Ameren Exhibit 1.22

Ameren

Bloomington Area Transmission Development

Brokaw-South Bloomington 345 kV Line Project

Summary of Justification

August 2011

Prepared by ____________________

Approved by ____________________

Table of Contents

A. Executive Summary

The transmission system in the Bloomington regional area is heavily dependent on one substation, and a single transmission corridor. The Bloomington area may be viewed as a single pocket of load, with primary supply from the Brokaw 345/138 kV Substation, and a double-circuit 138 kV line from Brokaw to the South Bloomington Substation. Based on analyses performed a few years ago and annually updated since that time, it is expected that by summer 2014 the Bloomington regional area could experience a voltage collapse for the loss of two bulk electric system elements. This exposure includes the outage of the double-circuit 138 kV Brokaw-South Bloomington line, or a coincident outage of two 345/138 kV transformers, or a coincident outage of two 345 kV lines at Brokaw Substation. The total amount of load which would experience a loss of supply for these situations is approximately 480 MW.

Expanding the Brokaw 345 kV station to a ring bus configuration with the connection to the ComEd line modified to be an "in-out" arrangement, adding a 345 kV transmission line (approximately seven miles in length) between the Brokaw and South Bloomington Substations, and adding a 345/138 kV 560 MVA transformer at South Bloomington Substation will eliminate the exposure to a total area outage for the loss of two bulk electric system elements. The cost of these improvements is estimated to be about $35,070,000.

Four other alternatives were also investigated. Note that each of these alternatives would include the installation of a 345/138 kV, 560 MVA transformer at West Washington Street Substation in Bloomington, rather than at South Bloomington Substation:

- Extend a 345 kV line from Brokaw Substation to West Washington Street Substation. Approximately 14 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $46,014,000.
- Extend a 345 kV line to West Washington Street Substation from Commonwealth Edison's Blue Mound Substation. Approximately 15 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $44,010,000.
- Extend a 345 kV line to West Washington Street from Commonwealth Edison's Powerton Substation to West Washington Street Substation. Approximately 26 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $65,370,000.
- Extend a 345 kV line to West Washington Street Substation eastward from Peoria. Approximately 30 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $76,770,000.

While all of these alternatives would address the critical system needs, the alternative which should be pursued is the expansion of the Brokaw 345 kV station, construction of a 345 kV line (approximately seven miles long) between Brokaw and South Bloomington Substations, and the addition of a 345/138 kV transformer at South Bloomington Substation. This alternative significantly improves the robustness of the transmission system in the area, eliminates the projected exposure to voltage collapse from double contingency scenarios, can be constructed in the shortest amount of time, and has the lowest cost.

B. Introduction

The transmission system in the Bloomington regional area is heavily dependent on one 345/138 kV substation, and one double-circuit 138 kV line. The Bloomington area may be viewed as a single pocket of load, with primary supply from the Brokaw 345/138 kV Substation, and a double-circuit 138 kV line from Brokaw to the South Bloomington Substation. Based on analyses performed a few years ago and annually updated since that time, it is expected that by summer 2014 the Bloomington regional area could experience a voltage collapse for the loss of two bulk electric system elements. This exposure includes the outage of the double-circuit 138 kV Brokaw-South Bloomington line, or a coincident outage of two 345/138 kV transformers at Brokaw Substation, or the coincident outage of the two 345 kV circuits that supply Brokaw Substation. Based on latest load projections, which take into consideration recent economic conditions, the total amount of load which would experience a loss of supply for these situations is approximately 480 MW.

C. Ameren Transmission Planning Criteria

Ameren Transmission Planning Criteria includes the evaluation of the contingencies and conditions prescribed by the NERC TPL-001, TPL-002 and TPL-003 reliability standards. These standards define single and multiple contingencies that should be evaluated in the power flow and voltage analysis of the transmission system. Ameren's criteria require system upgrades to mitigate equipment loading or system voltages when those metrics fall outside of acceptable limits under the following conditions:

- With all facilities in service,
- Outage of any one transmission circuit, transmission element, or generator,
- Loss of any one transmission circuit coincident with any generator out of service,
- Concurrent outage of any two transmission elements (transmission line or transformer), an outage to a bus section, or failure of a breaker that drops 300 MW or more due to system topology or voltage collapse.

These metrics and conditions will be used to determine the future transmission needs in the Bloomington area. Of particular concern in Bloomington is that there are critical multiple contingencies which would cause facility loading and low system voltages that fall outside of acceptable limits. These contingency conditions are described in this report.

D. Assumptions

The power flow base case uses a North American Electric Reliability Corporation (NERC) Multi-Regional Modeling Working Group (MMWG) 2009 series 2015 summer case as the starting point. This power flow model represents most of the transmission system in the Eastern US Interconnection. It uses summer ratings for the existing units which are dispatched to serve loads based on a 50/50 forecast of summer 2015 peak conditions. Detailed models for bulk supply transformers connected directly to the transmission system with loads aggregated on the low side bus are included.

Load in the Bloomington area is supplied from the 138 kV system via transformers located at the South Bloomington, Normal East, Washington Street, El Paso, and Cornbelt Towanda Substations. Additional customer load is supplied from the 138 kV system at the State Farm and Diamond Star facilities. Exhibit 1.1 is an area map of Bloomington, Illinois showing the electrical system which provides electrical supply to the south and southeastern Bloomington, Illinois area.

A detailed representation of the Bloomington area 34.5 kV system was inserted into the MMWG model for this study. The 34.5 kV distribution system including the transformations to 12 and 4 kV voltages and substation capacitor banks are explicitly modeled.

Bloomington area loads were adjusted to reflect a 90/10 forecast of summer 2015 peak conditions. For the forecasted 2015 summer conditions, the weather normalized peak for the Bloomington area is projected to be 486 MW. Exhibit 1.2 shows substation loads in the Bloomington area for 2015 summer conditions. (These forecasts were developed after the 2010 peak load season.)

The Bloomington area is primarily supplied by 138 kV transmission lines from the Brokaw 345/138 kV Substation. The Brokaw Substation has two 345 kV supply connections (a line from Clinton and a tap to the ComEd Pontiac-Lanesville line), only two 345 kV breakers, two 345/138 kV transformers, and four outlet 138 kV lines. Two of these lines are the main source for the Bloomington area. With all facilities in-service, at high load levels these two 138 kV lines supply approximately 80% of the Bloomington-Normal area load. One of these 138 kV lines is a double-circuit configuration and terminates at South Bloomington Substation. The other line is routed northward to the Normal, East Substation. Two additional 138 kV lines which connect to Brokaw Substation provide a small amount of support to the Bloomington area from Champaign and Paxton, respectively. The 138 kV lines from Champaign and Paxton supply approximately 9% and 4% of the Bloomington area load, respectively, with all facilities in service. An additional 138 kV line from the Decatur area, which connects to South Bloomington Substation, supplies approximately 7% of the Bloomington area load with all facilities in service. Two additional 138 kV lines connected to the Bloomington area, one from the Peoria area to the west, and one from the Oglesby area to the north, provide limited support to the Peoria and Oglesby areas with all facilities in service. However, during transmission contingencies, the flow direction on these lines can reverse such that the lines would provide a small amount of support to the Bloomington area. Exhibit 1.3 shows the Bloomington area transmission system with all transmission facilities in service, including the bus voltages and the line and transformer flows.

