



***Feasibility Study
For
Generation Interconnection
Request
GEN-2004-022***

***SPP Tariff Studies
(#GEN-2004-022)***

March 8, 2005

Executive Summary

<OMITTED TEXT> (Customer) has requested a Feasibility Study for the purpose of interconnecting 60MW of wind generation within the service territory of American Electric Power West (AEPW) in Custer County Oklahoma. The proposed point of interconnection is in the existing Thomas Tap – Thomas 69kV line at a new switching station to be located north of Weatherford, OK. This 69kV line is owned by AEPW. The proposed in-service date is December 1, 2005.

Power flow analysis has indicated that for the powerflow cases studied, it is possible to interconnect the 60MW of generation with transmission system reinforcements within the local transmission system. The requirements for interconnection consist of adding a new 69kV switching station with 3 switches. This 69kV addition shall be constructed and maintained by AEPW. The Customer did not propose a specific 69kV line extending to serve its 69-34.5kV facilities. It is assumed that obtaining all necessary right-of-way for the necessary substation additions in the Thomas Tap – Thomas 69kV line will not be a significant expense.

The total cost for adding a new 69kV switching station, the required interconnection facility, is estimated at \$1,200,000. Other Network Constraints in the American Electric Power West (AEPW), OG&E Electric Services (OKGE) 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 throughout the SPP footprint. 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 69kV line from the Customer substation into a new AEPW switching station. This cost does not include the Customer's 69-34.5kV substation.

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.

There are several other proposed generation additions in the general area of the Customer's facility. It was assumed in this preliminary analysis that these other projects within the AEPW and WFEC service territories will be in service. Those previously queued projects that have advanced to nearly complete phases were included in this Feasibility Study. In the event that another request for a generation interconnection with a higher priority withdraws, then this request may have to be re-evaluated to determine the local Network Constraints.

Introduction

<OMITTED TEXT> (Customer) has requested a Feasibility Study for the purpose of interconnecting 60MW of wind generation within the service territory of AEPW in Custer County Oklahoma. The existing Thomas Tap – Thomas 69kV line is owned by AEPW, and the proposed generation interconnect is within AEPW. The proposed point of interconnection is at a new 69kV switching station in this line. The proposed in-service date is December 1, 2005.

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 69kV switching station. This 69kV addition shall be constructed and maintained by AEPW. The Customer did not propose a route of its 69kV line to serve its 69-34.5kV facilities. It is assumed that obtaining all necessary right-of-way for the new AEPW 69kV switching station will not be a significant expense.

The total cost for AEPW to add a new 69kV switching station, the interconnection facility, in the Thomas Tap – Thomas 69kV line is estimated at \$1,200,000. Other Network Constraints in the AEPW, OKGE and WFEW 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 69kV line from the Customer substation into the new AEPW switching station. The Customer is responsible for this 69kV line up to the point of interconnection. This cost does not include the Customer's 69-34.5kV substation 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 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 (2005 DOLLARS)
Customer – 69-34.5 kV Substation facilities.	*
Customer – 69kV line between Customer substation and new AEPW 69kV switchyard.	*
Customer - Right-of-Way for Customer Substation & Line.	*
Total	*

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

Table 2: Required Interconnection Network Upgrade Facilities

Facility	ESTIMATED COST (2005 DOLLARS)
AEPW - Add 3-switch 69kV switchyard in Thomas Tap - Thomas 69kV line with transfer-trip scheme at Weatherford SE & Clinton City, and add an RTU & DFR in Customer's 69-34.5kV Substation.	1,200,000
Total	\$1,200,000

