	6A: 1.1 Mw 6B. 1 1 Mw, (combined @ 2 2Mw)
7. DESCRIPTION OF COMBUSTION AIR SYS	Not Applicable
8. MANUFACTURER OF COMBUSTION AIR SYS	Not Applicable
9 PEAK MW LOAD OF COMBUSTION AIR SYS	Not Applicable
10 DESCRIPTION OF AIR PREHEATER	Not Applicable
11. MANUFACTURER OF AIR PREHEATER	Not Applicable
12. PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13 DESCRIPTION OF FUEL FEED SYS	Natural Gas - Pipe Line Quality (dual suppliers)
14. MANUFACTURER OF FUEL FEED SYS	6A & 6B· Texas System
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
FLINT CREEK #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Three casing, tandem compound, four flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2400 psig
4. NUMBER OF FEEDWATER HEATERS	Seven
5 LAST ROW OF BLADING SIZE / RPMs	26" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	620 MVA, 0 90 PF, 22,000 volts
8. MAXIMUM NET CAPABILITY	516 MW
9 TYPE OF COOLING	Water cooled stator
10. TYPE OF EXCITATION	AC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Western coal
2 DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4 STARTUP FUEL	No 2 fuel oil
5 BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, reheat
7 TYPE OF FUEL FIRING	Pulverized
8. DESCRIPTION OF BURNER LAYOUT	Opposed
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
2. MANUFACTURER OF PART. CONTROL	Research-Cottrell
3. MANUFACTURER OF SO2 CONTROL	GE (Alstom)
4. MANUFACTURER OF NOx CONTROL	Babcock & Wilcox
5. TYPE OF PARTICULATE CONTROL	Hot side electrostatic precipitator/Pulse Jet Fabric Filter
6. TYPE OF SO2 CONTROL	NID Dry Scrubber
7. TYPE OF NOx CONTROL	Low NOx burners
8. CURRENT LEVEL OF PARTICULATES	0 0052 lb/mmBtu (filterable portion only 2/19/20 Title V stack test)
9. CURRENT LEVEL OF SO2	*0.0574 lbs/million Btu
10. CURRENT LEVEL OF NOx	*0.1850 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	2.2 MW
12. PEAK MW LOAD OF SO2 SYSTEM	7 0 MW
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
15. APPLICABLE WASTE DISPOSAL REG	Arkansas Pollution Control and Ecology Commission regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17 TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Landfill for combustion by-products
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2 MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	3.4 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP, (1) motor driven BFP with hydraulic coupling
5. MANUFACTURER OF BOILER FEEDPUMP SYS	DeLaval (pumps), Westinghouse (turbine), General Electric (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	13 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	Two (2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (FD fans) and General Electric (motors)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	2.6 MW
10 DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative tri-sector air heaters
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12 PEAK MW LOAD OF AIR PREHEATER	0.06 MW
13. DESCRIPTION OF FUEL FEED SYS	Belt conveyors, coal feeders, pulverizers, and primary air fans
14. MANUFACTURER OF FUEL FEED SYS	J B. Webb (conveyors), Stock (feeders), B&W (pulv.), Westinghouse (PA fans)
15. PEAK MW LOAD OF FUEL FEED SYS	10 0 MW

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
DOLET HILLS #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Four casing, tandem compound, four flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2400 psig
4 NUMBER OF FEEDWATER HEATERS	Seven
5. LAST ROW OF BLADING SIZE / RPMs	28-1/2" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7. NAMEPLATE RATINGS	775 MVA, 0.93 PF, 24,000 volts
8. MAXIMUM NET CAPABILITY	650 MW
9 TYPE OF COOLING	Water cooled stator
10 TYPE OF EXCITATION	Brushless AC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Lignite
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, reheat
7. TYPE OF FUEL FIRING	Pulverized
8. DESCRIPTION OF BURNER LAYOUT	Opposed firing
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality Regulations
2 MANUFACTURER OF PART. CONTROL	Hamon Research Cottrell
3 MANUFACTURER OF SO2 CONTROL	United Oil Products Air Correction Division
4 MANUFACTURER OF NOx CONTROL	Advanced Burner Technologies /Fuel Tech
5. TYPE OF PARTICULATE CONTROL	Pulse Jet Fabric Filter (Baghouse)
6. TYPE OF SO2 CONTROL	Limestone Absorption
7. TYPE OF NOx CONTROL	Low Nox Burners/ SNCR
8 CURRENT LEVEL OF PARTICULATES	0.013 lb/mmBTU (Cleco quarterly testing)
9. CURRENT LEVEL OF SO2	0.910 lb/mmBTU
10 CURRENT LEVEL OF NOx	0 198 lb/mmBTU
11. PEAK MW LOAD OF PART SYSTEM	1.0 MW
12. PEAK MW LOAD OF SO2 SYSTEM	5.0 MW
13 PEAK MW LOAD OF NOx SYSTEM	0.3 MW
14. APPLICABLE WATER POLLUTION REG	Louisiana Department of Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Louisiana Department of Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Ecodyne-Graver Water Divison
17. TYPE OF WASTE WATER SYSTEM	Lime treatment for solids precipitation
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Landfill for combustion by-products and FGD sludge
20. PEAK MW LOAD OF WASTE WATER SYS	System not used
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable
AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Cooling tower with makeup and blowdown ponds
2 MANUFACTURER OF COOLING WATER SYS	Ceramic Cooling Tower Company
3. PEAK MW LOAD OF COOLING WATER SYS	10 0 MW (circulating water pumps, cooling tower fans, misc pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP with hydraulic coupling
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Westinghouse (turbine), General Electric (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	16.8 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	Two (2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fans) and General Electric (motors)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	4 5 MW
10. DESCRIPTION OF AIR PREHEATER	(1) primary and (2) secondary, Rothemuhle bisector regenerative
11 MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12. PEAK MW LOAD OF AIR PREHEATER	0 05 MW
13 DESCRIPTION OF FUEL FEED SYS	Belt conveyors, fuel feeders, pulverizers, and primary air fans
14 MANUFACTURER OF FUEL FEED SYS	FMC (conveyors), Westinghouse (PA fans), B&W (pulverizers), Stock (feeders)
15 PEAK MW LOAD OF FUEL FEED SYS	15 8 MW

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #2 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Single casing, condensing, non-reheat
3. INLET TEMPERATURES / PRESSURES	900°F / 850 psig
4. NUMBER OF FEEDWATER HEATERS	Four
5. LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6. GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	31,250 KVA, 0.80 PF, 13,800 volts
8. NOMINAL GROSS MW OUTPUT	20 MW
9. TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, non-reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Front firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*Not Available
10. CURRENT LEVEL OF NOx	*Not Available
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Louisiana Department of Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Louisiana Department of Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable
AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	0.15 (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington (pumps), Westinghouse (turbine), Allis Chalmers (motor)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	0.45 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(1) forced draft fan, (1) induced draft fan
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse
9. PEAK MW LOAD OF COMBUSTION AIR SYS	0.45 MW
10. DESCRIPTION OF AIR PREHEATER	(1) tubular type
11. MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12. PEAK MW LOAD OF AIR PREHEATER	Not applicable
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

Draft Report May 2020

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #3 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 1450 psig
4. NUMBER OF FEEDWATER HEATERS	Five
5. LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7. NAMEPLATE RATINGS	133,689 KVA, 0 85 PF, 13,800 volts
8. MAXIMUM NET CAPABILITY	109 MW
9. TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	DC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	
3. MW DERATING - ALTER FUEL USE	
4. STARTUP FUEL	Natural gas
5 BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Corner firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality regulations
2 MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6 TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*Unit 2 0.1203 Lbs/Million Btu Unit 3 0.1301 lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Louisiana Department of Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Louisiana Department of Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	0.4 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps with hydraulic couplings
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Allis Chalmers (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	1 9 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Buffalo Forge (fans), Allis Chalmers (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	1 0 MW
10 DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative air heaters
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12 PEAK MW LOAD OF AIR PREHEATER	0 01 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping, oil piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	0.06 MW (fuel oil pump)

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #4 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 1450 psig
4. NUMBER OF FEEDWATER HEATERS	Five
5. LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7. NAMEPLATE RATINGS	133,689 KVA, 0 85 PF, 13,800 volts
8. MAXIMUM NET CAPABILITY	108 MW
9. TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	
3. MW DERATING - ALTER FUEL USE	
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Corner firing
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Louisiana Department of Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6 TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0 0008 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0 1175 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Louisiana Department of Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Louisiana Department of Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	0 4 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps with hydraulic couplings
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Elliot Company (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	1 9 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Buffalo Forge (fans), Elliot Company (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	1 0 MW
10. DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative air heaters
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0 01 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping, oil piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	0.06 MW (fuel oil pump)