E. Power Flow Analysis

The transmission system in the Bloomington regional area is heavily dependent on one substation, and a single transmission corridor. The Bloomington area may be viewed as a single pocket of load, with primary supply from the Brokaw 345/138 kV Substation, and a double-circuit 138 kV line from Brokaw to the South Bloomington Substation. Based on analyses performed a few years ago and annually updated since that time, it is expected that by summer 2014 the Bloomington regional area could experience a voltage collapse for the loss of two bulk electric system elements. This exposure includes the coincident outage of the two circuits on the double-circuit 138 kV Brokaw-South Bloomington line, or a coincident outage of two 345/138 kV transformers at Brokaw Substation, or the coincident outage of the two 345 kV circuits that supply Brokaw Substation. The total amount of load which would experience a loss of supply for these situations is approximately 480 MW.

A simulation of 2015 summer peak load conditions, with loads reduced to 90% of the expected peak load values to permit convergence of the powerflow solution, showed that, immediately following an outage to the two 138 kV circuits on the double-circuit 138 kV Brokaw-South Bloomington line, some voltages in the Bloomington area would fall below 88% of nominal. With system loads at the projected peak values, the voltages would be even lower. Voltage collapse is assumed to be certain if a steady-state power flow shows that post-contingency voltage drops to 85 percent of the nominal value, and voltage collapse is likely if a steady-state power flow shows that post-contingency voltage drops to 86 - 89 %. At the same time, thermal loading on a number of facilities in the Bloomington area would range from 110% to 120% of emergency rating. It is likely that one or more of these heavily-loaded facilities would subsequently trip offline, making the voltage collapse more severe and accelerating loss of service to the majority of the customer load in the Bloomington area. This situation is depicted in Exhibit 1.4.

One such heavily-loaded facility is the Normal, East Substation 138-34.5 kV Transformer. This transformer, which has an emergency rating of 120 MVA based on substation equipment associated with the transformer, would be loaded well above this rating, to about 174 MVA in the powerflow simulation described above, following the outage to the Brokaw-South Bloomington 1562 and 1596 138 kV Lines. System protection equipment would trip this transformer offline should the transformer be exposed to loadings above about 149 MVA. Subsequent to tripping of this transformer offline, loss of service to remaining load in the Bloomington area would be accelerated.

Other NERC Category C contingency events which could cause similar consequences include the outage of both 345/138 kV transformers at Brokaw Substation, or the outage of two 345 kV circuits terminated at Brokaw Substation. It is not possible to simulate voltage and flow conditions which would occur if these outages were to occur at peak load because the power flow simulation will not "solve" with peak loads in the model. In order to depict the exposure to voltage collapse, conditions at less than peak load were modeled and documented. Exhibits 1.5 and 1.6 show the expected transmission system response for 90% and 85% of summer peak load conditions, respectively, in 2015 following each of these contingency conditions. In Exhibit 1.5, at 90% of summer peak load, some transmission facilities would be loaded to 110% of summer emergency rating with both Brokaw 345/138 kV transformers out of service. System voltages would be below 90% of nominal. Similarly, in Exhibit 1.6, at 85% of summer peak load, transmission facilities would be loaded between 102% and 118% of summer emergency rating with two 345 kV lines terminating at Brokaw Substation out-of-service. System voltages would be near 90% of nominal.

Note that this analysis was based on a powerflow model with a more detailed distribution load and capacitor bank representation in the Bloomington area. This detail provides additional insight into the manner in which depressed post-contingency voltages would affect capacitor reactive power output from the distribution capacitors.

F. Discussion of Voltage Collapse

The term "voltage collapse" is used by electric utility engineers to describe a scenario where an area of the interconnected system experiences rapidly declining voltages followed by a total loss of electric service. A typical voltage collapse situation occurs when the system is at a high load level and there is a sudden change in the source(s) of electric supply to an area. The change could be the loss of a large generator or one or more transmission lines. In either case, the remaining sources for the area cannot provide adequate voltage support and voltages at both the transmission and distribution levels of the system drop significantly below normal values. The sudden drop of voltage causes the characteristics of the loads to change. Electric motors stall, which results in a significant increase of real power load and a drastic increase in reactive power load. The increased load from the stalled motors drives the voltages even lower. At this point, current flow on the entire system supplying the area is increased, resulting in increased voltage drop to the loads and a spiraling downward of system voltages as more motors stall. Ultimately, the voltages collapse as the transmission and distribution system can no longer support the increased area load. Under these situations, as the collapse develops, flows on distribution, subtransmission, or transmission circuits will exceed the settings of the protective relays, resulting in a total outage to the area.

In many instances, the voltage collapse event is precipitated by a fault on a transmission line. During the time the fault is connected to the system, voltages at both the transmission and distribution levels of the system are very low. Although this period of very low voltage may be relatively short, perhaps only 5-10 cycles (0.083-0.167 seconds), some loads connected to the system can change drastically and not return to the pre-fault status when the faulted line is disconnected from the system by the opening of circuit breakers. The drastic change in load characteristics may cause a voltage collapse to occur in situations where, absent the effect of the fault, a collapse would have been avoided. The impact on load characteristics due to the voltage sag during the time a fault is connected to the system was not directly considered in the determination of exposure to voltage collapse for the Bloomington area. However, the presence of this phenomenon indicates that the situation may be worse than depicted by the steady state analysis.

G. Mitigation Options

Alternatives considered for addressing these contingency conditions are listed below. Note that the second through the fifth alternatives involve the installation of a 345/138 kV, 560 MVA transformer at West Washington Street Substation in Bloomington, rather than at South Bloomington Substation:

- Expansion of the Brokaw substation to a 345 kV ring bus configuration including modification of the connection to the ComEd line to an “in-out” arrangement, construction of a 345 kV line from Brokaw to South Bloomington Substation, and the installation of a 345/138 kV, 560 MVA transformer at South Bloomington Substation, at an estimated cost of $35,070,000.
- Extend a 345 kV line from Brokaw Substation to West Washington Street Substation. Approximately 14 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $46,014,000.
- Extend a 345 kV line to West Washington Street Substation from Commonwealth Edison’s Blue Mound Substation. Approximately 15 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $44,010,000.
- Extend a 345 kV line to West Washington Street from Commonwealth Edison’s Powerton Substation to West Washington Street Substation. Approximately 26 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $65,370,000.
- Extend a 345 kV line to West Washington Street Substation eastward from Peoria. Approximately 30 miles of new 345 kV transmission line would be needed. The estimated cost for this alternative is $76,770,000.

Further details of these alternatives are outlined in the attached Exhibit 1.7.