Table 3: Network Constraints

Facility
WFEC - ANADARKO 138-69kV: Add 2nd 112MVA transformer including bus and breakers. (2) Facility identified in GEN-2004-020 and -021.
AEPW - CLINTON - CLINTON NATURAL GAS TAP 138kV: Replace Clinton Jct. switches 1302 & 1303. (2) Facility identified in GEN-2004-020.
AEPW - CLINTON CITY - FOSS TAP 69kV: Replace wave trap @ Clinton City. (2) Facility identified in GEN-2004-020 and -021.
AEPW - CLINTON CITY - THOMAS TAP 69kV: Replace wave trap @ Clinton City. (2) Facility identified in GEN-2004-021.
AEPW - CLINTON CITY - THOMAS TAP 69kV: Rebuild 13.9 miles of 4/0 ACSR with 795 ACSR. (2) Facility identified in GEN-2004-021.
WFEC - EL RENO SW - EL RENO 69kV: (1) (2) Facility identified in GEN-2004-021.
WFEC - EL RENO SW 138-69kV: (1)
AEPW - ELGIN JUNCTION - *2001-35T 138kV: None as rating to be updated in cases.
AEPW - ELK CITY - CLINTON 138kV: Replace switches @ Clinton Jct. & Reset CT @ Elk City. (2) Facility identified in GEN-2004-021.
AEPW - ELK CITY - CLINTON 138kV: Rebuild 24.1 miles of 477 ACSR with 1272 ACSR & replace wave traps @ both ends.
AEPW - ELK CITY 69kV: Replace Metering CTs & Jumpers @ Elk City (AEPW) & reset relaying CT. (2) Facility identified in GEN-2004-021.
WFEC - ELK CITY 69kV: Upgrade to be completed in current work plan by 12/2005.
AEPW - FLETCHER TAP - LAWTON EASTSIDE 138kV: Replace switches 1334 & 1335 @ Lawton Eastside. (2) Facility identified in GEN-2004-021.
WFEC - HAMON BUTLER - MOREWOOD 69kV: (1)
AEPW - HINTON - JENSEN ROAD 138kV: None given conductor rating.
OKGE - HINTON - JENSEN ROAD 138kV: Increase the CTR from 800A to 1200A at Jensen Road.
AEPW - SOUTHWEST STATION - NORGE ROAD 138kV: Rebuild 22.35 miles of 397.5 ACSR with 1272 ACSR & Replace switches 1302, 1303, & 1398MD @ Norge Road. (2) Facility identified in GEN-2004-021.
WFEC - WASHITA 138-69kV: (1)
AEPW - WEATHERFORD - THOMAS TAP 69kV: Rebuild 0.9 miles of 4/0 ACSR with 795 ACSR. (2) Facility identified in GEN-2004-021.
AEPW - WEATHERFORD - THOMAS TAP 69kV: Replace switches, wave trap & jumpers @ Weatherford
AEPW - WEATHERFORD - Weatherford Southeast 69kV: Replace switches @ Weatherford & reset relays @ Weatherford SE
AEPW - Weatherford Southeast 138-69kV: Replace Weatherford SE 138/69 kV autotransformer

Note: (1) Network Upgrade description will be determined at the request of the Customer.

(2) Overloaded facility identified in prior evaluation.

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, Add 2nd 112MVA transformer including bus and breakers.	07SP, 55814-55923, WFEC FLA - WFEC AEP-OP, ANADARKO - GEORGIA 138kV	119.2	0	6/1/2006
ANADARKO 138-69kV	07SP, 55912-55923, WFEC FLA - WFEC AEP-OP, FLETCHER - GEORGIA 138kV	114.9	0	
CLINTON - CLINTON NATURAL GAS TAP 138kV, Replace Clinton Jct switches 1302 & 1303.	05AP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	120.3	15	12/1/2005
CLINTON - CLINTON NATURAL GAS TAP 138kV	05AP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	118.3	19	
CLINTON - CLINTON NATURAL GAS TAP 138kV	05AP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	117.6	20	
CLINTON - CLINTON NATURAL GAS TAP 138kV	05WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	114.7	28	
CLINTON - CLINTON NATURAL GAS TAP 138kV	07WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	114.2	29	
CLINTON - CLINTON NATURAL GAS TAP 138kV	10WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	113.6	30	
CLINTON - CLINTON NATURAL GAS TAP 138kV	05WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	110.8	37	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
CLINTON - CLINTON NATURAL GAS TAP 138kV	07WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	110.3	38	
CLINTON - CLINTON NATURAL GAS TAP 138kV	10WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	109.5	39	
CLINTON - CLINTON NATURAL GAS TAP 138kV	05WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	109.4	40	
CLINTON - CLINTON NATURAL GAS TAP 138kV	07WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	108.8	41	
CLINTON - CLINTON NATURAL GAS TAP 138kV	10WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	108.0	42	
CLINTON - CLINTON NATURAL GAS TAP 138kV	07SP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	104.7	49	
CLINTON - CLINTON NATURAL GAS TAP 138kV	10SP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	103.9	51	

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Table 4: Contingency Analysis Results