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #2 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Single casing, condensing, non-reheat
3. INLET TEMPERATURES / PRESSURES	900°F / 850 psig
4 NUMBER OF FEEDWATER HEATERS	Four
5 LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6 GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7 NAMEPLATE RATINGS	44,118 KVA, 0 85 PF, 13,800 volts
8 NOMINAL GROSS MW OUTPUT	30 MW
9. TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Pressurized furnace, natural circulation, non-reheat
7 TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Front firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2 MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0 0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.3734 Lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISPOSAL SYS	Not Applicable

*Based on 2013-2015 EPA Air Markets Program Data

AUXILIARIES	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2 MANUFACTURER OF COOLING WATER SYS	Not Applicable
3 PEAK MW LOAD OF COOLING WATER SYS	0.3 MW (circulating water pumps)
4 DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington (pumps), General Electric (motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	0 6 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(1) forced draft fan
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fan), General Electric (motor)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	0.3 MW
10. DESCRIPTION OF AIR PREHEATER	(1) tubular type
11. MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12. PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

Withdrawn May 2020

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #3 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Single casing, condensing, non-reheat
3 INLET TEMPERATURES / PRESSURES	900°F / 850 psig
4. NUMBER OF FEEDWATER HEATERS	Four
5. LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7. NAMEPLATE RATINGS	44,118 KVA, 0.85 PF, 13,800 volts
8 NOMINAL GROSS MW OUTPUT	30 MW
9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	None
3 MW DERATING - ALTER FUEL USE	Not Applicable
4 STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Pressurized furnace, natural circulation, non-reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Front firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4 MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*0 4470 Lbs/Million Btu
11 PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2013-2015 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2 MANUFACTURER OF COOLING WATER SYS	Not Applicable
3 PEAK MW LOAD OF COOLING WATER SYS	0.3 MW (circulating water pumps)
4 DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington (pumps), General Electric (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	0.6 MW
7 DESCRIPTION OF COMBUSTION AIR SYS	(1) forced draft fan
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fan), General Electric (motor)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	0.4 MW
10. DESCRIPTION OF AIR PREHEATER	(1) tubular type
11. MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12. PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

Unit Retired May 2020

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #4 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, non-reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 850 psig
4. NUMBER OF FEEDWATER HEATERS	Five
5. LAST ROW OF BLADING SIZE / RPMs	20" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	91,875 KVA, 0.80 PF, 13,800 volts
8. NOMINAL GROSS MW OUTPUT	75 MW
9 TYPE OF COOLING	Hydrogen
10 TYPE OF EXCITATION	DC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas oil
2 DESCRIPTION OF ALTERNATE FUEL	None
3 MW DERATING - ALTER FUEL USE	Not Applicable
4 STARTUP FUEL	Natural gas oil
5. BOILER MANUFACTURER	Riley Stoker
6 TYPE OF BOILER	Pressurized furnace, natural circulation, non-reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	LFN firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4 MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Not Applicable
8 CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.6[illegible] Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.2[illegible]9 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12 PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2013-2015 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	0.6 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(3) motor driven pumps
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Worthington (pumps), Allis Chalmers (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	1.2 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	American Blower Corporation (fans), Allis Chalmers (motors)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	1 0 MW
10 DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	Negligible
13 DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14 MANUFACTURER OF FUEL FEED SYS	Not Applicable
15 PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

Retired January 2016

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #5 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2 TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2000 psig
4. NUMBER OF FEEDWATER HEATERS	Six
5. LAST ROW OF BLADING SIZE / RPMs	30" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	390 MVA, 0 90 PF, 22,000 volts
8. MAXIMUM NET CAPABILITY	344 MW
9 TYPE OF COOLING	Water cooled stator
10 TYPE OF EXCITATION	AC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	
3. MW DERATING - ALTER FUEL USE	
4 STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Combustion Engineering
6. TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7. TYPE OF FUEL FIRING	Not Applicable
8 DESCRIPTION OF BURNER LAYOUT	Corner fired
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	RJM Corp.
5 TYPE OF PARTICULATE CONTROL	Not Applicable
6 TYPE OF SO2 CONTROL	Not Applicable
7 TYPE OF NOx CONTROL	Burner water injection
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9 CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0 1030 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2 MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	2.0 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP, (1) motor driven BFP with hydraulic coupling
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), General Electric (turbine and motor)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	7.3 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Green Fuel Economizer Company (fans), General Electric (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	5 2 MW
10. DESCRIPTION OF AIR PREHEATER	(1) Ljungstrom regenerative air heater
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0 02 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping, oil piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	0 09 MW (fuel oil pumps)

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
LONE STAR #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, non-reheat
3 INLET TEMPERATURES / PRESSURES	900°F / 850 psig
4 NUMBER OF FEEDWATER HEATERS	Four
5. LAST ROW OF BLADING SIZE / RPMs	16-1/2" / 3600 RPM
6. GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	58,823 KVA, 0.85 PF, 13,800 volts
8. NOMINAL GROSS MW OUTPUT	40 MW
9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	DC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	Fuel Oil
3. MW DERATING - ALTER FUEL USE	None
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Pressurized [illegible] ce, [illegible]ral circulation, non-reheat
7. TYPE OF FUEL FIRING	Not Applicabl[illegible]
8 DESCRIPTION OF BURNER LAYOUT	Front f[illegible]
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Te[illegible] Commission on Environmental Quality regulations
2. MANUFACTURER OF PART CONTROL	N[illegible]able
3. MANUFACTURER OF SO2 CONTROL	N[illegible]cable
4. MANUFACTURER OF NOx CONTROL	[illegible]t Applicable
5. TYPE OF PARTICULATE CONTROL	[illegible] Applicable
6 TYPE OF SO2 CONTROL	[illegible]ot Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0 1078 Lbs/Million Btu
11 PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION R[illegible]	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF OF WASTE WATER S[illegible]EM	Not Applicable
17. TYPE OF WASTE WATER [illegible]	Not Applicable
18 MANUF OF WASTE DISPOS[illegible] SYSTEM	Not Applicable
19 TYPE OF WASTE DISPO[illegible] SYSTEM	Not Applicable
20. PEAK MW LOAD OF WA[illegible]TER SYS	Not Applicable
21 PEAK MW LOAD O[illegible] WA[illegible] DISP SYS	Not Applicable

*Based on 2013-2015 EPA [illegible] Markets Program Data

AUXILIARIES & [illegible]OLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	0.45 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Allis Chalmers (motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	0 75 MW
7 DESCRIPTION OF COMBUSTION AIR SYS	(1) forced draft fan
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse
9 PEAK MW LOAD OF COMBUSTION AIR SYS	0 52 MW
10. DESCRIPTION OF AIR PREHEATER	(1) tubular type
11. MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12 PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13 DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping, oil piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15 PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

