



***Feasibility Study
For
Generation Interconnection
Request
GEN-2005-022***

***SPP Tariff Studies
(#GEN-2005-022)***

May 18, 2006

Executive Summary

<OMITTED TEXT> (Customer) has requested a Feasibility Study for the purpose of interconnecting 168MW of combustion generation within the service territory of American Electric Power West (AEPW) in Caddo County Oklahoma. The proposed point of interconnection is in the existing Southwestern 138kV Substation. This 138kV substation is owned by AEPW. The proposed in-service date is June 1, 2007.

Power flow analysis has indicated that for the powerflow cases studied, it is possible to interconnect the 168MW of generation with transmission system reinforcements within the local AEPW transmission system. The requirements for interconnection consist of adding a 138-13.8kV generator step-up unit (GSU) at the Customer's new facilities. This 138-13.8kV transformer addition shall be installed and maintained by the Customer. AEPW will install new bus, breaker, switches and metering as required in the existing substation for a new 138kV terminal to accommodate the Customer's facilities.

The total cost for adding the GSU as part of the new 138-13.8kV facilities will be estimated by the Customer. The total cost for adding the new bus, breaker, switches and metering as required in the existing Southwestern 138kV Substation, the interconnection facility, to accommodate new 138kV facilities is estimated to be \$832,000 by AEPW. Other Network Constraints in the AEPW and Western Farmers Electric Cooperative (WFEC) systems that may be verified with a transmission service request and associated studies are listed in Table 3. These Network Constraints are in the local area of the new generation when this generation is sunk within the SPP footprint for the Energy Resource Interconnection request. With a defined source and sink in a Transmission Service Request, this list of Network Constraints will be refined and expanded to account for all Network Upgrade requirements. This cost does not include building 13.8kV facilities within the Customer's facilities.

In Table 4, a value of Available Transfer Capability (ATC) associated with each overloaded facility is included. These values may be used by the Customer for future analyses including the determination of lower generation capacity levels that may be installed. When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower. When a facility is overloaded for more than 10 contingencies, then only the results with the 10 highest values of loading may be included in this table. There are other proposed generation additions in the general area of the Customer's facility.

Introduction

<OMITTED TEXT> (Customer) has requested a feasibility study for the purpose of interconnecting 168MW of combustion generation within the service territory of American Electric Power West in Caddo County Oklahoma. The existing Southwestern 138kV Substation is owned by AEPW, and the proposed generation interconnection is with AEPW in this facility. The proposed in-service date is June 1, 2007.

Interconnection Facilities

The primary objective of this study is to identify the system problems associated with connecting the plant to the area transmission system. The Feasibility and other subsequent Interconnection Studies are designed to identify attachment facilities, Network Upgrades and other direct assignment facilities needed to accept power into the grid at the interconnection receipt point.

The requirements for interconnection consist of adding a new 138-13.8kV GSU by the Customer as part of its new facilities and interconnecting in the AEPW Southwestern Substation via a new 138kV terminal. This station addition shall be installed and maintained by the Customer. A specific route of the Customer's 138kV facilities to serve its 138-13.8kV station has been defined. It is assumed that obtaining all necessary right-of-way for the new 138kV facilities will not be a significant expense.

The total estimated cost for AEPW to add new 138kV facilities in the Southwestern 138kV Substation, the interconnection facility, is \$832,000. Other Network Constraints in the AEPW and WFEC systems that were identified are listed in Table 3. These estimates will be refined during the development of the impact study based on the final designs. This cost does not include building 138kV facilities into the existing Southwestern Substation. The Customer is responsible for all 138kV facilities up to the point of interconnection. This cost does not include the Customer's 138-13.8kV facilities and the cost estimate should be determined by the Customer.

The costs of interconnecting the facility to the AEPW transmission system are listed in Table 1 & 2. **These costs do not include any cost that might be associated with short circuit study results or dynamic stability study results.** These costs will be determined when and if a System Impact Study is conducted.

Table 1: Direct Assignment Facilities

Facility	ESTIMATED COST (2006 DOLLARS)
Customer – 138-13.8 kV Station facilities.	*
Customer – 138kV facilities between Customer facilities and existing AEPW 138kV Substation.	*
Customer - Right-of-Way for Customer facilities.	*
Total	*

Note: *Estimates of cost to be determined by Customer.