Facility	Model & Contingency	Facility Loading (% Rate B) Or Voltage (PU)	ATC (MW)	Date Required (M/D/Y)
CLINTON CITY - FOSS TAP 69kV, Replace wavetraps @ Clinton City	05AP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	105.7	56	4/1/2006
CLINTON CITY - FOSS TAP 69kV	05AP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	102.1	59	
CLINTON CITY - FOSS TAP 69kV	05AP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	102.1	59	
CLINTON CITY - THOMAS TAP 69kV, Replace wavetraps @ Clinton City	07SP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	123.7	48	12/1/2005
CLINTON CITY - THOMAS TAP 69kV, Rebuild 13.9 miles of 4/0 ACSR with 795 ACSR	10SP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	123.3	48	
CLINTON CITY - THOMAS TAP 69kV	05AP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	114.5	52	
CLINTON CITY - THOMAS TAP 69kV	07WP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	111.7	54	
CLINTON CITY - THOMAS TAP 69kV	10WP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	111.7	53	
CLINTON CITY - THOMAS TAP 69kV	05WP, 54144-54180, AEPW WESTERN, WEATHERFORD - THOMAS TAP 69kV	111.5	54	
CLINTON CITY - THOMAS TAP 69kV	05AP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	110.9	54	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
CLINTON CITY - THOMAS TAP 69kV	05AP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	110.9	54	
CLINTON CITY - THOMAS TAP 69kV	07SP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	108.5	54	
CLINTON CITY - THOMAS TAP 69kV	07SP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	108.5	54	
CLINTON CITY - THOMAS TAP 69kV	10SP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	107.4	55	
CLINTON CITY - THOMAS TAP 69kV	10SP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	107.4	55	
CLINTON CITY - THOMAS TAP 69kV	05WP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	104.1	57	
CLINTON CITY - THOMAS TAP 69kV	05WP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	104.1	57	
CLINTON CITY - THOMAS TAP 69kV	07WP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	104.1	57	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable. 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)
CLINTON CITY - THOMAS TAP 69kV	07WP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	104.1	57	
CLINTON CITY - THOMAS TAP 69kV	10WP, 54144-54159, AEPW WESTERN, WEATHERFORD - Weatherford Southeast 69kV	103.7	58	
CLINTON CITY - THOMAS TAP 69kV	10WP, 54159-54160-54168, AEPW WESTERN, Weatherford Southeast 138-69kV	103.7	58	
EL RENO SW - EL RENO 69kV,	05AP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	136.9	0	12/1/2005
EL RENO SW - EL RENO 69kV	07WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	132.0	0	
EL RENO SW - EL RENO 69kV	05WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	131.1	0	
EL RENO SW - EL RENO 69kV	10WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	118.8	17	
EL RENO SW - EL RENO 69kV	07SP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	103.2	53	
EL RENO SW 138-69kV,	05AP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	100.5	58	4/1/2006