Interim Rates May 2020

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
COMBUSTION TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric, Co.
2. TURBINE DESCRIPTION	Frame 7, Model 7121 EA Combustion Turbine
3. INLET TEMPERATURES / PRESSURES	Ambient
4. NUMBER OF FEEDWATER HEATERS	Not Applicable
5 LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6 GENERATOR MANUFACTURER	Elin, Austria
7. NAMEPLATE RATINGS	102540 KVA, 0 85 PF, 13800 Volts
8. MAXIMUM NET CAPABILITY	78 MW
9. TYPE OF COOLING	Air
10 TYPE OF EXCITATION	Electric Machinery Co Brushless Exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Not Applicable
2. DESCRIPTION OF ALTERNATE FUEL	Not Applicable
3. MW DERATING - ALTER FUEL USE	Not Applicable
4 STARTUP FUEL	Not Applicable
5. BOILER MANUFACTURER	Not Applicable
6 TYPE OF BOILER	Not Applicable
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Not Applicable
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
2 MANUFACTURER OF PART CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8 CURRENT LEVEL OF PARTICULATES	Not Applicable
9 CURRENT LEVEL OF SO2	*0 0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.0474 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Not Applicable
15. APPLICABLE WASTE DISPOSAL REG	Not Applicable
16. MANUF OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Part of Combustion Turbine System
2 MANUFACTURER OF COOLING WATER SYS	Part of Combustion Turbine System
3 PEAK MW LOAD OF COOLING WATER SYS	Not Applicable
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Not Applicable
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Not Applicable
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	Not Applicable
7 DESCRIPTION OF COMBUSTION AIR SYS	Not Applicable
8 MANUFACTURER OF COMBUSTION AIR SYS	Not Applicable
9. PEAK MW LOAD OF COMBUSTION AIR SYS	Not Applicable
10. DESCRIPTION OF AIR PREHEATER	Not Applicable
11. MANUFACTURER OF AIR PREHEATER	Not Applicable
12 PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13 DESCRIPTION OF FUEL FEED SYS	Not Applicable
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON #2 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
COMBUSTION TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric, Co.
2. TURBINE DESCRIPTION	Frame 7, Model 7121 EA Combustion Turbine
3. INLET TEMPERATURES / PRESSURES	Ambient
4 NUMBER OF FEEDWATER HEATERS	Not Applicable
5. LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6. GENERATOR MANUFACTURER	Elin, Austria
7. NAMEPLATE RATINGS	102540 KVA, 0 85 PF, 13800 Volts
8 MAXIMUM NET CAPABILITY	78 MW
9 TYPE OF COOLING	Air
10. TYPE OF EXCITATION	Electric Machinery Co Brushless Exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Not Applicable
2. DESCRIPTION OF ALTERNATE FUEL	Not Applicable
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Not Applicable
5 BOILER MANUFACTURER	Not Applicable
6 TYPE OF BOILER	Not Applicable
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Not Applicable
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0 0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.0461 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Not Applicable
15. APPLICABLE WASTE DISPOSAL REG	Not Applicable
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Part of Combustion Turbine System
2. MANUFACTURER OF COOLING WATER SYS	Part of Combustion Turbine System
3. PEAK MW LOAD OF COOLING WATER SYS	Not Applicable
4 DESCRIPTION OF BOILER FEEDPUMP SYS	Not Applicable
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Not Applicable
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	Not Applicable
7 DESCRIPTION OF COMBUSTION AIR SYS	Not Applicable
8. MANUFACTURER OF COMBUSTION AIR SYS	Not Applicable
9. PEAK MW LOAD OF COMBUSTION AIR SYS	Not Applicable
10. DESCRIPTION OF AIR PREHEATER	Not Applicable
11. MANUFACTURER OF AIR PREHEATER	Not Applicable
12 PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13. DESCRIPTION OF FUEL FEED SYS	Not Applicable
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON #3 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
COMBUSTION TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric, Co
2. TURBINE DESCRIPTION	Frame 7, Model 7121 EA Combustion Turbine
3. INLET TEMPERATURES / PRESSURES	Ambient
4. NUMBER OF FEEDWATER HEATERS	Not Applicable
5. LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6. GENERATOR MANUFACTURER	General Electric, Co
7. NAMEPLATE RATINGS	101800 KVA, 0.85 PF, 13800 Volts
8. MAXIMUM NET CAPABILITY	79 MW
9. TYPE OF COOLING	Air
10. TYPE OF EXCITATION	Kato Brushless Exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Not Applicable
2. DESCRIPTION OF ALTERNATE FUEL	Not Applicable
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Not Applicable
5. BOILER MANUFACTURER	Not Applicable
6. TYPE OF BOILER	Not Applicable
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Not Applicable
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6 TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.0727 Lbs/Million Btu
11 PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Not Applicable
15 APPLICABLE WASTE DISPOSAL REG	Not Applicable
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Part of Combustion Turbine System
2. MANUFACTURER OF COOLING WATER SYS	Part of Combustion Turbine System
3 PEAK MW LOAD OF COOLING WATER SYS	Not Applicable
4. DESCRIPTION OF BOILER FEEDPUMP SYS	Not Applicable
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Not Applicable
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	Not Applicable
7. DESCRIPTION OF COMBUSTION AIR SYS	Not Applicable
8. MANUFACTURER OF COMBUSTION AIR SYS	Not Applicable
9. PEAK MW LOAD OF COMBUSTION AIR SYS	Not Applicable
10. DESCRIPTION OF AIR PREHEATER	Not Applicable
11. MANUFACTURER OF AIR PREHEATER	Not Applicable
12. PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13. DESCRIPTION OF FUEL FEED SYS	Not Applicable
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
MATTISON #4 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
COMBUSTION TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric, Co.
2. TURBINE DESCRIPTION	Frame 7, Model 7121 EA Combustion Turbine
3. INLET TEMPERATURES / PRESSURES	Ambient
4. NUMBER OF FEEDWATER HEATERS	Not Applicable
5 LAST ROW OF BLADING SIZE / RPMs	3600 RPM
6 GENERATOR MANUFACTURER	General Electric, Co.
7. NAMEPLATE RATINGS	101800 KVA, 0.85 PF, 13800 Volts
8. MAXIMUM NET CAPABILITY	79 MW
9 TYPE OF COOLING	Air
10. TYPE OF EXCITATION	Kato Brushless Exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Not Applicable
2. DESCRIPTION OF ALTERNATE FUEL	Not Applicable
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Not Applicable
5. BOILER MANUFACTURER	Not Applicable
6. TYPE OF BOILER	Not Applicable
7 TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Not Applicable
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Arkansas Pollution Control and Ecology Commission regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0 0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.0774 Lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	Not Applicable
12 PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13 PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Not Applicable
15 APPLICABLE WASTE DISPOSAL REG	Not Applicable
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Part of Combustion Turbine System
2. MANUFACTURER OF COOLING WATER SYS	Part of Combustion Turbine System
3. PEAK MW LOAD OF COOLING WATER SYS	Not Applicable
4. DESCRIPTION OF BOILER FEEDPUMP SYS	Not Applicable
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Not Applicable
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	Not Applicable
7. DESCRIPTION OF COMBUSTION AIR SYS	Not Applicable
8 MANUFACTURER OF COMBUSTION AIR SYS	Not Applicable
9. PEAK MW LOAD OF COMBUSTION AIR SYS	Not Applicable
10. DESCRIPTION OF AIR PREHEATER	Not Applicable
11 MANUFACTURER OF AIR PREHEATER	Not Applicable
12. PEAK MW LOAD OF AIR PREHEATER	Not Applicable
13. DESCRIPTION OF FUEL FEED SYS	Not Applicable
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
HENRY W. PIRKEY #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2 TURBINE DESCRIPTION	Four casing, tandem compound, four flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2400 psig
4. NUMBER OF FEEDWATER HEATERS	Seven
5. LAST ROW OF BLADING SIZE / RPMs	28-1/2" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse Electric Corporation
7. NAMEPLATE RATINGS	775 MVA, 0.93 PF, 24,000 volts
8. MAXIMUM NET CAPABILITY	675 MW
9. TYPE OF COOLING	Water cooled stator
10. TYPE OF EXCITATION	Brushless AC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Lignite
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, reheat
7 TYPE OF FUEL FIRING	Pulverized
8. DESCRIPTION OF BURNER LAYOUT	Opposed firing
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	United Oil Products Air Correction Division
3. MANUFACTURER OF SO2 CONTROL	United Oil Products Air Correction Division
4. MANUFACTURER OF NOx CONTROL	Advanced Burner Technologies Corp.
5 TYPE OF PARTICULATE CONTROL	Cold side electrostatic precipitator
6 TYPE OF SO2 CONTROL	Limestone absorption
7 TYPE OF NOx CONTROL	Low NOx burners with overfire air
8 CURRENT LEVEL OF PARTICULATES	0 0045 lb/mmBtu (3/14/18 MATS PM test)
9. CURRENT LEVEL OF SO2	*0 1770 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.1616 Lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	4.4 MW
12 PEAK MW LOAD OF SO2 SYSTEM	7 5 MW
13 PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Ecodyne-Graver Water Divison
17. TYPE OF WASTE WATER SYSTEM	Lime treatment for solids precipitation
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19. TYPE OF WASTE DISPOSAL SYSTEM	Landfill for combustion by-products and FGD sludge
20. PEAK MW LOAD OF WASTE WATER SYS	System not used
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	4.5 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP with hydraulic coupling
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Westinghouse (turbine), General Electric (motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	16 8 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	Two (2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fans) and General Electric (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	4 5 MW
10. DESCRIPTION OF AIR PREHEATER	(1) primary and (2) secondary, Rothemuhle bisector regenerative
11. MANUFACTURER OF AIR PREHEATER	Babcock & Wilcox
12. PEAK MW LOAD OF AIR PREHEATER	0.05 MW
13 DESCRIPTION OF FUEL FEED SYS	Belt conveyors, fuel feeders, pulverizers, and primary air fans
14. MANUFACTURER OF FUEL FEED SYS	FMC (conveyors), Westinghouse (PA fans), B&W (pulverizers), Stock (feeders)
15. PEAK MW LOAD OF FUEL FEED SYS	17.0 MW