In addition to the transmission alternatives which were examined, distribution solutions were also considered. The possibility of installing distribution capacitors and static var compensators was considered. It was determined that this approach would cost over $35,000,000, would only defer the need to build the new transmission line, would not add robustness of the overall supply to the area, and would carry a high maintenance cost. Another distribution solution considered would be to install a second 138-34.5 kV transformer in parallel with the existing transformer at Normal, East Substation, thereby sharing the resulting load between the two transformers. However, powerflow simulations using the same 2015 summer peak load conditions, reduced to 90% of full peak load to permit convergence of the powerflow solution, with a second 138-34.5 kV transformer in-service at Normal, East Substation, showed no material improvement for an outage of the double-circuit Brokaw-South Bloomington 138 kV line. Post-contingency area voltages were still near or below 90% of nominal, with thermal loading on a number of transmission facilities of between 103% and 140% of summer emergency rating. Therefore, the addition of a second 138-34.5 kV transformer at Normal, East Substation would not be a viable solution. Post-contingency conditions with a second 138-34.5 kV transformer at Normal, East Substation are shown in Exhibit 1.12.

The alternative which should be pursued is the expansion of the Brokaw substation to a 345 kV ring bus configuration including modification of the connection to the ComEd line to be an “in-out" arrangement, construction of the 345 kV line between Brokaw and South Bloomington Substations, and addition of a 345/138 kV transformer at South Bloomington Substation. This alternative significantly improves the robustness of the transmission system in the area, eliminates the projected exposure to voltage collapse from double contingency scenarios, can be constructed in the shortest amount of time, and has the lowest cost.

With the addition of 345 kV breakers and bus at Brokaw to establish a ring bus configuration and modification of the 345 kV connection to the ComEd line to be an "in-out" arrangement, the addition of a 345 kV transmission line between the Brokaw and South Bloomington Substations, and the addition of a 345/138 kV, 560 MVA transformer at South Bloomington Substation, the post-contingency loading and voltage issues associated with the outage of the double-circuit 138 kV Brokaw-South Bloomington line would be resolved. Exhibit 1.8 shows the immediate post-contingency conditions following the double-circuit outage event, prior to adjustment of load tap-changing transformers. Prior to load tap-changing transformer adjustment, subtransmission voltages in the Bloomington area would be between 93.5% and 97% of nominal. Exhibit 1.8b shows conditions following the double-circuit outage event and subsequent load tap-changing transformer adjustment, with transmission and subtransmission voltages of 99% of nominal or greater. Post contingency transmission facility loadings would be within emergency ratings. Similarly, low voltage issues following double contingency 345 kV line outages or double transformer outages at Brokaw Substation would be eliminated. (See Exhibits 1.9, 1.9b, 1.10, 1.10b, and 1.11.)

H. Conclusions

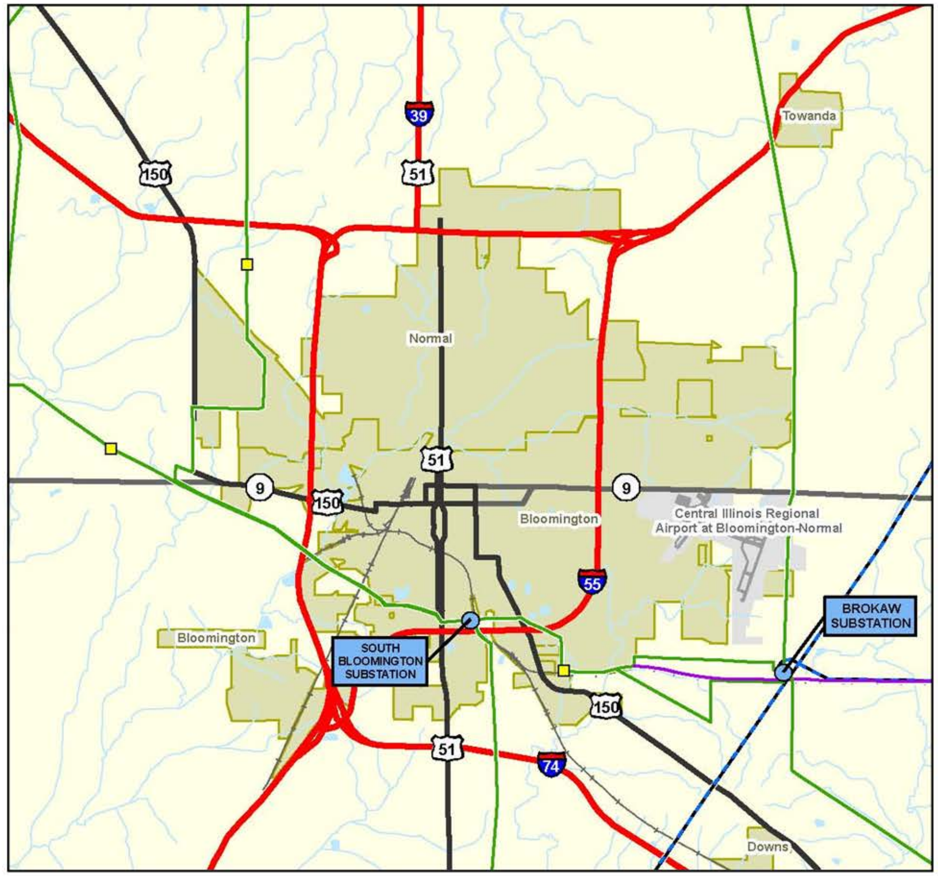
Based on the potential impact from an outage to the double-circuit Brokaw-South Bloomington line or the coincident outage of two 345/138 kV transformers or two 345 kV lines at Brokaw Substation, system reinforcements are needed. Power flow simulations indicated that transmission facility overloading and voltage collapse would occur as a result of any of these events. Under these conditions, in excess of 300 MW of load served in the Bloomington area will be dropped. This amount exceeds the 300 MW threshold prescribed by the Ameren Transmission Planning criteria thus requires system reinforcements.

While there are multiple alternatives that would address the critical system needs, the alternative which should be pursued is the expansion of the Brokaw 345 kV station to a ring bus configuration, modification of the ComEd connection at Brokaw to an "in-out" arrangement, construction of a 345 kV line (approximately seven miles long) between Brokaw and South Bloomington Substations, and the addition of a 345/138 kV transformer at South Bloomington Substation. This alternative significantly improves the robustness of the transmission system in the area, eliminates the projected exposure to voltage collapse from double contingency scenarios, can be constructed in the shortest amount of time, and has the lowest cost.