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
ELGIN JUNCTION - *2001-35T 138kV, None	10SP, 54086-54140, AEPW WESTERN, FLETCHER TAP - SOUTHWEST STATION 138kV	107.6	0	6/1/2006
ELGIN JUNCTION - *2001-35T 138kV	10SP, 54086-54130, AEPW WESTERN, FLETCHER TAP - LAWTON EASTSIDE 138kV	107.0	0	
ELGIN JUNCTION - *2001-35T 138kV	07SP, 54086-54140, AEPW WESTERN, FLETCHER TAP - SOUTHWEST STATION 138kV	105.6	0	
ELGIN JUNCTION - *2001-35T 138kV	07SP, 54086-54130, AEPW WESTERN, FLETCHER TAP - LAWTON EASTSIDE 138kV	105.0	0	
ELGIN JUNCTION - *2001-35T 138kV	10SP, 54108-54126, AEPW WESTERN, CARNEGIE - HOBART JUNCTION 138kV	104.2	0	
ELGIN JUNCTION - *2001-35T 138kV	07SP, 54108-54126, AEPW WESTERN, CARNEGIE - HOBART JUNCTION 138kV	101.5	0	
ELK CITY - CLINTON 138kV, Replace switches @ Clinton Jct & Reset CT @ Elk City	05WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	144.2	0	12/1/2005
ELK CITY - CLINTON 138kV, Rebuild 24.1 miles of 477 ACSR with 1272 ACSR & replace wavetraps @ both ends.	05WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	141.4	0	
ELK CITY - CLINTON 138kV	05WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	140.5	0	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
ELK CITY - CLINTON 138kV	05AP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	137.3	0	
ELK CITY - CLINTON 138kV	05AP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	136.0	0	
ELK CITY - CLINTON 138kV	05AP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	135.5	0	
ELK CITY - CLINTON 138kV	07WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	135.4	0	
ELK CITY - CLINTON 138kV	07WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	132.8	0	
ELK CITY - CLINTON 138kV	07WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	131.9	0	
ELK CITY - CLINTON 138kV	10WP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	131.6	0	
ELK CITY - CLINTON 138kV	10SP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	129.5	0	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable. 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)
ELK CITY - CLINTON 138kV	10WP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	128.9	0	
ELK CITY - CLINTON 138kV	07SP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	128.5	0	
ELK CITY - CLINTON 138kV	10WP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	127.9	0	
ELK CITY - CLINTON 138kV	10SP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	124.8	0	
ELK CITY - CLINTON 138kV	07SP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	123.9	3	
ELK CITY - CLINTON 138kV	10SP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	123.1	5	
ELK CITY - CLINTON 138kV	07SP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	122.4	6	
ELK CITY - CLINTON 138kV	05WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	114.3	0	
ELK CITY - CLINTON 138kV	05AP, 56092-99954, WFEC AEP-CS - , WEATHERFORD - 2004-21T 138kV	114.0	21	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
ELK CITY - CLINTON 138kV	05WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	113.3	24	
ELK CITY - CLINTON 138kV	05AP, 55950-56092, WFEC AEP-CS, HYDRO - WEATHERFORD 138kV	113.0	24	
ELK CITY - CLINTON 138kV	05WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	111.9	0	
ELK CITY - CLINTON 138kV	05WP, 56092-99954, WFEC AEP-CS - , WEATHERFORD - 2004-21T 138kV	111.0	28	
ELK CITY - CLINTON 138kV	05AP, 55950-56050, WFEC AEP-CS, HYDRO - SICKLES 138kV	110.0	32	
ELK CITY - CLINTON 138kV	05WP, 55814-56089, WFEC FLA - WFEC AEP-CS, ANADARKO - WASHITA 138kV	109.8	29	
ELK CITY - CLINTON 138kV	05WP, 55950-56092, WFEC AEP-CS, HYDRO - WEATHERFORD 138kV	109.6	32	
ELK CITY - CLINTON 138kV	05AP, 55827-56050, WFEC AEP-CS, BINGER NIJECT - SICKLES 138kV	108.5	37	
ELK CITY - CLINTON 138kV	05AP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	107.8	38	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.
 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)
ELK CITY - CLINTON 138kV	05WP, 55950-56050, WFEC AEP-CS, HYDRO - SICKLES 138kV	107.8	38	
ELK CITY - CLINTON 138kV	05AP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	106.1	27	
ELK CITY - CLINTON 138kV	07WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	105.2	31	
ELK CITY - CLINTON 138kV	05AP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	105.0	33	
ELK CITY - CLINTON 138kV	05AP, 55827-56017, WFEC AEP-CS, BINGER NIJECT - ONEY 138kV	104.7	47	
ELK CITY - CLINTON 138kV	05WP, 55827-56050, WFEC AEP-CS, BINGER NIJECT - SICKLES 138kV	104.6	47	
ELK CITY - CLINTON 138kV	07WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	104.6	47	
ELK CITY - CLINTON 138kV	10SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	103.7	40	
ELK CITY - CLINTON 138kV	05AP, 56017-56089, WFEC AEP-CS, ONEY - WASHITA 138kV	103.4	51	
ELK CITY - CLINTON 138kV	07WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	102.8	45	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