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
JOHN W TURK PLANT GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1 TURBINE MANUFACTURER	Alstom
2 TURBINE DESCRIPTION	Alstom steam turbine-generator is a four casing, 3600-rpm, tandem compound, single reheat, condensing machine The turbine consists of a single flow high-pressure (HP) turbine section, a double flow intermediate-pressure (IP) turbine section and two double flow low pressure (LP) turbine sections with down exhausts (a four flow LP turbine)
3 INLET TEMPERATURES / PRESSURES	SH 1115°F/3515 Psi RH 1125°F/750 Psi
4 NUMBER OF FEEDWATER HEATERS	8
5 LAST ROW OF BLADING SIZE / RPMs	34 inch 3600 rpm
6 GENERATOR MANUFACTURER	Alstom
7 NAMEPLATE RATINGS	840 MVA Rating, 0 85 Power Factor, 2 Pole, 3 phase
8 MAXIMUM NET CAPABILITY	650
9 TYPE OF COOLING	Direct Hydrogen cooled field and stator core Direct water cooled stator windings
10 TYPE OF EXCITATION	Static Exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Low Sulfur Powder River Basin Coal
2 DESCRIPTION OF ALTERNATE FUEL	N/A
3 MW DERATING - ALTER FUEL USE	N/A
4 STARTUP FUEL	Natural Gas
5 BOILER MANUFACTURER	Babcock &Wilcox
6 TYPE OF BOILER	Pulverized coal fired Spiral Wound Universal Pressure (SWUP) ultra super critical boiler
7 TYPE OF FUEL FIRING	Powder River Basin (PRB)
8 DESCRIPTION OF BURNER LAYOUT	30 low NOx burners ,3 levels opposed firing 10 low nox ports
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	ADEQ Title V #2123-AOP-R2
2 MANUFACTURER OF PART CONTROL	B&W
3 MANUFACTURER OF SO2 CONTROL	B&W
4 MANUFACTURER OF NOx CONTROL	B&W
5. TYPE OF PARTICULATE CONTROL	BagHouse
6 TYPE OF SO2 CONTROL	Spray Dry Absorber
7 TYPE OF NOx CONTROL	Selective Catalytic Reduction with 19% NH^3
8 CURRENT LEVEL OF PARTICULATES	0 0005 lb/mmBtu (10/16/19 Title V stack test)
9 CURRENT LEVEL OF SO2	*0 0329 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*0 0388 Lbs/Million Btu
11 PEAK MW LOAD OF PART SYSTEM	N/A
12 PEAK MW LOAD OF SO2 SYSTEM	1 mw
13 PEAK MW LOAD OF NOx SYSTEM	N/A
14. APPLICABLE WATER POLLUTION REG	ADEQ AR0051136
15 APPLICABLE WASTE DISPOSAL REG	ADEQ Class 3N solid waste
16 MANUF OF WASTE WATER SYSTEM	SHAW/CBI
17 TYPE OF WASTE WATER SYSTEM	settling Pond with outfall
18 MANUF OF WASTE DISPOSAL SYSTEM	UCC
19 TYPE OF WASTE DISPOSAL SYSTEM	Solid Landfill
20 PEAK MW LOAD OF WASTE WATER SYS	N/A
21 PEAK MW LOAD OF WASTE DISP SYS	N/A

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Mechanical draft, 16 cells 2, 3400 Hp circ pumps
2 MANUFACTURER OF COOLING WATER SYS	SPX Cooling Technologies
3 PEAK MW LOAD OF COOLING WATER SYS	3 6 MW
4 DESCRIPTION OF BOILER FEEDPUMP SYS	1 turbine feedpump 1 motor feedpump
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Turbine Alstom Pump Flowserve Motor TECO Westinghouse Pump Flowserve
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	Turbine 10 5 MW Motor 3 7 MW
7 DESCRIPTION OF COMBUSTION AIR SYS	Balanced Draft
8 MANUFACTURER OF COMBUSTION AIR SYS	B&W
9 PEAK MW LOAD OF COMBUSTION AIR SYS	11 2 MW (FD, ID & PA fans)
10 DESCRIPTION OF AIR PREHEATER	Trisector lungstrum
11 MANUFACTURER OF AIR PREHEATER	Alstom
12 PEAK MW LOAD OF AIR PREHEATER	0 09 MW
13. DESCRIPTION OF FUEL FEED SYS	Nat Gas pipeline feed Coal 6 B$W-98N Pulverizer
14 MANUFACTURER OF FUEL FEED SYS	Nat Gas B&W Coal B&W
15. PEAK MW LOAD OF FUEL FEED SYS	Nat Gas N/A Coal 1 8Mw

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3 INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 1800 psig
4. NUMBER OF FEEDWATER HEATERS	Six
5. LAST ROW OF BLADING SIZE / RPMs	23" / 3600 RPM
6. GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	211,200 KVA, 0.85 PF, 20,000 volts
8. MAXIMUM NET CAPABILITY	164 MW
9. TYPE OF COOLING	Oil cooled stator
10 TYPE OF EXCITATION	DC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2 DESCRIPTION OF ALTERNATE FUEL	Fuel oil
3 MW DERATING - ALTER FUEL USE	27 MW reduction
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Combustion Engineering
6 TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7. TYPE OF FUEL FIRING	Not Applicable
8 DESCRIPTION OF BURNER LAYOUT	Corner fired
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2 MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Not Applicable
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Not Applicable
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0 1539 Lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21 PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake and cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Not Applicable
3 PEAK MW LOAD OF COOLING WATER SYS	0.6 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(2) motor driven boiler feed pumps
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), General Electric (motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	3 7 MW
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fans), General Electric (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	1 5 MW
10. DESCRIPTION OF AIR PREHEATER	Two Ljungstrom regenerative air heaters
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0 01 MW
13 DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping, oil piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	0 06 MW (fuel oil pump)

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #2 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2000 psig
4. NUMBER OF FEEDWATER HEATERS	Six
5. LAST ROW OF BLADING SIZE / RPMs	30" / 3600 RPM
6. GENERATOR MANUFACTURER	General Electric Company
7. NAMEPLATE RATINGS	390 MVA, 0.90 PF, 22,000 volts
8 MAXIMUM NET CAPABILITY	365 MW
9. TYPE OF COOLING	Water cooled stator
10. TYPE OF EXCITATION	AC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7. TYPE OF FUEL FIRING	Not Applicable
8. DESCRIPTION OF BURNER LAYOUT	Opposed
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Not Applicable
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	RJM Corp.
5 TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Low NOx burners
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0 0006 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*0.1381 Lbs/Million Btu
11. PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13 PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake and cooling tower
2. MANUFACTURER OF COOLING WATER SYS	Not Applicable
3. PEAK MW LOAD OF COOLING WATER SYS	1.2 MW (circulating water pumps)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP with hydraulic coupling
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), General Electric (turbine and motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	7.3 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Air Preheater Company (fans), General Electric (motors)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	4.5 MW
10. DESCRIPTION OF AIR PREHEATER	(1) Ljungstrom regenerative
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0.02 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #3 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	General Electric Company
2. TURBINE DESCRIPTION	Two casing, tandem compound, two flow exhaust, condensing, reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2000 psig
4. NUMBER OF FEEDWATER HEATERS	Six
5. LAST ROW OF BLADING SIZE / RPMs	30" / 3600 RPM
6 GENERATOR MANUFACTURER	General Electric Company
7 NAMEPLATE RATINGS	390 MVA, 0 90 PF, 22,000 volts
8 MAXIMUM NET CAPABILITY	360 MW
9. TYPE OF COOLING	Water cooled stator
10. TYPE OF EXCITATION	AC exciter
BOILER	
1. DESCRIPTION OF PRIMARY FUEL	Natural gas
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	Natural gas
5. BOILER MANUFACTURER	Babcock & Wilcox
6 TYPE OF BOILER	Pressurized furnace, natural circulation, reheat
7 TYPE OF FUEL FIRING	Not Applicable
8 DESCRIPTION OF BURNER LAYOUT	Opposed
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART CONTROL	Not Applicable
3 MANUFACTURER OF SO2 CONTROL	Not Applicable
4 MANUFACTURER OF NOx CONTROL	RJM Corp
5. TYPE OF PARTICULATE CONTROL	Not Applicable
6. TYPE OF SO2 CONTROL	Not Applicable
7. TYPE OF NOx CONTROL	Low NOx burners
8. CURRENT LEVEL OF PARTICULATES	Not Applicable
9. CURRENT LEVEL OF SO2	*0.0006 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.1064 Lbs/Million Btu
11 PEAK MW LOAD OF PART. SYSTEM	Not Applicable
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14 APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18 MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Not Applicable.
20. PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1 DESCRIPTION OF COOLING WATER SYS	Lake and cooling tower
2 MANUFACTURER OF COOLING WATER SYS	Marley (cooling tower)
3. PEAK MW LOAD OF COOLING WATER SYS	3 3 MW (circulating water pumps and cooling tower)
4. DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP, (1) motor driven BFP with hydraulic coupling
5 MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), General Electric (turbine and motors)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	7 3 MW (equivalent electrical load of auxiliary steam turbine output)
7 DESCRIPTION OF COMBUSTION AIR SYS	(2) forced draft fans
8 MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (fans), General Electric (motors)
9 PEAK MW LOAD OF COMBUSTION AIR SYS	4.5 MW
10. DESCRIPTION OF AIR PREHEATER	(1) Ljungstrom regenerative
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0 02 MW
13. DESCRIPTION OF FUEL FEED SYS	Pressurized gas piping
14. MANUFACTURER OF FUEL FEED SYS	Not Applicable
15. PEAK MW LOAD OF FUEL FEED SYS	Not Applicable