Ameren Illinois Utilities

Exhibit 1.1

Bloomington Area Electrical Supply



Brokaw to South Bloomington Transmission Line Project

Exhibit 1.2
Load Forecast for the Bloomington Area – 2015 Summer

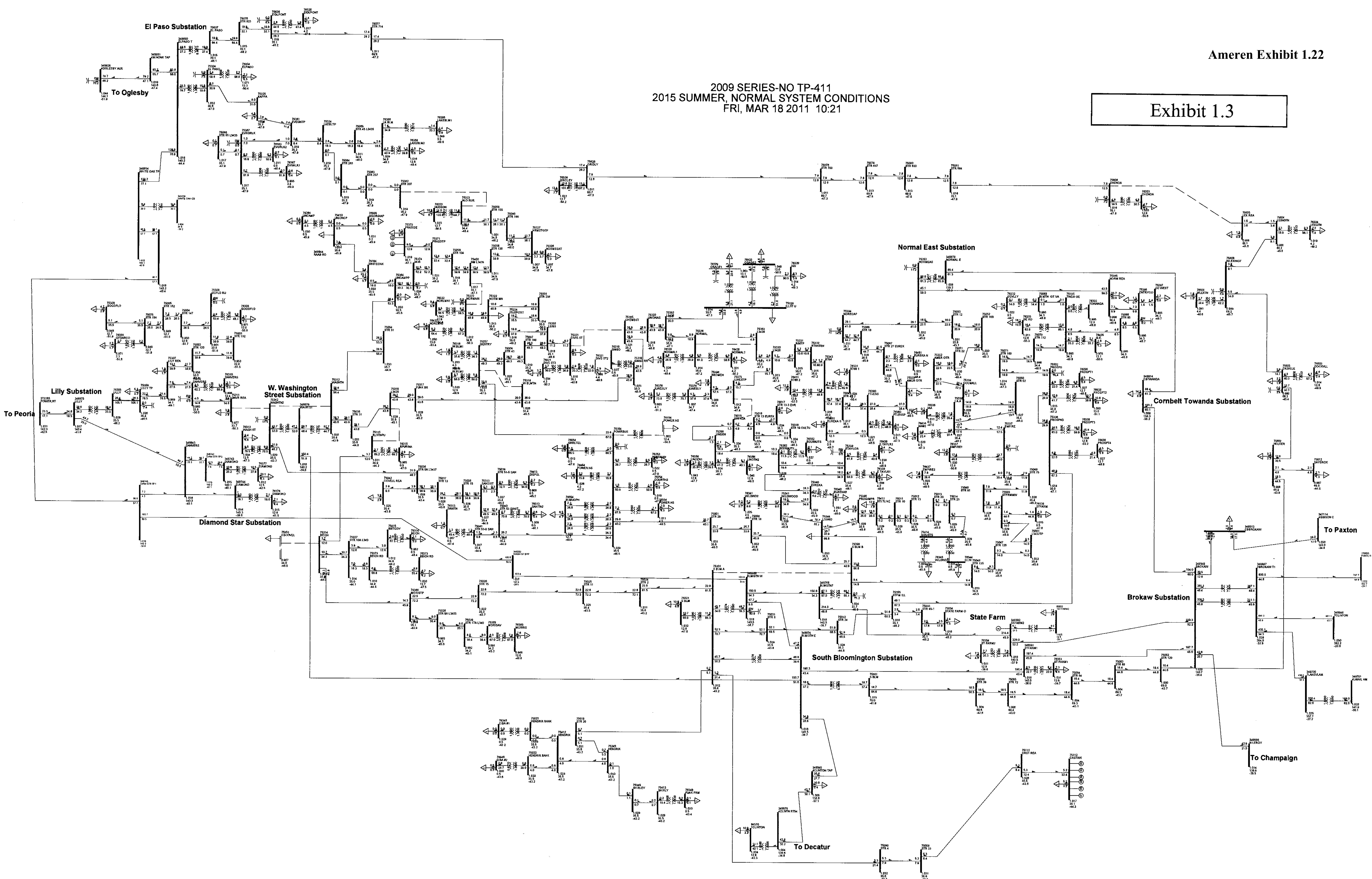
(Loads shown are for each transformer connected to the transmission system.)

Substation	Load, MW
South Bloomington	46.7
	67.3
	46.8
	18.6
W. Washington Street	42.1
	58.7
Normal, East	88.4
State Farm	8.5
	7.8
	8.1
Diamond Star	10.6
	7.2
El Paso	19.8
	15.3
Cornbelt Towanda	14.3
Lilly	26.6
Total, MW	486.8

Ameren Exhibit 1.22

Exhibit 1.3

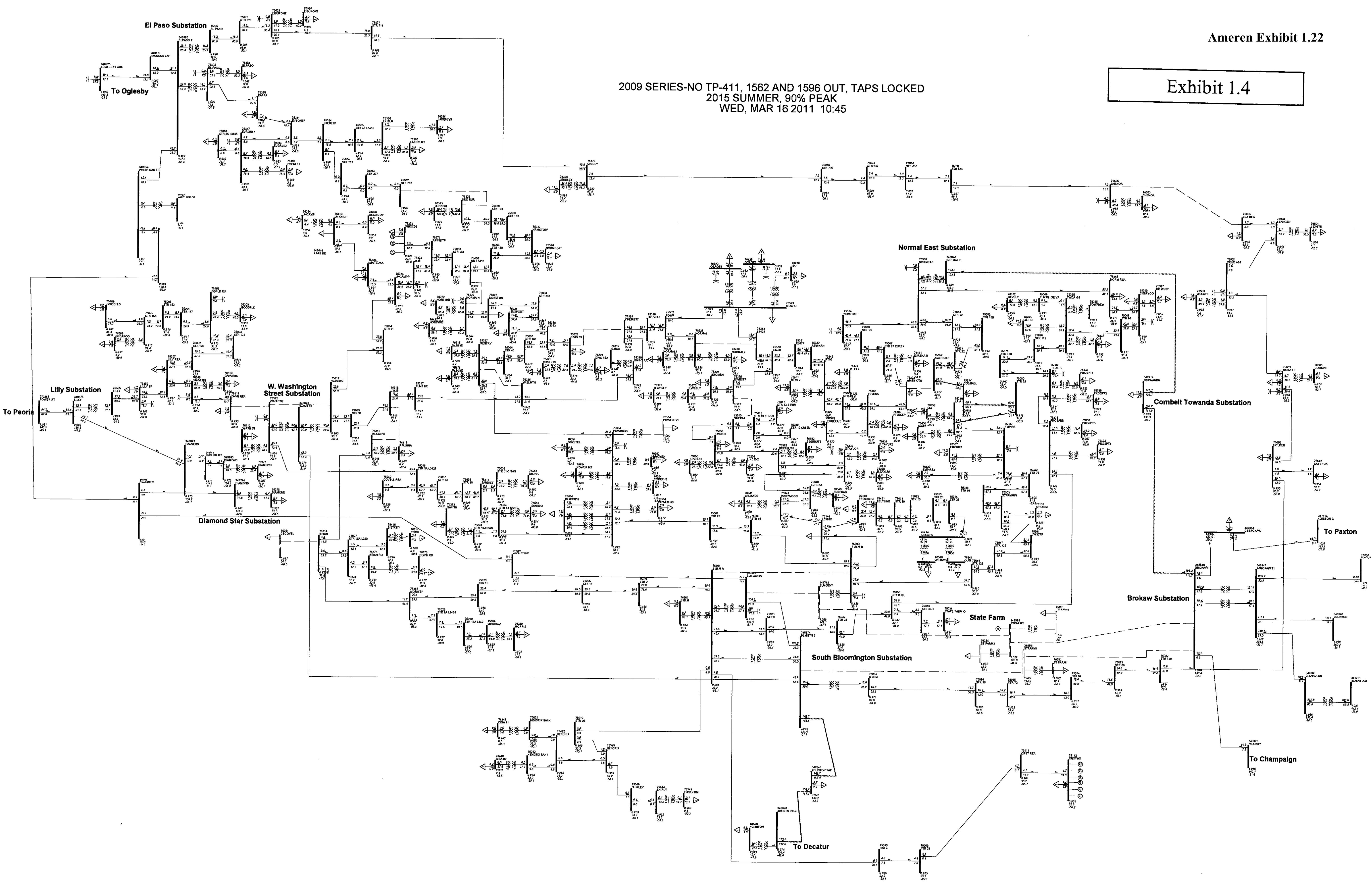
2009 SERIES-NO TP-411
2015 SUMMER, NORMAL SYSTEM CONDITIONS
FRI, MAR 18 2011 10:21