ELK CITY - CLINTON 138kV	07SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	102.1	48	
ELK CITY - CLINTON 138kV	07WP, 56092-99954, WFEC AEP-CS - , WEATHERFORD - 2004-21T 138kV	101.9	55	
ELK CITY - CLINTON 138kV	10WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	101.3	53	
ELK CITY - CLINTON 138kV	10WP, 54820-54821, OKGE METRO, JENSEN TAP - JENSEN ROAD 138kV	100.8	58	
ELK CITY - CLINTON 138kV	07WP, 55950-56092, WFEC AEP-CS, HYDRO - WEATHERFORD 138kV	100.5	59	
ELK CITY - CLINTON 138kV	05WP, 55827-56017, WFEC AEP-CS, BINGER NIJECT - ONEY 138kV	100.1	60	
ELK CITY 69kV, Replace Metering CTs & Jumpers @ Elk City (AEPW) & reset relaying CT	07SP, 56001-99940, WFEC AEP-CS - , MOREWOOD SW - 2002-05T 138kV	113.8	0	12/1/2005
ELK CITY 69kV, Upgrade to be completed in current workplan.	07SP, 54152-54160, AEPW WESTERN, WEATHERFORD JCT. - Weatherford Southeast 138kV	113.6	0	12/1/2005
ELK CITY 69kV	07SP, 54109-54121, AEPW WESTERN, CLINTO AIR FORCE BASE TAP - ELK CITY 138kV	113.3	0	
ELK CITY 69kV	07SP, 54096-54152, AEPW WESTERN, HINTON - WEATHERFORD JCT. 138kV	112.5	0	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
ELK CITY 69kV	07SP, 54096-54821, AEPW WESTERN - OKGE METRO, HINTON - JENSEN ROAD 138kV	112.1	0	
ELK CITY 69kV	07SP, 54109-54126, AEPW WESTERN, CLINTO AIR FORCE BASE TAP - HOBART JUNCTION 138kV	111.8	0	
ELK CITY 69kV	05WP, 54121-56001, AEPW WESTERN - WFEC AEP-CS, ELK CITY - MOREWOOD SW 138kV	110.5	0	
ELK CITY 69kV	07SP, 50827-54153, SPS SPS-OKLA - AEPW WESTERN, Grapevine Interchange - ELK CITY 230kV	104.8	5	
ELK CITY 69kV	07SP, 54121-54153-54145, AEPW WESTERN, ELK CITY 230-138kV	104.7	6	
ELK CITY 69kV	07SP, 55950-56050, WFEC AEP-CS, HYDRO - SICKLES 138kV	104.6	6	
ELK CITY 69kV	07SP, 55827-56017, WFEC AEP-CS, BINGER NIJECT - ONEY 138kV	101.7	40	
ELK CITY 69kV	07SP, 56017-56089, WFEC AEP-CS, ONEY - WASHITA 138kV	101.2	46	
FLETCHER TAP - LAWTON EASTSIDE 138kV, Replace switches 1334 & 1335 @ Lawton Eastside	10SP, 54149-99936, AEPW WESTERN - , ELGIN JUNCTION - 2001-35T 138kV	105.2	0	6/1/2006
FLETCHER TAP - LAWTON EASTSIDE 138kV	07SP, 54149-99936, AEPW WESTERN - , ELGIN JUNCTION - 2001-35T 138kV	102.4	0	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
HAMON BUTLER - MOREWOOD 69kV,	07WP, 55999-56001, WFEC AEP-OP - WFEC AEP-CS, MOORELAND - MOREWOOD SW 138kV	117.8	0	12/1/2006
HINTON - JENSEN ROAD 138kV, None	05AP, 54121-54148, AEPW WESTERN, ELK CITY - CLINTON 138kV	103.2	50	12/1/2005
HINTON - JENSEN ROAD 138kV, Increase the CTR from 800A to 1200A at Jensen Road.	05WP, 54121-54148, AEPW WESTERN, ELK CITY - CLINTON 138kV	102.4	53	12/1/2005
HINTON - JENSEN ROAD 138kV	07WP, 54121-54148, AEPW WESTERN, ELK CITY - CLINTON 138kV	102.1	53	
HINTON - JENSEN ROAD 138kV	10WP, 54121-54148, AEPW WESTERN, ELK CITY - CLINTON 138kV	100.9	57	
SOUTHWEST STATION - NORGE ROAD 138kV, Rebuild 22.35 miles of 397.5 ACSR with 1272 ACSR & Replace switches 1302, 1303, &1398MD @ Norge Road.	10SP, 54084-54140, AEPW WESTERN, VERDEN - SOUTHWEST STATION 138kV	107.9	0	6/1/2006
SOUTHWEST STATION - NORGE ROAD 138kV	10SP, 54084-54165, AEPW WESTERN, VERDEN - NORTH 29TH CHICKASHA 138kV	106.8	0	
SOUTHWEST STATION - NORGE ROAD 138kV	07SP, 54084-54140, AEPW WESTERN, VERDEN - SOUTHWEST STATION 138kV	105.5	0	
SOUTHWEST STATION - NORGE ROAD 138kV	07SP, 54084-54165, AEPW WESTERN, VERDEN - NORTH 29TH CHICKASHA 138kV	104.4	0	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
SOUTHWEST STATION - NORGE ROAD 138kV	10SP, 54112-54165, AEPW WESTERN, CORNVILLE - NORTH 29TH CHICKASHA 138kV	103.1	0	
SOUTHWEST STATION - NORGE ROAD 138kV	10SP, 55814-55867, WFEC FLA - WFEC AEP-IM-I, ANADARKO - CORN TAP 138kV	102.7	0	
SOUTHWEST STATION - NORGE ROAD 138kV	07SP, 54112-54165, AEPW WESTERN, CORNVILLE - NORTH 29TH CHICKASHA 138kV	100.7	34	
WASHITA 138-69kV,	05WP, 55814-56089, WFEC FLA - WFEC AEP-CS, ANADARKO - WASHITA 138kV	116.4	0	12/1/2005
WEATHERFORD - THOMAS TAP 69kV, Rebuild 0.9 miles of 4/0 ACSR with 795 ACSR	07SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	176.7	0	12/1/2005
WEATHERFORD - THOMAS TAP 69kV, Replace switches, wavetrap & jumpers @ Weatherford	10SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	176.0	0	
WEATHERFORD - THOMAS TAP 69kV	07SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	165.7	5	
WEATHERFORD - THOMAS TAP 69kV	10SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	164.5	6	
WEATHERFORD - THOMAS TAP 69kV	10WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	162.7	3	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
WEATHERFORD - THOMAS TAP 69kV	07WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	161.6	4	
WEATHERFORD - THOMAS TAP 69kV	10WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	156.5	8	
WEATHERFORD - THOMAS TAP 69kV	07WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	155.6	9	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	153.8	10	