Table 2: Required Interconnection Network Upgrade Facilities

Facility	ESTIMATED COST (2006 DOLLARS)
AEPW –Add 138kV bus, breaker, switches and metering in the existing Southwestern Substation for a new terminal.	\$832,000
Total	\$832,000

Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
ANADARKO 138-69kV, 55810 - 55814,	08SP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	124.0	0	6/1/2007
ANADARKO 138-69kV, 55810 - 55814	07SP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	122.9	0	
ANADARKO 138-69kV, 55810 - 55814	08SP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	120.2	0	
ANADARKO 138-69kV, 55810 - 55814	07SP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	119.3	0	
ANADARKO 138-69kV, 55810 - 55814	11SP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	113.5	0	
ANADARKO 138-69kV, 55810 - 55814	11WP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	109.8	10	
ANADARKO 138-69kV, 55810 - 55814	11SP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	109.7	45	
ANADARKO 138-69kV, 55810 - 55814	11WP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	106.6	62	
ANADARKO 138-69kV, 55810 - 55814	07WP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	105.4	82	
ANADARKO 138-69kV, 55810 - 55814	08WP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	104.8	90	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
ANADARKO 138-69kV, 55810 - 55814	16SP, 55814-55923, WFEC FLA - WFEC AEP-OP , ANADARKO - GEORGIA 138kV	104.0	100	
ANADARKO 138-69kV, 55810 - 55814	08SP, 55911-55912, WFEC FLA , FLETCHER 138-69kV	102.5	119	
ANADARKO 138-69kV, 55810 - 55814	07WP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	102.2	133	
ANADARKO 138-69kV, 55810 - 55814	07SP, 55911-55912, WFEC FLA , FLETCHER 138-69kV	101.9	131	
ANADARKO 138-69kV, 55810 - 55814	08WP, 55912-55923, WFEC FLA - WFEC AEP-OP , FLETCHER - GEORGIA 138kV	101.6	142	
ANADARKO 138-69kV, 55810 - 55814	08SP, 55814-56031, WFEC FLA , ANADARKO - POCASSETT 138kV	100.0	168	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
CARNEGIE - FORT COBB 138kV, 54108 - 54117,	16SP, 54151-54173, AEPW WESTERN , LAWTON 112th & WEST GORE - LAWTON AIRGAS TAP 138kV	112.1	0	6/1/2012
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54163-54173, AEPW WESTERN , CACHE 138 - LAWTON AIRGAS TAP 138kV	110.7	0	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54131-54119, AEPW WESTERN - AEPW , LAWTON EASTSIDE 345KV - OKLAUNION 345kV	109.3	7	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54098-54163, AEPW WESTERN , SNYDER - CACHE 138 138kV	109.1	0	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54121-99940, AEPW WESTERN - , ELK CITY 138 - 2002-05T 138kV	107.3	32	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54121-54148, AEPW WESTERN , ELK CITY 138 - CLINTON JUNCTION 138KV 138kV	106.1	68	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 56017-56089, WFEC AEP-CS , ONEY - WASHITA 138kV	106.1	76	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55827-56017, WFEC AEP-CS , BINGER NIJECT - ONEY 138kV	105.4	86	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55827-56050, WFEC AEP-CS , BINGER NIJECT - SICKLES 138kV	103.7	112	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 56024-99947, WFEC AEP-KP - , PARADISE - 2003-05T 138kV	103.5	108	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 56024-56052, WFEC AEP-KP , PARADISE - SNYDER 138kV	102.4	127	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 56051-56052, WFEC AEP-KP , SNYDER 138- 69kV	102.4	127	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55950-56050, WFEC AEP-CS , HYDRO - SICKLES 138kV	102.2	135	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	102.0	138	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55999-55997, WFEC AEP-OP - WFEC AEP- CS , MOORELAND - MORLND2 18.0 138-18kV	101.6	140	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55999-55998, WFEC AEP-OP - WFEC AEP- CS , MOORELAND - MORLND3 18.0 138-18kV	101.5	142	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55950-56092, WFEC AEP-CS , HYDRO - WEATHERFORD 138kV	101.0	153	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 55856-56092, WFEC AEP-CS , CLINTON - WEATHERFORD 138kV	100.4	162	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54086-54140, AEPW WESTERN , FLETCHER TAP - SOUTHWEST STATION 138KV 138kV	100.3	163	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54148-55856, AEPW WESTERN - WFEC AEP- CS , CLINTON JUNCTION 138KV - CLINTON 138kV	100.2	165	
CARNEGIE - FORT COBB 138kV, 54108 - 54117	16SP, 54086-54130, AEPW WESTERN , FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV	100.1	166	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126,	16SP, 54151-54173, AEPW WESTERN , LAWTON 112th & WEST GORE - LAWTON AIRGAS TAP 138kV	111.6	0	6/1/2012
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54163-54173, AEPW WESTERN , CACHE 138 - LAWTON AIRGAS TAP 138kV	110.2	0	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54131-54119, AEPW WESTERN - AEPW , LAWTON EASTSIDE 345KV - OKLAUNION 345kV	108.6	33	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54098-54163, AEPW WESTERN , SNYDER - CACHE 138 138kV	108.5	16	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54121-99940, AEPW WESTERN - , ELK CITY 138 - 2002-05T 138kV	106.6	50	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 56017-56089, WFEC AEP-CS , ONEY - WASHITA 138kV	105.5	89	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54121-54148, AEPW WESTERN , ELK CITY 138 - CLINTON JUNCTION 138KV 138kV	105.4	83	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55827-56017, WFEC AEP-CS , BINGER NIJECT - ONEY 138kV	104.8	99	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55827-56050, WFEC AEP-CS , BINGER NIJECT - SICKLES 138kV	102.9	126	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 56024-99947, WFEC AEP-KP - , PARADISE - 2003-05T 138kV	102.6	126	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