SCHEDULE H-12 3b
SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH #1 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2. TURBINE DESCRIPTION	Three casing, tandem compound, four flow exhaust, condensing, reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2400 psig
4. NUMBER OF FEEDWATER HEATERS	Seven
5. LAST ROW OF BLADING SIZE / RPMs	25" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse Electric Company
7. NAMEPLATE RATINGS	620 MVA, 0 90 PF, 18,000 volts
8 MAXIMUM NET CAPABILITY	525 MW
9 TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	Brushless AC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Western coal
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	No. 2 fuel oil
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, reheat
7. TYPE OF FUEL FIRING	Pulverized
8. DESCRIPTION OF BURNER LAYOUT	Opposed
POLLUTION CONTROL	
1 APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2 MANUFACTURER OF PART CONTROL	Research-Cottrell
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Advanced Burner Technologies Corp.
5 TYPE OF PARTICULATE CONTROL	Hot side electrostatic precipitator/Pulse Jet Fabric Filter
6. TYPE OF SO2 CONTROL	None
7. TYPE OF NOx CONTROL	Low NOx burners with overfire air
8 CURRENT LEVEL OF PARTICULATES	0.0031 lb/mmBtu (2/14/19 Title V Stack test)
9 CURRENT LEVEL OF SO2	*0.4314 Lbs/Million Btu
10. CURRENT LEVEL OF NOx	*0.2071 Lbs/Million Btu
11. PEAK MW LOAD OF PART SYSTEM	2 7 MW
12. PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15. APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Landfill for combustion by-products
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake and cooling tower
2. MANUFACTURER OF COOLING WATER SYS	Not applicable
3 PEAK MW LOAD OF COOLING WATER SYS	3.4 MW (circulating water pumps)
4 DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP with hydraulic coupling
5 MANUFACTURER OF BOILER FEEDPUMP SYS	DeLaval (TDBFP), Pacific (MDBFP), Westinghouse (turbine), GE (motor)
6 PEAK MW LOAD OF BOILER FEEDPUMP SYS	13 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	Two (2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (FD fans) and General Electric (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	2 6 MW
10 DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative tri-sector air heaters
11 MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12 PEAK MW LOAD OF AIR PREHEATER	0.06 MW
13. DESCRIPTION OF FUEL FEED SYS	Belt conveyors, coal feeders, pulverizers, and primary air fans
14 MANUFACTURER OF FUEL FEED SYS	J B. Webb (conveyors), Stock (feeders), B&W (pulv.), Westinghouse (PA fans)
15 PEAK MW LOAD OF FUEL FEED SYS	9.8 MW

SCHEDULE H-12.3b
SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH #3 GENERATING UNIT CHARACTERISTICS

CATEGORY	DESCRIPTION / RESPONSE
TURBINE-GENERATOR	
1. TURBINE MANUFACTURER	Westinghouse Electric Corporation
2 TURBINE DESCRIPTION	Three casing, tandem compound, four flow exhaust, condensing, reheat
3. INLET TEMPERATURES / PRESSURES	1000°F / 1000°F / 2400 psig
4. NUMBER OF FEEDWATER HEATERS	Seven
5. LAST ROW OF BLADING SIZE / RPMs	25" / 3600 RPM
6. GENERATOR MANUFACTURER	Westinghouse Electric Company
7. NAMEPLATE RATINGS	620 MVA, 0 90 PF, 18,000 volts
8. MAXIMUM NET CAPABILITY	528 MW
9. TYPE OF COOLING	Hydrogen
10. TYPE OF EXCITATION	Brushless AC exciter
BOILER	
1 DESCRIPTION OF PRIMARY FUEL	Western coal
2. DESCRIPTION OF ALTERNATE FUEL	None
3. MW DERATING - ALTER FUEL USE	Not Applicable
4. STARTUP FUEL	No. 2 fuel oil
5. BOILER MANUFACTURER	Babcock & Wilcox
6. TYPE OF BOILER	Balanced draft, natural circulation, reheat
7. TYPE OF FUEL FIRING	Pulverized
8. DESCRIPTION OF BURNER LAYOUT	Opposed
POLLUTION CONTROL	
1. APPLICABLE AIR POLLUTION REG	Texas Commission on Environmental Quality regulations
2. MANUFACTURER OF PART. CONTROL	Research-Cottrell
3. MANUFACTURER OF SO2 CONTROL	Not Applicable
4. MANUFACTURER OF NOx CONTROL	Babcock & Wilcox
5. TYPE OF PARTICULATE CONTROL	Hot side electrostatic precipitator/Pulse Jet Fabric Filter
6. TYPE OF SO2 CONTROL	None
7. TYPE OF NOx CONTROL	Low NOx burners with overfire air
8. CURRENT LEVEL OF PARTICULATES	0 0017 lb/mmBtu (2/13/19 MATS PM test)
9. CURRENT LEVEL OF SO2	*0.4314 Lbs/Million Btu
10 CURRENT LEVEL OF NOx	*0.2071 Lbs/Million Btu
11 PEAK MW LOAD OF PART. SYSTEM	2 7 MW
12 PEAK MW LOAD OF SO2 SYSTEM	Not Applicable
13. PEAK MW LOAD OF NOx SYSTEM	Not Applicable
14. APPLICABLE WATER POLLUTION REG	Texas Commission on Environmental Quality regulations
15 APPLICABLE WASTE DISPOSAL REG	Texas Commission on Environmental Quality regulations
16. MANUF. OF WASTE WATER SYSTEM	Not Applicable
17. TYPE OF WASTE WATER SYSTEM	Not Applicable
18. MANUF OF WASTE DISPOSAL SYSTEM	Not Applicable
19 TYPE OF WASTE DISPOSAL SYSTEM	Landfill for combustion by-products
20 PEAK MW LOAD OF WASTE WATER SYS	Not Applicable
21. PEAK MW LOAD OF WASTE DISP SYS	Not Applicable

*Based on 2019 EPA Air Markets Program Data

AUXILIARIES & COOLING WATER SYSTEM	
1. DESCRIPTION OF COOLING WATER SYS	Lake and cooling tower
2. MANUFACTURER OF COOLING WATER SYS	Research Cottrell (cooling tower)
3. PEAK MW LOAD OF COOLING WATER SYS	6 2 MW (circulating water pumps and cooling tower fans/pumps)
4 DESCRIPTION OF BOILER FEEDPUMP SYS	(1) turbine driven BFP; (1) motor driven BFP with hydraulic coupling
5. MANUFACTURER OF BOILER FEEDPUMP SYS	Pacific Pumps (pumps), Westinghouse (turbine), General Electric (motors)
6. PEAK MW LOAD OF BOILER FEEDPUMP SYS	13 MW (equivalent electrical load of auxiliary steam turbine output)
7. DESCRIPTION OF COMBUSTION AIR SYS	Two (2) forced draft fans
8. MANUFACTURER OF COMBUSTION AIR SYS	Westinghouse (FD fans) and General Electric (motors)
9. PEAK MW LOAD OF COMBUSTION AIR SYS	3 0 MW
10. DESCRIPTION OF AIR PREHEATER	(2) Ljungstrom regenerative tri-sector air heaters
11. MANUFACTURER OF AIR PREHEATER	Air Preheater Corporation
12. PEAK MW LOAD OF AIR PREHEATER	0 06 MW
13. DESCRIPTION OF FUEL FEED SYS	Coal feeders, pulverizers, and primary air fans
14. MANUFACTURER OF FUEL FEED SYS	Stock (feeders), Babcock & Wilcox (pulverizers), and Westinghouse (PA fans)
15 PEAK MW LOAD OF FUEL FEED SYS	8 7 MW