Ameren Exhibit 1.22

Exhibit 1.4

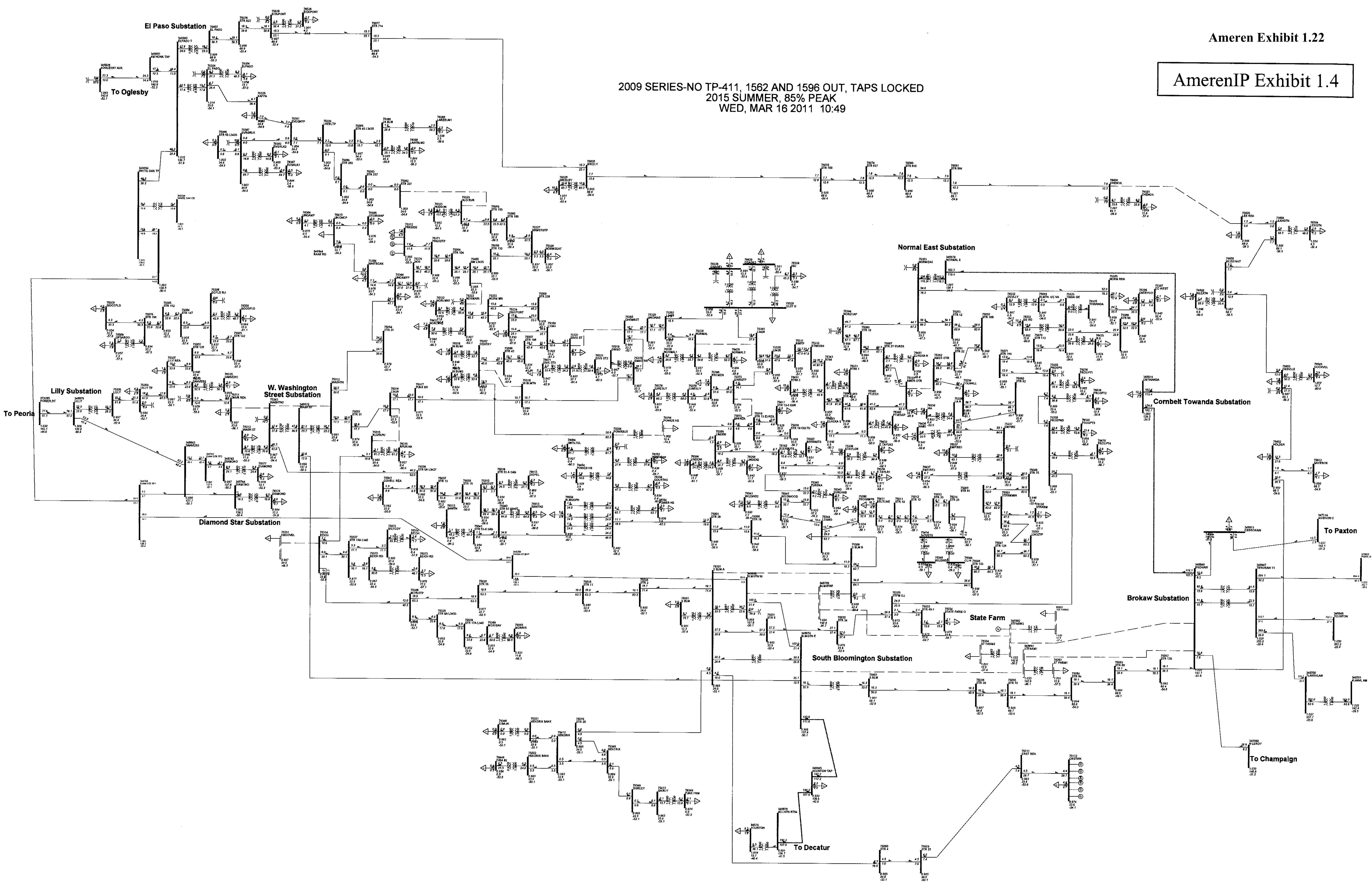
2009 SERIES-NO TP-411, 1562 AND 1596 OUT, TAPS LOCKED
2015 SUMMER, 90% PEAK
WED, MAR 16 2011 10:45



Ameren Exhibit 1.22

AmerenIP Exhibit 1.4

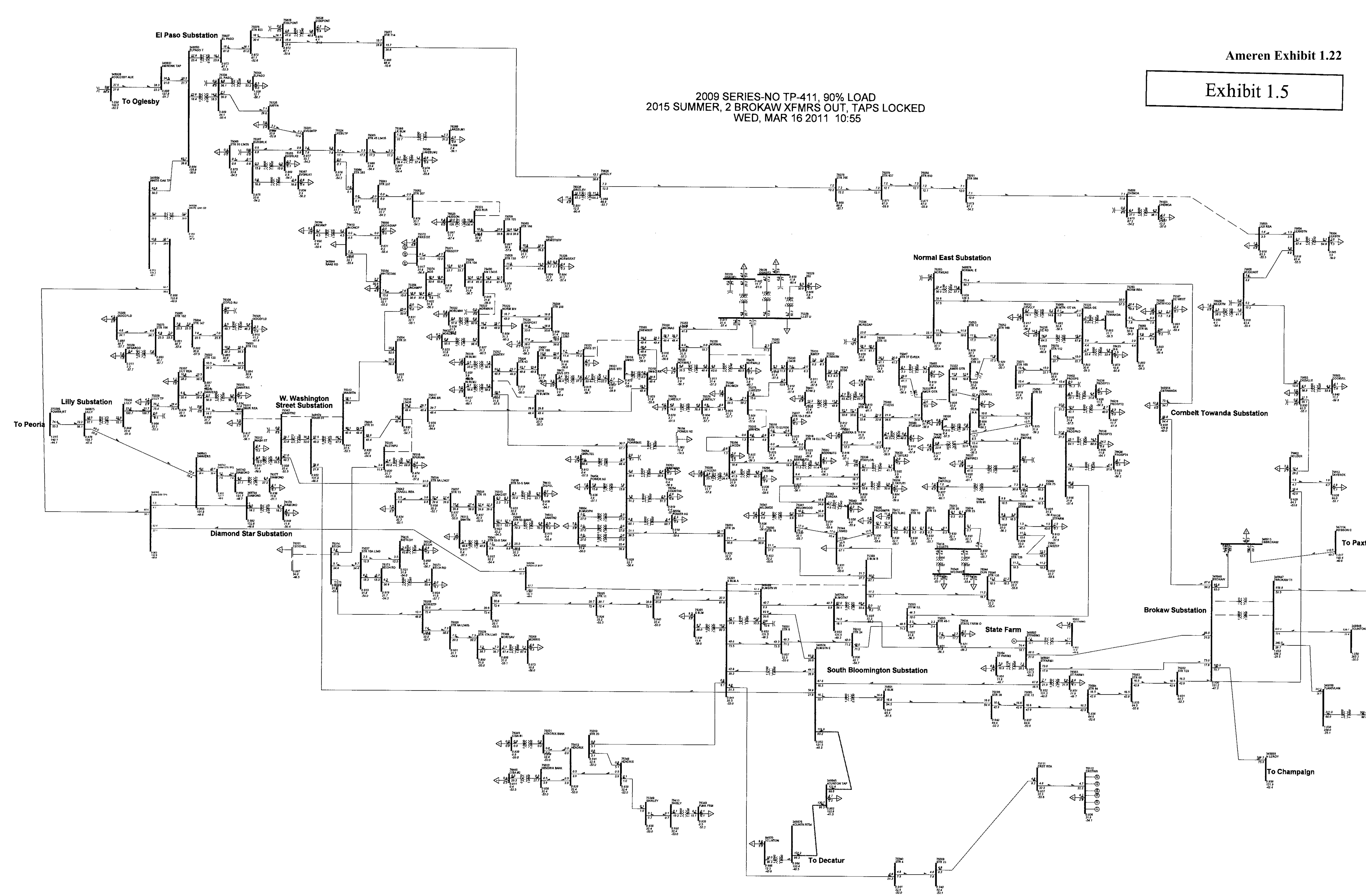
2009 SERIES-NO TP-411, 1562 AND 1596 OUT, TAPS LOCKED
2015 SUMMER, 85% PEAK
WED, MAR 16 2011 10:49