WEATHERFORD - THOMAS TAP 69kV	05WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	152.9	12	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	151.0	13	
WEATHERFORD - THOMAS TAP 69kV	05WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	147.1	17	
WEATHERFORD - THOMAS TAP 69kV	07SP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	118.5	50	
WEATHERFORD - THOMAS TAP 69kV	10SP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	118.2	50	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	111.2	54	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
WEATHERFORD - THOMAS TAP 69kV	07WP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	108.8	55	
WEATHERFORD - THOMAS TAP 69kV	10WP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	108.8	55	
WEATHERFORD - THOMAS TAP 69kV	05WP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	108.7	55	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54110-54185, AEPW WESTERN, CLINTON CITY - FOSS TAP 69kV	100.8	59	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54147-54185, AEPW WESTERN, CLINTON - FOSS TAP 69kV	100.5	60	
WEATHERFORD - THOMAS TAP 69kV	05AP, 54147-54148-54162, AEPW WESTERN, CLINTON 138-69kV	100.5	60	
WEATHERFORD - Weatherford Southeast 69kV, Replace switches @ Weatherford & reset relays @ Weatherford SE	10WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	118.8	38	12/1/2005
WEATHERFORD - Weatherford Southeast 69kV	07WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	118.2	39	
WEATHERFORD - Weatherford Southeast 69kV	05AP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	115.3	42	
WEATHERFORD - Weatherford Southeast 69kV	10WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	114.0	43	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
WEATHERFORD - Weatherford Southeast 69kV	07WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	113.6	44	
WEATHERFORD - Weatherford Southeast 69kV	05AP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	113.2	44	
WEATHERFORD - Weatherford Southeast 69kV	05WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	111.7	46	
WEATHERFORD - Weatherford Southeast 69kV	07SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	111.7	47	
WEATHERFORD - Weatherford Southeast 69kV	10SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	110.8	48	
WEATHERFORD - Weatherford Southeast 69kV	05WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	107.2	52	
WEATHERFORD - Weatherford Southeast 69kV	07SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	104.2	55	
WEATHERFORD - Weatherford Southeast 69kV	10SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	102.8	57	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.
 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)
Weatherford Southeast - 138-()kV, Replace Weatherford SE 138/69 kV autotransformer	10WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	148.1	14	12/1/2005
Weatherford Southeast - 138-()kV	07WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	146.6	15	
Weatherford Southeast - 138-()kV	05AP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	144.5	17	
Weatherford Southeast - 138-()kV	10WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	142.8	19	
Weatherford Southeast - 138-()kV	05AP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	142.0	20	
Weatherford Southeast - 138-()kV	07WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	141.6	20	
Weatherford Southeast - 138-()kV	07SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	139.0	24	
Weatherford Southeast - 138-()kV	05WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	138.2	24	
Weatherford Southeast - 138-()kV	10SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	137.8	25	
Weatherford Southeast - 138-()kV	05WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	133.3	28	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
Weatherford Southeast - 138-()kV	07SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	130.7	32	
Weatherford Southeast - 138-()kV	10SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	129.0	33	
Weatherford Southeast - 138-()kV	05AP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	104.9	57	
Weatherford Southeast - 69-()kV	10WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	144.9	16	
Weatherford Southeast - 69-()kV	07WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	143.7	18	
Weatherford Southeast - 69-()kV	05AP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	142.1	19	
Weatherford Southeast - 69-()kV	10WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	140.0	21	
Weatherford Southeast - 69-()kV	05AP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	139.8	22	
Weatherford Southeast - 69-()kV	07WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	139.0	22	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable.