SOUTHWESTERN ELECTRIC POWER COMPANY
ARSENAL HILL #5 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	84.2% / 1500 psig / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,832 Btu/KWh / 1450 psig / 1000°F
3. GENERATOR EFFICIENCY / MW · MVAR	98 90% / 125 MW : 77 5 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	2.50" Hg absolute / 67,200 gpm
5 GROSS HEAT RATE (1)	10,479 Btu/KWh @ 100,000 gross KW
6. ORIGINAL STATION LOAD	4,000 KW
7. NET HEAT RATE (2)	10,916 Btu/KWh @ 96,000 net KW
8. HEAT RATE CURVE / EQUATION	Not Available

"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2 MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2001	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	1995								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS	General Electric
3 DATE & COST OF INSTALLATION	1960· Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Programmable logic controller (PLC) based system
5. MANUFACTURER OF BOILER CONTROL SYS.	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
6. DATE & COST OF INSTALLATION	1998· $319,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Mechanical positioning of feedwater valve
9. TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One
11. DESCRIPTION OF HEATRATE DEVIATION SYS	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
STALL (ARSENAL HILL #6) GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	99 5% / 1084F / 1058F @ 1511psi (HRSG Performace Data Case 7)
2 TURBINE EFFICIENCY / STEAM CONDITIONS	6,119 Btu/Gross KWh / 1050°F / 1050°F @ 1882 psi design (calculated)
3 GENERATOR EFFICIENCY / MW . MVAR	6A & 6B Not Available % / 184.5 Mw / 115 MVAR
	6S: Not Available % / 256 02 Mw / 160 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	2 15 Hg Absolute / 166,999 gpm
5 GROSS HEAT RATE (1)	6,150 Btu/Kwh (LHV) @ 537 2 Gross Mw (Case Study 7, 100% load 72F)
6 ORIGINAL STATION LOAD	15,400 Kw
7. NET HEAT RATE (2)	6,331 Btu/Kwh (LHV) @ 521 8 Gross Mw (Case Study 7, 100% load 72F)
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1 STARTUP Btus	REDACTED
2 MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	6/8/2010	6/8/2010	6/10/2010	6/10/2010
1. TEST 1	MW OUTPUT	June-10	REDACTED			
	HEAT RATE					
	INCREMENTAL HEAT RATE					
2 TEST 2	MW OUTPUT					
	HEAT RATE					
	INCREMENTAL HEAT RATE					
3 TEST 3	MW OUTPUT					
	HEAT RATE					
	INCREMENTAL HEAT RATE					

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	Digital Electro Hydraulic / Fuel Combustion CT Control
2 MANUFACTURER OF TURBINE CONTROL SYS.	6A & 6B Siemens T-3000, 6S: ABB Symphony
3 DATE & COST OF INSTALLATION	Feb 2010, Commercial Operation June 2010
4 DESCRIPTION OF BOILER CONTROL SYS	DCS (Distributive Control System for both HRSG's)
5 MANUFACTURER OF BOILER CONTROL SYS	ABB
6 DATE & COST OF INSTALLATION	Feb 2010, Commercial Operation June 2010
7. TYPE OF FAN CONTROL SYSTEM	N/A
8 TYPE OF FEEDWATER PUMP CONTROL SYS	6A & 6B: Motor Driven Boiler Feed Pump, constant speed, DCS w/varing recirc
9 TYPE OF SOOT BLOWER CONTROL SYS	N/A
10 NUMBER OF OPERATOR CONTROL ROOMS	1- Main Control Romm, (1 Engineering Control Station)
11 DESCRIPTION OF HEATRATE DEVIATION SYS.	N/A
12. TYPE OF SCRUBBER CONTROL SYS	N/A

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities.

Sponsored by Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #2 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	82.2% / 875 psig / 910°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	9,535 Btu/KWh / 850 psig / 900°F
3 GENERATOR EFFICIENCY / MW · MVAR	Not Available / 25 MW · 18 75 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	1 50" Hg absolute / 35,000 gpm
5. GROSS HEAT RATE (1)	11,600 Btu/KWh @ 20,000 gross K[illegible]
6. ORIGINAL STATION LOAD	600 KW
7 NET HEAT RATE (2)	11,959 Btu/KWh @ 19,400 ne[illegible]
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1 STARTUP Btus	REDACTED
2 MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1995	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	[illegible]								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1989								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2 MANUFACTURER OF TURBINE CONTROL SYS	General Electric
3. DATE & COST OF INSTALLATION	1949: Cost included with turbine-generator
4 DESCRIPTION OF BOILER CONTROL SYS.	Distributed control system
5 MANUFACTURER OF BOILER CONTROL SYS	Moore APACS / Central & South West - Engineering Servies
6 DATE & COST OF INSTALLATION	1999. $297,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of forced and induced draft fan inlet valves
8 TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control (TDBFP), mechanical positioning of feedwater valve (MDBFP)
9 TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1&2
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12 TYPE OF SCRUBBER CONTROL SYS	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by. Monte McMahon

Unit Retired May 2020

SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #3 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	84 6% / 1575 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,105 Btu/KWh / 1450 psig / 1000°F / 1000°F
3 GENERATOR EFFICIENCY / MW MVAR	98 78% / 113 6 MW 70 4 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	1 50" Hg absolute / 58,200 gpm
5 GROSS HEAT RATE (1)	9,563 Btu/KWh @ 100,000 gross KW
6. ORIGINAL STATION LOAD	4,000 KW
7 NET HEAT RATE (2)	9,961 Btu/KWh @ 96,000 net KW
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1 STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1 TEST 1	MW OUTPUT	2001	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	1995								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1986								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS	Westinghouse
3. DATE & COST OF INSTALLATION	1957. Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Microprocessor based split architecture distributed control system
5 MANUFACTURER OF BOILER CONTROL SYS	Foxboro
6. DATE & COST OF INSTALLATION	1986. $127,000
7 TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8 TYPE OF FEEDWATER PUMP CONTROL SYS.	Mech positioning of feedwater valve and pump speed control via hyd coupling
9 TYPE OF SOOT BLOWER CONTROL SYS	None
10 NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 3, 4
11 DESCRIPTION OF HEATRATE DEVIATION SYS	None
12 TYPE OF SCRUBBER CONTROL SYS	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
LIEBERMAN #4 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	84.6% / 1575 psig / 1005°F / 1005°F
2 TURBINE EFFICIENCY / STEAM CONDITIONS	8,105 Btu/KWh / 1450 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW MVAR	98 78% / 113 6 MW . 70 4 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	1.50" Hg absolute / 58,200 gpm
5 GROSS HEAT RATE (1)	9,563 Btu/KWh @ 100,000 gross KW
6. ORIGINAL STATION LOAD	4,000 KW
7. NET HEAT RATE (2)	9,961 Btu/KWh @ 96,000 net KW
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1 STARTUP Btus	REDACTED
2 MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2001	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	1995								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3 TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS	Westinghouse
3 DATE & COST OF INSTALLATION	1957. Cost included with turbine-generator
4 DESCRIPTION OF BOILER CONTROL SYS	Microprocessor based split architecture distributed control system
5. MANUFACTURER OF BOILER CONTROL SYS	Foxboro
6 DATE & COST OF INSTALLATION	1992: $145,000
7 TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8 TYPE OF FEEDWATER PUMP CONTROL SYS	Mech positioning of feedwater valve and pump speed control via hyd coupling
9 TYPE OF SOOT BLOWER CONTROL SYS	None
10 NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 3, 4
11 DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #2 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	83.1% / 875 psig / 910°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	9,554 Btu/KWh / 850 psig / 900°F
3. GENERATOR EFFICIENCY / MW . MVAR	98.30% / 37.5 MW . 23.2 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	1.50" Hg absolute / 45,000 gpm
5. GROSS HEAT RATE (1)	11,553 Btu/KWh @ 30,000 gross KW
6. ORIGINAL STATION LOAD	1,500 KW
7. NET HEAT RATE (2)	12,161 Btu/KWh @ 28,500 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1996	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT									
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1989								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS.	Westinghouse
3. DATE & COST OF INSTALLATION	1950: Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS	Programmable logic controller (PLC) based system
5 MANUFACTURER OF BOILER CONTROL SYS.	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
6. DATE & COST OF INSTALLATION	1997: $184,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Mechanical positioning of feedwater valve
9. TYPE OF SOOT BLOWER CONTROL SYS.	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 2,3 & 4
11. DESCRIPTION OF HEATRATE DEVIATION SYS	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES . (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Unit Retired May 2020