Ameren Exhibit 1.22

Exhibit 1.5

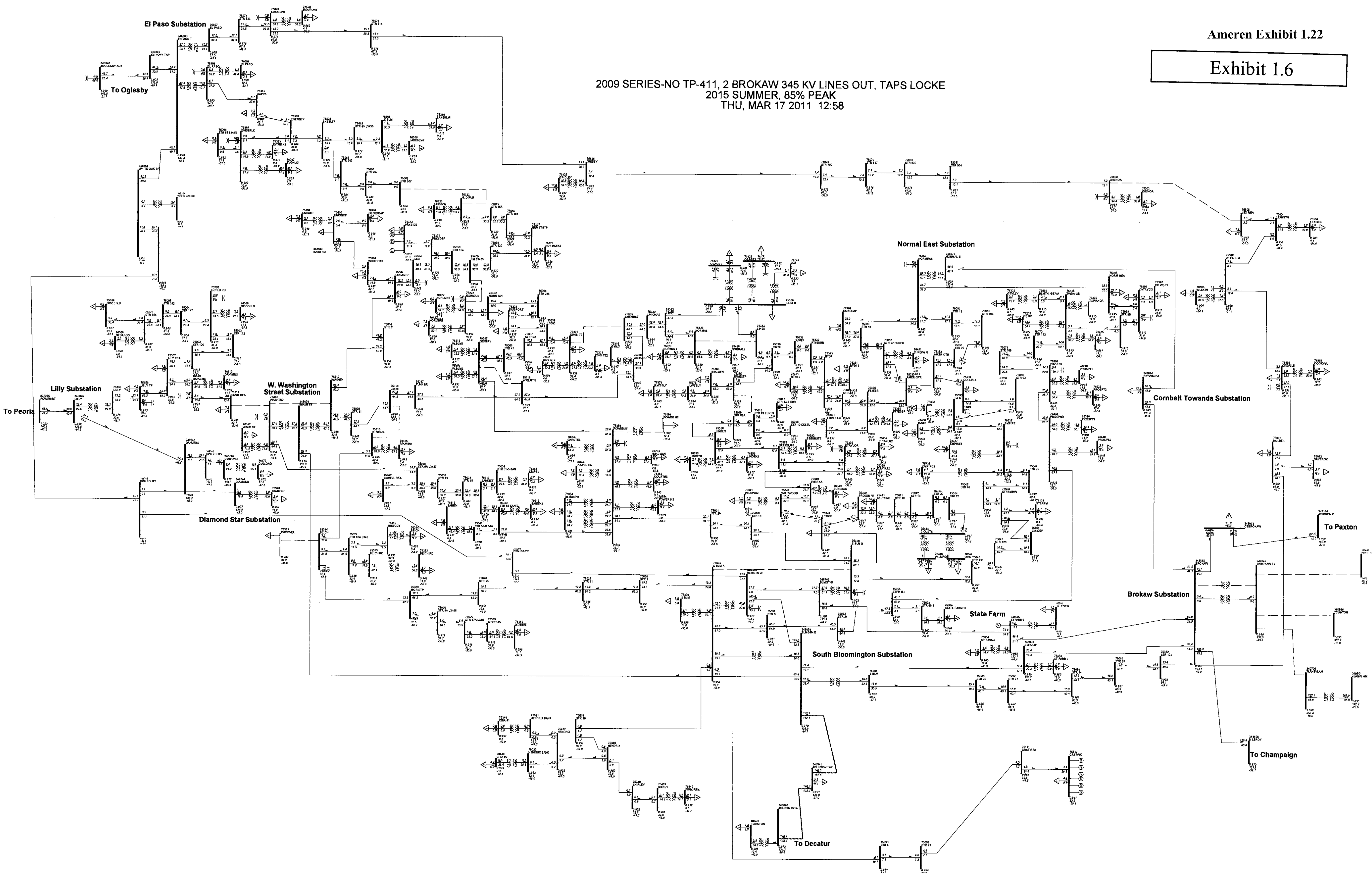
2009 SERIES-NO TP-411, 90% LOAD
2015 SUMMER, 2 BROKAW XFMRS OUT, TAPS LOCKED
WED, MAR 16 2011 10:55