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CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 56024-56052, WFEC AEP-KP , PARADISE - SNYDER 138kV	101.5	144	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 56051-56052, WFEC AEP-KP , SNYDER 138-69kV	101.5	144	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55950-56050, WFEC AEP-CS , HYDRO - SICKLES 138kV	101.3	149	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	101.1	152	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55999-55997, WFEC AEP-OP - WFEC AEP-CS , MOORELAND - MORLND2 18.0 138-18kV	100.7	156	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55999-55998, WFEC AEP-OP - WFEC AEP-CS , MOORELAND - MORLND3 18.0 138-18kV	100.6	158	
CARNEGIE - HOBART JUNCTION 138KV 138kV, 54108 - 54126	16SP, 55950-56092, WFEC AEP-CS , HYDRO - WEATHERFORD 138kV	100.1	167	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

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Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130,	16SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	117.0	42	6/1/2007
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	11SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	107.2	115	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	16SP, 54130-54149, AEPW WESTERN , LAWTON EASTSIDE 138KV - ELGIN JUNCTION 138KV 138kV	105.7	123	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	08SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	104.7	133	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	07SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	103.0	146	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	16SP, 54108-54117, AEPW WESTERN , CARNEGIE - FORT COBB 138kV	102.6	145	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	16SP, 54117-54140, AEPW WESTERN , FORT COBB - SOUTHWEST STATION 138KV 138kV	102.6	145	
FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV, 54086 - 54130	16SP, 54108-54126, AEPW WESTERN , CARNEGIE - HOBART JUNCTION 138KV 138kV	101.4	156	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

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Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140,	16SP, 54151-54173, AEPW WESTERN , LAWTON 112th & WEST GORE - LAWTON AIRGAS TAP 138kV	112.1	0	6/1/2012
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54163-54173, AEPW WESTERN , CACHE 138 - LAWTON AIRGAS TAP 138kV	110.7	0	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54131-54119, AEPW WESTERN - AEPW , LAWTON EASTSIDE 345KV - OKLAUNION 345kV	109.3	16	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54098-54163, AEPW WESTERN , SNYDER - CACHE 138 138kV	109.1	0	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54121-99940, AEPW WESTERN - , ELK CITY 138 - 2002-05T 138kV	107.3	30	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54121-54148, AEPW WESTERN , ELK CITY 138 - CLINTON JUNCTION 138KV 138kV	106.2	67	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 56017-56089, WFEC AEP-CS , ONEY - WASHITA 138kV	106.2	75	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55827-56017, WFEC AEP-CS , BINGER NIJECT - ONEY 138kV	105.5	85	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55827-56050, WFEC AEP-CS , BINGER NIJECT - SICKLES 138kV	103.7	112	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 56024-99947, WFEC AEP-KP - , PARADISE - 2003-05T 138kV	103.5	108	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