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)
Weatherford Southeast - 69-()kV	07SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	137.6	25	
Weatherford Southeast - 69-()kV	10SP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	136.4	26	
Weatherford Southeast - 69-()kV	05WP, 54199-99950, AEPW WESTERN - , WEATHERFORD TAP - 2003-22T 138kV	135.9	25	
Weatherford Southeast - 69-()kV	05WP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	131.2	30	
Weatherford Southeast - 69-()kV	07SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	129.4	33	
Weatherford Southeast - 69-()kV	10SP, 54160-54199, AEPW WESTERN, Weatherford Southeast - WEATHERFORD TAP 138kV	127.8	34	
Weatherford Southeast - 69-()kV	05AP, 54110-54180, AEPW WESTERN, CLINTON CITY - THOMAS TAP 69kV	103.5	58	

Note: Listed loading of each facility is the highest value when an operating guide is not applicable. 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 2005 April, 2005 Winter Peak, 2007 and 2010 Summer and Winter 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 generator is December 1, 2005. The available seasonal models used were the 2005 April, 2005 Winter, and 2007 through 2010 peak models. This is the end of the current SPP planning horizon.

The analysis of the Customer's project indicates that, given the requested generation level of 60MW and location, additional criteria violations will occur on the existing AEPW, OKGE and WFEC facilities under steady state conditions in the peak seasons.

There are several other proposed generation additions in the general area of the Customer's facility. Local projects that were previously queued were assumed to be in service in this Feasibility Study. Those local projects that were previously queued and have advanced to nearly complete phases were included in this Feasibility Study.

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, Western Farmers Electric Cooperative, and Southwestern Public Service Company were applied and the resulting scenarios analyzed. This satisfies the 'more probable' contingency testing criteria mandated by NERC and the SPP criteria.

Conclusion

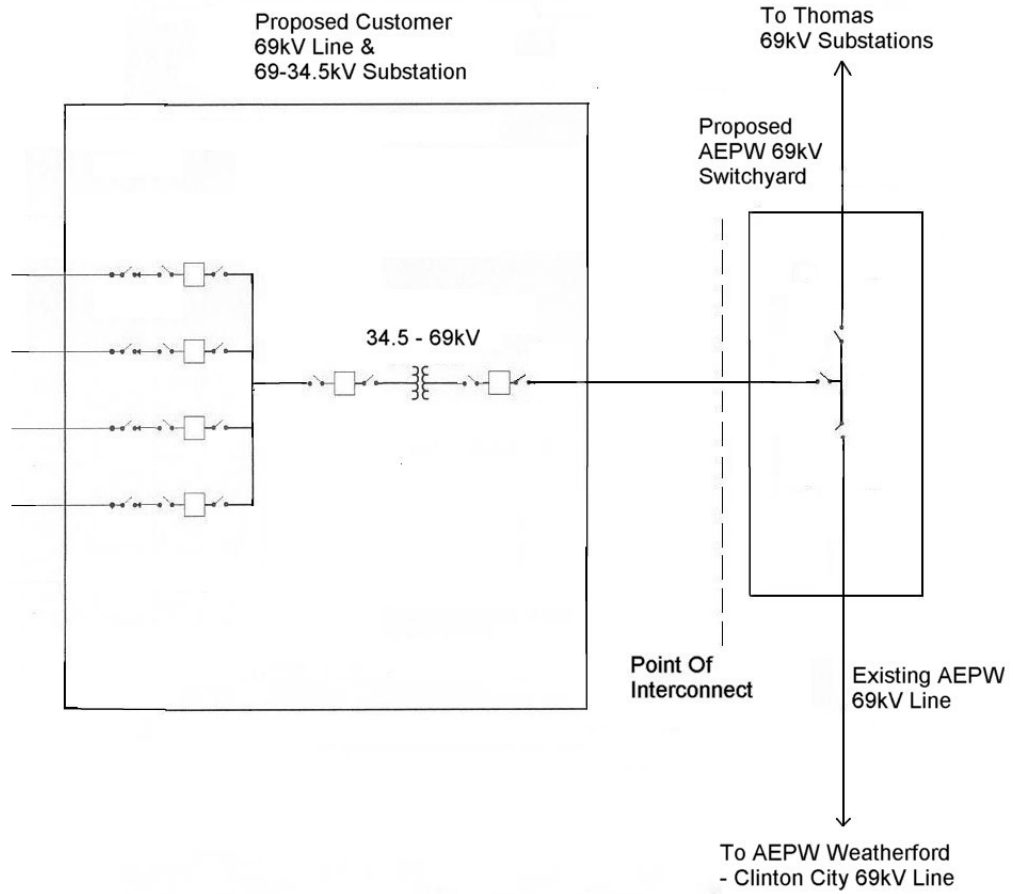
The minimum cost of interconnecting the Customer project is estimated at \$1,200,000 for AEPW's interconnection Network Upgrade facilities listed in Table 2 excluding upgrades of other transmission facilities by AEPW, OKGE and WFEC listed in Table 3 of which are Network Constraints. At this time, the cost estimates for other Direct Assignment facilities including those in Table 1 have not 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.