Ameren Exhibit 1.22

Exhibit 1.6

2009 SERIES-NO TP-411, 2 BROKAW 345 KV LINES OUT, TAPS LOCKE
2015 SUMMER, 85% PEAK
THU, MAR 17 2011 12:58



Ameren Exhibit 1.22

Alternatives for Bloomington Area Transmission Supply

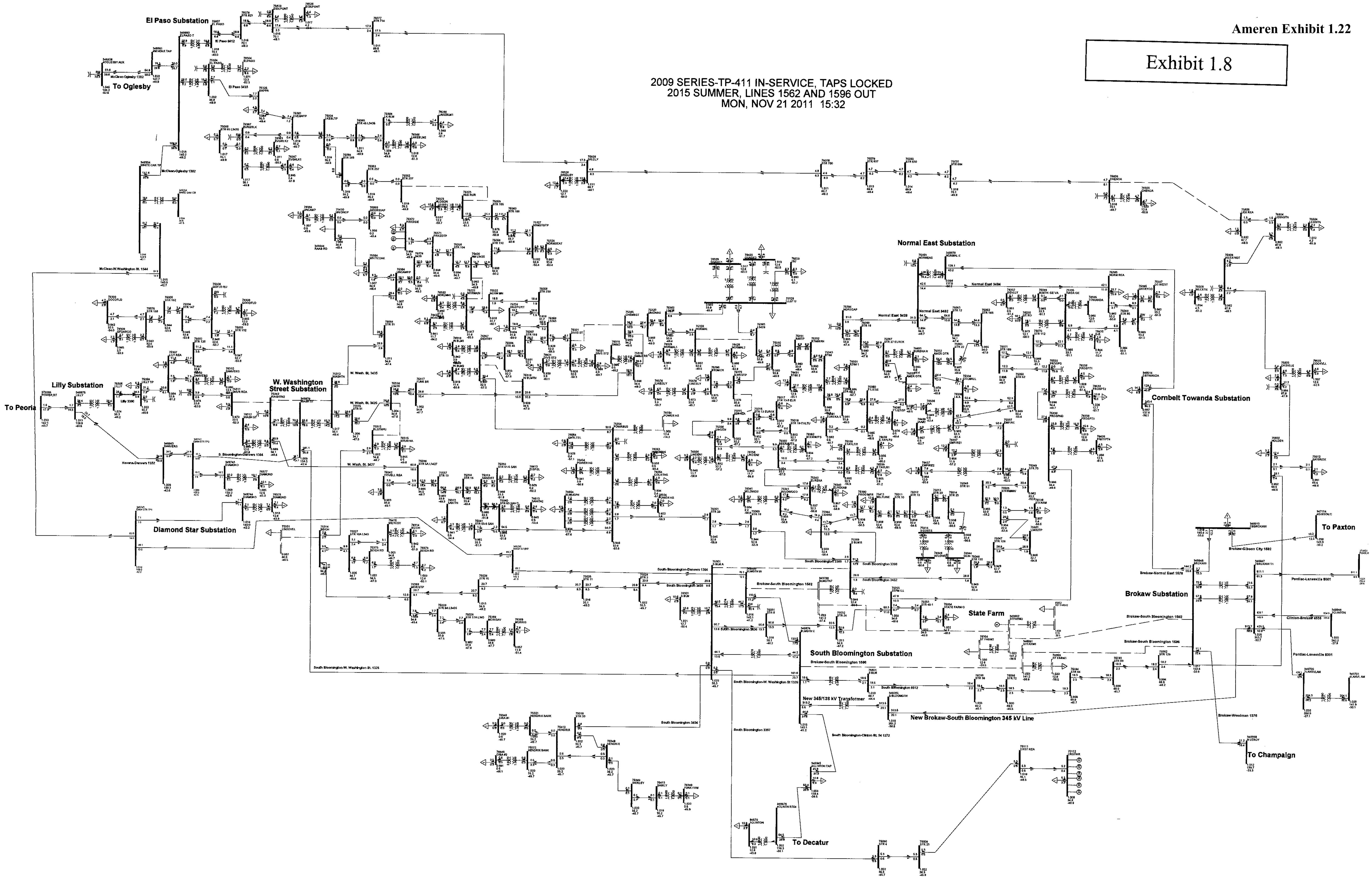
Exhibit 1.7

Description of Alternative	Location	Estimated Cost	Advantages	Disadvantages	Any Planning Criteria Non-compliance?
Construct 345 kV transmission line to South Bloomington Substation from Brokaw Substation (7 miles new 345 kV transmission line). Modify tap to Commonwealth Edison 345 kV line at Brokaw Substation to an 'in-out' arrangement to maintain source for double 345 kV line outage contingency at Brokaw Substation.	Alternative Selected	345 kV Line: $20,100,000 Brokaw Substation: $8,170,000 South Bloomington Substation $6,800,000 Total: $35,070,000	Alternative addresses all system needs	None	No
Construct 345 kV transmission line to Washington Street Substation from Brokaw Substation (14 miles new 345 kV transmission line). Modify tap to Commonwealth Edison 345 kV line at Brokaw Substation to an 'in-out' arrangement to maintain source for double 345 kV line outage contingency at Brokaw Substation.	Washington Street Substation - located southwest of Bloomington, 3.3 miles from the South Bloomington Substation; 40 deg, 28'56.49" N, 89 deg, 12' 39.44" W	345 kV Line: $35,040,000 Washington Street and Brokaw: $10,974,000 Total: $46,014,000	Alternative addresses all system needs	Increase in transmission line mileage and cost compared to Brokaw-South Bloomington alternative	No
Construct 345 kV supply to Bloomington area eastward from Peoria area to Washington Street Substation (30 miles new 345 kV transmission line).	Tazewell Substation, near Peoria - 40 deg, 33'43.83" N, 89 deg, 32'15.28"W	345 kV Line: $70,500,000 Washington Street: $4,270,000 Tazewell: $2,000,000 Total: $76,770,000	Alternative addresses all system needs	Increase in transmission line mileage and cost compared to Brokaw-South Bloomington alternative	No
Construct 345 kV line southward to Washington Street Substation from Commonwealth Edison's Powerton 345 kV transmission line located about 8.5 miles north of tap to El Paso Substation (26 miles new 345 kV transmission line) .	Tap Commonwealth Edision 345 kV line near location where the line crosses Hwy. 51 (40 deg, 51' 31.44"N, 89 deg, 02' 21.03" W)	345 kV Line: $61,100,000 Washington Street: $4,270,000 Total: $65,370,000	Alternative addresses all system needs	Increase in transmission line mileage and cost compared to Brokaw-South Bloomington alternative	No
Construct 345 kV line westward from Commonwealth Edison's Blue Mound Substation , located approximately 1 mile east of Brokaw Substation, to Washington Street Substation (15 miles of new 345 kV transmission line).	Commonwealth Edison Blue Mound Substation is located approximately 1 mile east of the AmerenIP Brokaw Substation	345 kV Line: $36,990,000 Washington Street: $4,270,000 Blue Mound: $2,750,000 Total: $44,010,000	Alternative addresses all system needs	Increase in transmission line mileage and cost compared to Brokaw-South Bloomington alternative	No