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Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 56024-56052, WFEC AEP-KP , PARADISE - SNYDER 138kV	102.4	127	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 56051-56052, WFEC AEP-KP , SNYDER 138- 69kV	102.4	127	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55950-56050, WFEC AEP-CS , HYDRO - SICKLES 138kV	102.2	135	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54140-54149, AEPW WESTERN , SOUTHWEST STATION 138KV - ELGIN JUNCTION 138KV 138kV	102.0	138	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55999-55997, WFEC AEP-OP - WFEC AEP- CS , MOORELAND - MORLND2 18.0 138-18kV	101.7	138	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55999-55998, WFEC AEP-OP - WFEC AEP- CS , MOORELAND - MORLND3 18.0 138-18kV	101.5	141	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55950-56092, WFEC AEP-CS , HYDRO - WEATHERFORD 138kV	101.0	153	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 55856-56092, WFEC AEP-CS , CLINTON - WEATHERFORD 138kV	100.4	162	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54086-54140, AEPW WESTERN , FLETCHER TAP - SOUTHWEST STATION 138KV 138kV	100.3	163	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54148-55856, AEPW WESTERN - WFEC AEP- CS , CLINTON JUNCTION 138KV - CLINTON 138kV	100.2	165	
FORT COBB - SOUTHWEST STATION 138KV 138kV, 54117 - 54140	16SP, 54086-54130, AEPW WESTERN , FLETCHER TAP - LAWTON EASTSIDE 138KV 138kV	100.1	166	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

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Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146,	08SP, 54084-54140, AEPW WESTERN , VERDEN - SOUTHWEST STATION 138KV 138kV	105.9	105	6/1/2007
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	08SP, 54084-54165, AEPW WESTERN , VERDEN - NORTH 29TH CHICKASHA 138 138kV	104.4	121	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	07SP, 54084-54140, AEPW WESTERN , VERDEN - SOUTHWEST STATION 138KV 138kV	104.1	125	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	11SP, 54084-54140, AEPW WESTERN , VERDEN - SOUTHWEST STATION 138KV 138kV	103.5	130	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	07SP, 54084-54165, AEPW WESTERN , VERDEN - NORTH 29TH CHICKASHA 138 138kV	102.7	139	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	11SP, 54084-54165, AEPW WESTERN , VERDEN - NORTH 29TH CHICKASHA 138 138kV	102.1	146	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	08SP, 54112-54165, AEPW WESTERN , CORNVILLE 138KV - NORTH 29TH CHICKASHA 138 138kV	100.6	162	
SOUTHWEST STATION 138KV - NORGE ROAD 138kV, 54140 - 54146	08SP, 55814-55867, WFEC FLA - WFEC AEP-IM-I, ANADARKO - CORN TAP 138kV	100.4	163	

Note: When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. If the loading of a facility is higher, the level of ATC will be lower.

Powerflow Analysis

A powerflow analysis was conducted for the facility using modified versions of the 2007 April, 2007, 2008 & 2011 Summer and Winter Peak, and 2016 Summer Peak models. The output of the Customer's facility was offset in each model by a reduction in output of existing online SPP generation. The proposed in-service date of the generation is June 1, 2007. The available seasonal models used were through the 2016 Summer Peak of which is the end of the current SPP planning horizon.

The analysis of the Customer's project indicates that, given the requested generation level of 168MW and location, additional criteria violations will occur on the existing AEPW and WFEC facilities under steady state conditions in the peak seasons. There are other proposed generation additions in the general area of the Customer's facility.

Powerflow Analysis Methodology

The Southwest Power Pool (SPP) criteria states that: "The transmission system of the SPP region shall be planned and constructed so that the contingencies as set forth in the Criteria will meet the applicable *NERC Planning Standards* for System Adequacy and Security – Transmission System Table I hereafter referred to as NERC Table I) and its applicable standards and measurements".

Using the created models and the ACCC function of PSS\E, single contingencies in portions or all of the modeled control areas of American Electric Power West, OG&E Electric Services, Southwestern Public Service Company (d/b/a Xcel Energy, Inc.) and Western Farmers Electric Cooperative were applied and the resulting scenarios analyzed. This satisfies the 'more probable' contingency testing criteria mandated by NERC and the SPP criteria.