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #3 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	83 1% / 875 psig / 910°F
2 TURBINE EFFICIENCY / STEAM CONDITIONS	9,554 Btu/KWh / 850 psig / 900°F
3 GENERATOR EFFICIENCY / MW · MVAR	98 30% / 37 5 MW : 23.2 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	1 50" Hg absolute / 45,000 gpm
5. GROSS HEAT RATE (1)	11,553 Btu/KWh @ 30,000 gross KW
6. ORIGINAL STATION LOAD	1,500 KW
7. NET HEAT RATE (2)	12,161 Btu/KWh @ 28,500 net KW
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1996	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT									
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3 TEST 3	MW OUTPUT	1989								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS.	Westinghouse
3. DATE & COST OF INSTALLATION	1952: Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Programmable logic controller (PLC) based system.
5. MANUFACTURER OF BOILER CONTROL SYS	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
6 DATE & COST OF INSTALLATION	1997: $184,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Mechanical positioning of feedwater valve
9 TYPE OF SOOT BLOWER CONTROL SYS.	None
10. NUMBER OF OPERATOR CONTROL ROOMS	None
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	One room common to units 2,3 & 4
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Unit Retired May 2020

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #4 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	83.6% / 875 psig / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	9,040 Btu/KWh / 850 psig / 1000°F
3. GENERATOR EFFICIENCY / MW · MVAR	98 62% / 73 5 MW : 55 1 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	1.50" Hg absolute / 60,000 gpm
5 GROSS HEAT RATE (1)	10,754 Btu/KWh @ 60,000 gross KW
6. ORIGINAL STATION LOAD	2,100 KW
7. NET HEAT RATE (2)	11,144 Btu/KWh @ 57,900 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1995	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT									
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1989								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS.	General Electric
3. DATE & COST OF INSTALLATION	1956: Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Programmable logic controller (PLC) based system.
5 MANUFACTURER OF BOILER CONTROL SYS.	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
6. DATE & COST OF INSTALLATION	2004; $82,482
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet vanes
8. TYPE OF FEEDWATER PUMP CONTROL SYS	Mechanical positioning of feedwater valve
9. TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 2,3 & 4
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start-up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by: Monte McMahon

Unit Retired June 2019

SOUTHWESTERN ELECTRIC POWER COMPANY
KNOX LEE #5 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85 5% / 2100 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,088 Btu/KWh / 2000 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW : MVAR	98 70 / 351 MW . 170 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	2 00" Hg absolute / 245,500 gpm
5. GROSS HEAT RATE (1)	9,451 Btu/KWh @ 322,521 gross KW
6. ORIGINAL STATION LOAD	10,936 KW
7 NET HEAT RATE (2)	9,793 Btu/KWh @ 311,585 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1 TEST 1	MW OUTPUT	2001	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	1996								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS.	Programmable logic controller based electronics. Hydraulic field actuators
2 MANUFACTURER OF TURBINE CONTROL SYS	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
3 DATE & COST OF INSTALLATION	1998. $175,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Programmable logic controller (PLC) based system.
5. MANUFACTURER OF BOILER CONTROL SYS	Allen-Bradley PLC-5 / Central & South West - Engineering Servies
6. DATE & COST OF INSTALLATION	1996: $512,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet vanes
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control. Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS.	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room for unit 5. Units 2, 3, and 4 can also be monitored from this room.
11 DESCRIPTION OF HEATRATE DEVIATION SYS	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES · (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
LONE STAR #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85 0% / 920 psig / 910°F
2 TURBINE EFFICIENCY / STEAM CONDITIONS	9,410 Btu/KWh / 850 psig / 900°F
3. GENERATOR EFFICIENCY / MW · MVAR	98 54% / 50 MW . 31 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	1.50" Hg absolute / 55,000 gpm
5. GROSS HEAT RATE (1)	11,026 Btu/KWh @ 40,000 gross KW
6. ORIGINAL STATION LOAD	1,400 KW
7 NET HEAT RATE (2)	11,426 Btu/KWh @ 38,600 net KW
8. HEAT RATE CURVE / EQUATION	Not Available

"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1995	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT									
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1989								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS.	Mechanical - Hydraulic Control
2. MANUFACTURER OF TURBINE CONTROL SYS	General Electric
3. DATE & COST OF INSTALLATION	1954· Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Microprocessor based loop controllers
5. MANUFACTURER OF BOILER CONTROL SYS.	Yokogawa / REO SWEPCO providing integration services
6 DATE & COST OF INSTALLATION	2012: $333,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet valves
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Mechanical positioning of feedwater valve
9. TYPE OF SOOT BLOWER CONTROL SYS	None
10 NUMBER OF OPERATOR CONTROL ROOMS	One
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by. Monte McMahon

Unit Retired May 2020

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85.1% / 1875 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,058 Btu/KWh / 1800 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW MVAR	98 66% / 179 5 MW 111 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	2.00" Hg absolute / 70,000 gpm
5 GROSS HEAT RATE (1)	9,460 Btu/KWh @ 160,000 gross KW
6 ORIGINAL STATION LOAD	6,948 KW
7. NET HEAT RATE (2)	9,890 Btu/KWh @ 153,052 net KW
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1997	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	1996								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS	Mechanical - Hydraulic control
2 MANUFACTURER OF TURBINE CONTROL SYS.	General Electric
3. DATE & COST OF INSTALLATION	1964: Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS	Programmable logic controller (PLC) based system
5. MANUFACTURER OF BOILER CONTROL SYS	Allen-Bradley Control Logics PLC / AEP Dallas - Engineering Servies
6 DATE & COST OF INSTALLATION	2011. $403,000
7 TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet vanes
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Mechanical positioning of feedwater valve
9. TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1,2,3
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #2 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85 6% / 2100 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,088 Btu/KWh / 2000 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW MVAR	98.70% / 351 MW : 170 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	2 00" Hg absolute / 139,000 gpm
5. GROSS HEAT RATE (1)	9,451 Btu/KWh @ 322,521 gross KW
6. ORIGINAL STATION LOAD	9,370 KW
7. NET HEAT RATE (2)	9,733 Btu/KWh @ 313,151 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2001	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	1996								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1995								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Programmable logic controller based electronics. Hydraulic field actuators.
2. MANUFACTURER OF TURBINE CONTROL SYS	Central & South West - Engineering Servies
3. DATE & COST OF INSTALLATION	1999. $224,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Microprocessor based loop controllers
5. MANUFACTURER OF BOILER CONTROL SYS.	Yokogawa / REO SWEPCO providing integration services
6. DATE & COST OF INSTALLATION	2012: $222,000
7. TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet vanes
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control: Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1,2,3
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by: Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
WILKES #3 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85.6% / 2100 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,088 Btu/KWh / 2000 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW · MVAR	98 70% / 351 MW · 170 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	2 00" Hg absolute / 139,000 gpm
5. GROSS HEAT RATE (1)	9,451 Btu/KWh @ 322,521 gross KW
6. ORIGINAL STATION LOAD	9,370 KW
7. NET HEAT RATE (2)	9,733 Btu/KWh @ 313,151 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2 MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	1995	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	1993								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Programmable logic controller based electronics. Hydraulic field actuators.
2 MANUFACTURER OF TURBINE CONTROL SYS.	Central & South West - Engineering Servies
3. DATE & COST OF INSTALLATION	1998· $123,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Microprocessor based loop controllers
5 MANUFACTURER OF BOILER CONTROL SYS.	Yokogawa / REO SWEPCO providing integration services
6. DATE & COST OF INSTALLATION	2011: $123,000
7 TYPE OF FAN CONTROL SYSTEM	Mechanical positioning of inlet vanes
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control: Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9 TYPE OF SOOT BLOWER CONTROL SYS	None
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1,2,3
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1 BOILER EFFICIENCY / STEAM CONDITIONS	85.8% / 2620 psig / 1005°F / 1005°F
2 TURBINE EFFICIENCY / STEAM CONDITIONS	7,944 Btu/KWh / 2400 psig / 1000°F / 1000°F
3 GENERATOR EFFICIENCY / MW · MVAR	98 81% / 558 MW : 270 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	2.50" Hg absolute / 241,300 gpm
5 GROSS HEAT RATE (1)	9,264 Btu/KWh @ 510,280 gross KW
6. ORIGINAL STATION LOAD	29,137 KW
7. NET HEAT RATE (2)	9,825 Btu/KWh @ 481,143 net KW
8 HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2002	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	2001								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3 TEST 3	MW OUTPUT	1999								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS.	Digital Electro - Hydraulic control
2. MANUFACTURER OF TURBINE CONTROL SYS	Siemens S7 / Wood Group
3. DATE & COST OF INSTALLATION	2006: $1,767,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Distributed control system
5. MANUFACTURER OF BOILER CONTROL SYS	ABB
6. DATE & COST OF INSTALLATION	2016· $5,744,043
7. TYPE OF FAN CONTROL SYSTEM	Mech. positioning of FD & PA inlet vanes, hyd positioning of ID fan blades
8. TYPE OF FEEDWATER PUMP CONTROL SYS	Speed control. Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9 TYPE OF SOOT BLOWER CONTROL SYS.	Microprocessor based automatic sequencing control
10. NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1,2,3
11 DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by· Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
WELSH #3 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85 8% / 2620 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	7,944 Btu/KWh / 2400 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW MVAR	98 81% / 558 MW . 270 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	2 50" Hg absolute / 241,300 gpm
5. GROSS HEAT RATE (1)	9,264 Btu/KWh @ 510,280 gross KW
6. ORIGINAL STATION LOAD	29,137 KW
7. NET HEAT RATE (2)	9,825 Btu/KWh @ 481,143 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3 MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2002	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	2001								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1999								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Digital Electro - Hydraulic control
2. MANUFACTURER OF TURBINE CONTROL SYS	Siemens S7 / Wood Group
3. DATE & COST OF INSTALLATION	2008: $1,869,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Distributed control system
5. MANUFACTURER OF BOILER CONTROL SYS.	ABB
6. DATE & COST OF INSTALLATION	2016: $5,744,043
7 TYPE OF FAN CONTROL SYSTEM	Mech positioning of PA fan inlet vanes, hyd. positioning of FD & ID fan blades
8 TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control. Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS	Microprocessor based automatic sequencing control
10 NUMBER OF OPERATOR CONTROL ROOMS	One room common to units 1,2,3
11 DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12 TYPE OF SCRUBBER CONTROL SYS.	None