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.



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

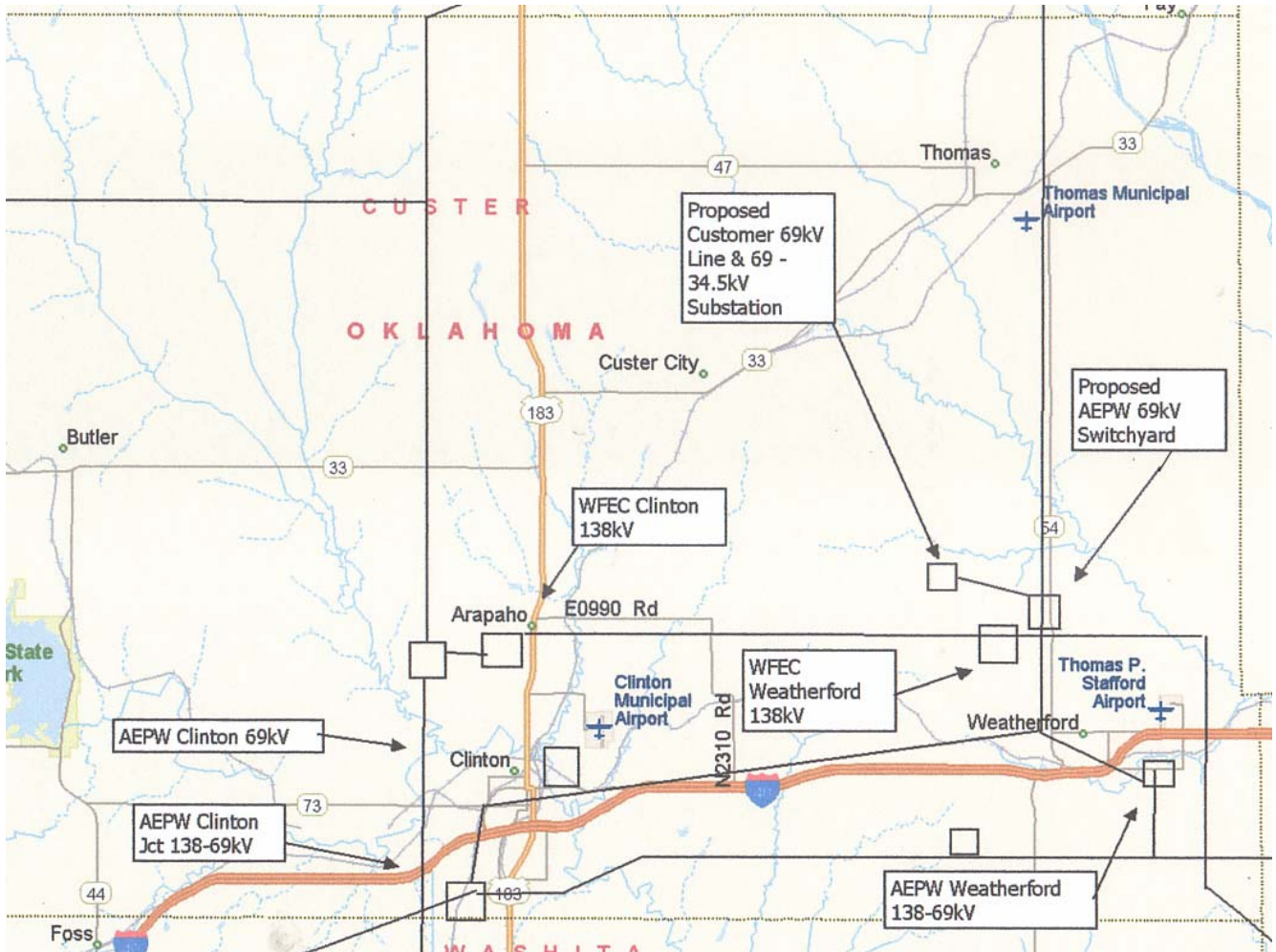


Figure 2: Map Of The Surrounding Area