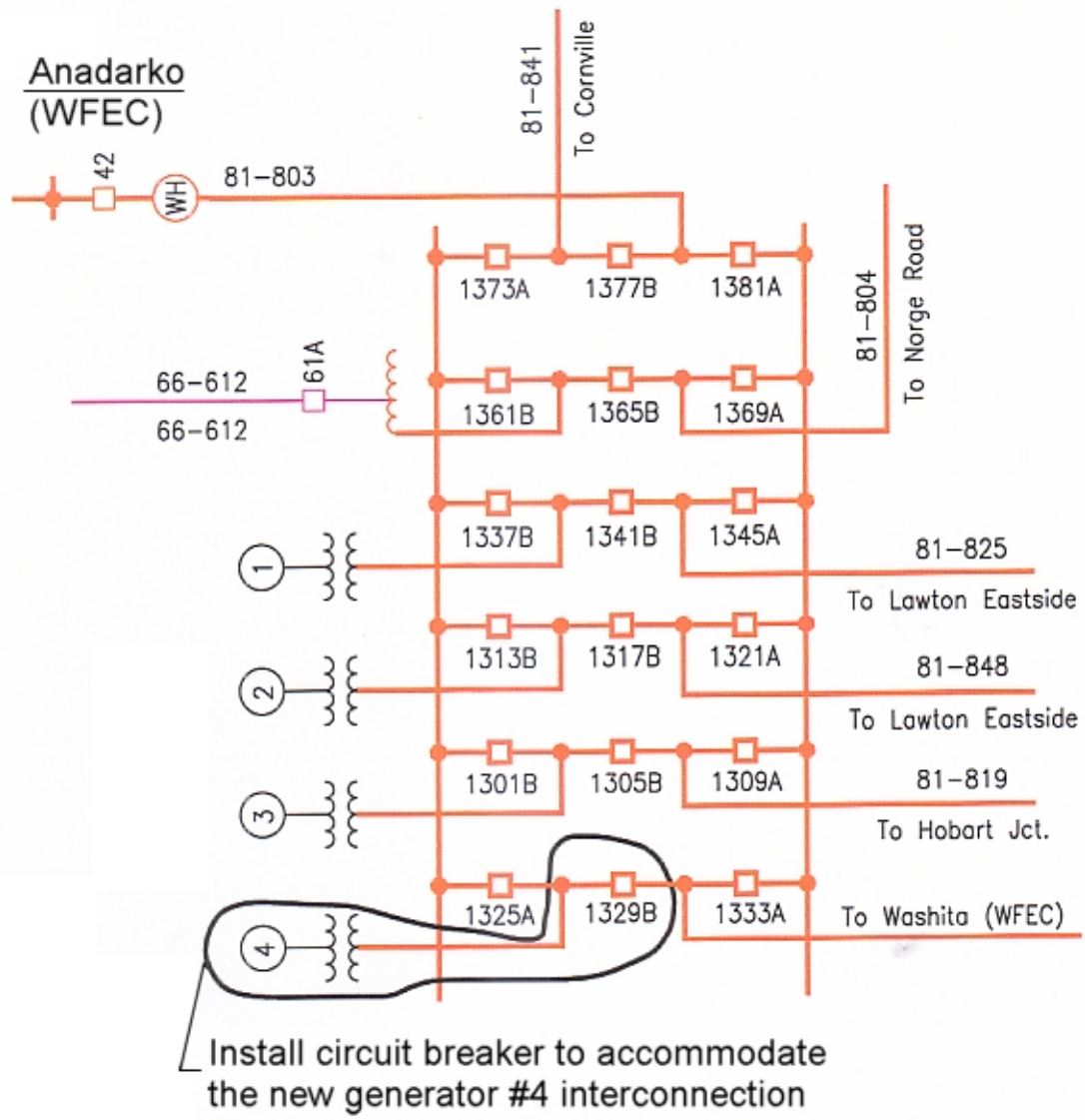
Conclusion

The minimum cost of interconnecting the Customer project is estimated at \$832,000 for AEPW's interconnection Network Upgrade facilities listed in Table 2 excluding upgrades of other transmission facilities by AEPW and WFEC listed in Table 3 of which are Network Constraints. At this time, the cost estimates for other Direct Assignment facilities including those in Table 1 have not all been defined by the Customer. As stated earlier, local projects that were previously queued are assumed to be in service in this Feasibility Study.