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
FLINT CREEK #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	85 8% / 2620 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	7,946 Btu/KWh / 2400 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW : MVAR	98 69% / 558 MW : 270 MVAR
4 CONDENSOR CONDITIONS / COOLING WATER	2.50" Hg absolute / 241,300 gpm
5. GROSS HEAT RATE (1)	9,283 Btu/KWh @ 509,799 gross KW
6 ORIGINAL STATION LOAD	29,262 KW
7. NET HEAT RATE (2)	9,849 Btu/KWh @ 480,537 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1 STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2003	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	2002								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3 TEST 3	MW OUTPUT	2001								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS	Digital Electro - Hydraulic control
2 MANUFACTURER OF TURBINE CONTROL SYS	ABB
3. DATE & COST OF INSTALLATION	2016: $5,490,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Distributed control system
5. MANUFACTURER OF BOILER CONTROL SYS.	ABB
6 DATE & COST OF INSTALLATION	2017· $8 5 million
7 TYPE OF FAN CONTROL SYSTEM	Mech positioning of FD & PA inlet vanes, hyd. positioning of ID fan blades
8. TYPE OF FEEDWATER PUMP CONTROL SYS	Speed control. Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS.	Microprocessor based automatic sequencing control
10 NUMBER OF OPERATOR CONTROL ROOMS	One
11 DESCRIPTION OF HEATRATE DEVIATION SYS	None
12. TYPE OF SCRUBBER CONTROL SYS	DCS

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities.

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
H.W. PIRKEY #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	84.1% / 2600 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,112 Btu/KWh / 2400 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW · MVAR	98.70% / 720.75 MW 285 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	4 00" Hg absolute / 328,216 gpm
5. GROSS HEAT RATE (1)	9,636 Btu/KWh @ 647,616 gross KW
6. ORIGINAL STATION LOAD	52,975 KW
7. NET HEAT RATE (2)	10,495 Btu/KWh @ 594,641 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1. TEST 1	MW OUTPUT	2002	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2. TEST 2	MW OUTPUT	1995								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1992								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1 DESCRIPTION OF TURBINE CONTROL SYS.	Digital Electro - Hydraulic control
2. MANUFACTURER OF TURBINE CONTROL SYS.	Emerson Ovation
3. DATE & COST OF INSTALLATION	2013: $5,564,000
4. DESCRIPTION OF BOILER CONTROL SYS.	Microprocessor based controls
5. MANUFACTURER OF BOILER CONTROL SYS.	Emerson
6. DATE & COST OF INSTALLATION	2019: $22.2 million (This includes FGD costs)
7. TYPE OF FAN CONTROL SYSTEM	Mech. positioning of PA fan inlet vanes, hyd. positioning of FD & ID fan blades
8. TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control: Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS.	Microprocessor based automatic sequencing control
10. NUMBER OF OPERATOR CONTROL ROOMS	One
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12. TYPE OF SCRUBBER CONTROL SYS.	Microprocessor based controls

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (Including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by. Monte McMahon

SOUTHWESTERN ELECTRIC POWER COMPANY
DOLET HILLS #1 GENERATING UNIT EFFICIENCY & CONTROL SYSTEMS

CATEGORY	DESCRIPTION / RESPONSE
INITIAL DESIGN EFFICIENCIES	
1. BOILER EFFICIENCY / STEAM CONDITIONS	84.1% / 2600 psig / 1005°F / 1005°F
2. TURBINE EFFICIENCY / STEAM CONDITIONS	8,112 Btu/KWh / 2400 psig / 1000°F / 1000°F
3. GENERATOR EFFICIENCY / MW . MVAR	98.70% / 720.75 MW : 285 MVAR
4. CONDENSOR CONDITIONS / COOLING WATER	4.00" Hg absolute / 324,720 gpm
5. GROSS HEAT RATE (1)	9,636 Btu/KWh @ 647,616 gross KW
6. ORIGINAL STATION LOAD	61,027 KW
7. NET HEAT RATE (2)	10,639 Btu/KWh @ 586,589 net KW
8. HEAT RATE CURVE / EQUATION	Not Available
"PROMOD" TYPE DATA	
1. STARTUP Btus	REDACTED
2. MINIMUM MW / TOTAL Btus	
3. MINIMUM MW / INCREMENTAL Btus PER MWh	
4. 1ST STEP MW / INCREMENTAL Btus PER MWh	
5. 2ND STEP MW / INCREMENTAL Btus PER MWh	
6. 3RD STEP MW / INCREMENTAL Btus PER MWh	
7. 4TH STEP MW / INCREMENTAL Btus PER MWh	
8. 5TH STEP MW / INCREMENTAL Btus PER MWh	

THREE MOST RECENT HEAT RATE TESTS

		DATE	LEVEL 1	LEVEL 2	LEVEL 3	LEVEL 4	LEVEL 5	LEVEL 6	LEVEL 7	LEVEL 8
1 TEST 1	MW OUTPUT	2004	REDACTED							
	HEAT RATE									
	INCREMENTAL HEAT RATE									
2 TEST 2	MW OUTPUT	2001								
	HEAT RATE									
	INCREMENTAL HEAT RATE									
3. TEST 3	MW OUTPUT	1991								
	HEAT RATE									
	INCREMENTAL HEAT RATE									

CONTROL SYSTEMS	
1. DESCRIPTION OF TURBINE CONTROL SYS	Digital Electro - Hydraulic control
2. MANUFACTURER OF TURBINE CONTROL SYS.	Westinghouse
3 DATE & COST OF INSTALLATION	1986: Cost included with turbine-generator
4. DESCRIPTION OF BOILER CONTROL SYS.	Distributed control system
5 MANUFACTURER OF BOILER CONTROL SYS	ABB
6. DATE & COST OF INSTALLATION	2007 $3,012,000
7. TYPE OF FAN CONTROL SYSTEM	Mech. positioning of PA fan inlet vanes, hyd. positioning of FD & ID fan blades
8 TYPE OF FEEDWATER PUMP CONTROL SYS.	Speed control. Hydraulic coupling (MDBFP), turbine speed (TDBFP)
9. TYPE OF SOOT BLOWER CONTROL SYS.	Microprocessor based automatic sequencing control
10 NUMBER OF OPERATOR CONTROL ROOMS	Two
11. DESCRIPTION OF HEATRATE DEVIATION SYS.	None
12 TYPE OF SCRUBBER CONTROL SYS.	Solid state electronics

NOTES (1) GROSS HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (including Start - up) (in mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT}}$

(2) NET HEAT RATE = $\frac{\text{TOTAL FUEL CONSUMED (mmBtu's)}}{\text{GROSS ELECTRICAL OUTPUT - STATION SERVICE}}$

Indicate whether Station Service includes consumption for Common Facilities

Sponsored by: Monte McMahon