In Table 4, a value of Available Transfer Capability (ATC) associated with each overloaded facility is included. These values may be used by the Customer to determine lower generation capacity levels that may be installed. When transmission service associated with this interconnection is evaluated, the loading of the facilities listed in this table may be greater due to higher priority reservations. When a facility is overloaded for more than 10 contingencies, then only the results with the 10 highest values of loading may be included in this table.

These interconnection costs do not include any cost that may be associated with short circuit or transient stability analysis. These studies will be performed if the Customer signs a System Impact Study Agreement.

The required interconnection costs listed in Table 2 and other upgrades associated with Network Constraints listed in Table 3 do not include all costs associated with the deliverability of the energy to final customers. These costs are determined by separate studies if the Customer requests transmission service through Southwest Power Pool's OASIS.



Southwestern Station 138kV

**Figure 1: Proposed Interconnection
(Final substation design to be determined)**

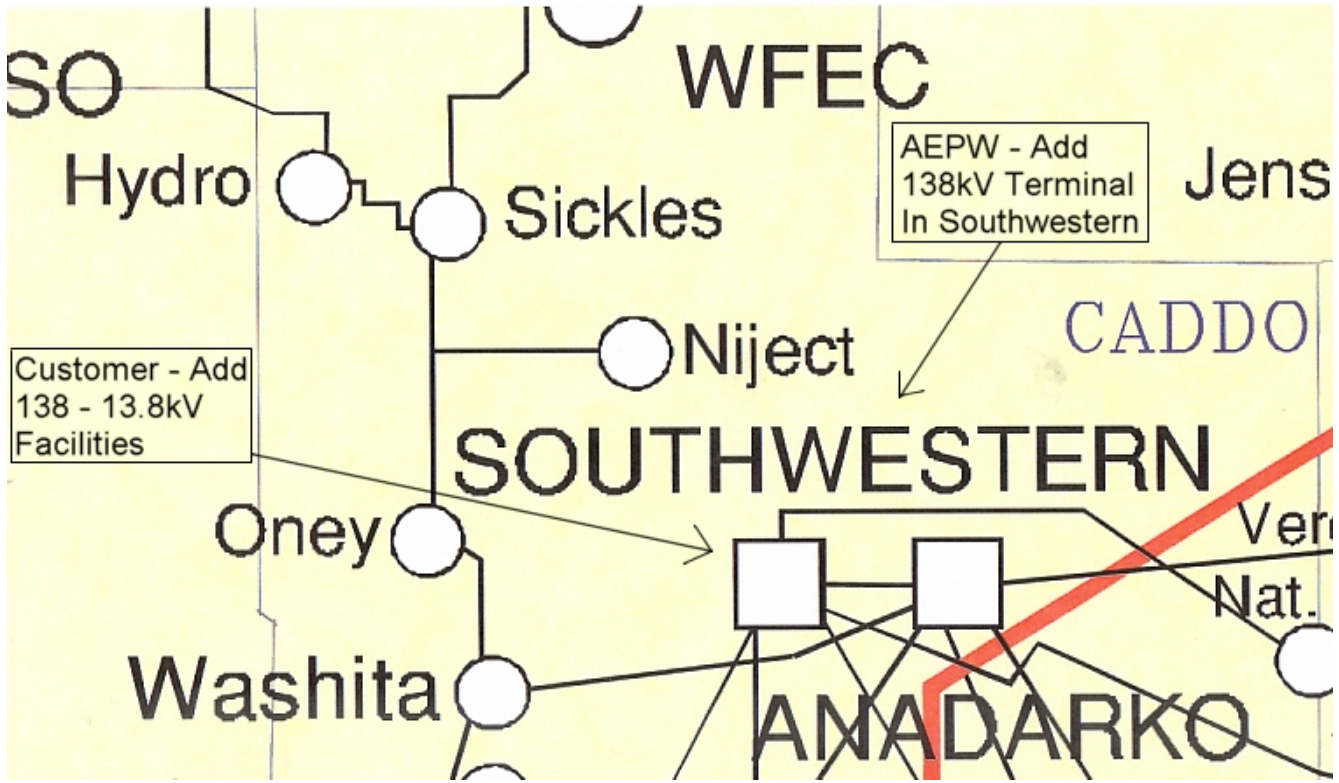


Figure 2: Map Of The Surrounding Area