Ameren Exhibit 1.22

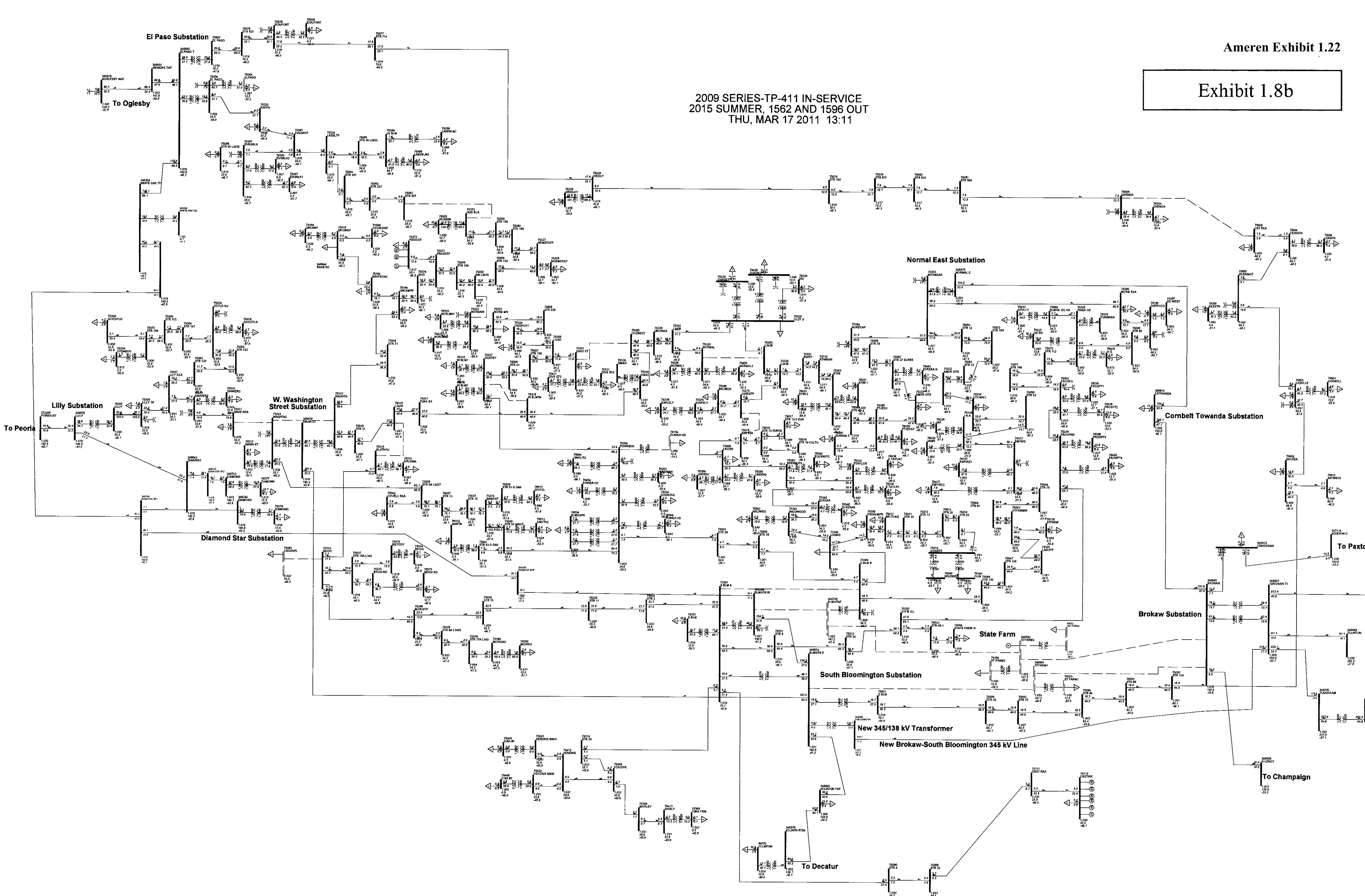
Exhibit 1.8

2009 SERIES-TP-411 IN-SERVICE, TAPS LOCKED
2015 SUMMER, LINES 1562 AND 1596 OUT
MON, NOV 21 2011 15:32



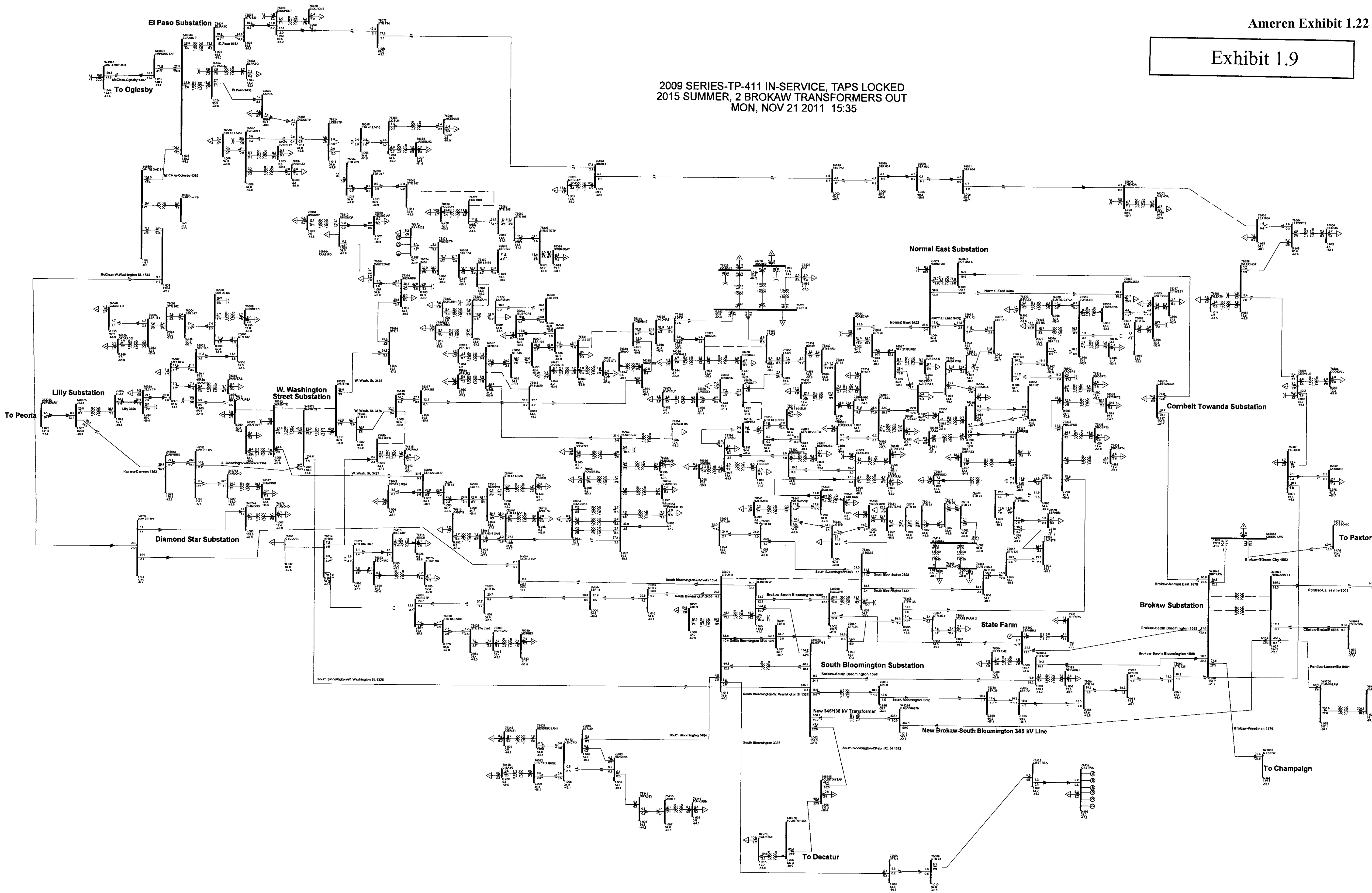
Ameren Exhibit 1.22

Exhibit 1.8b



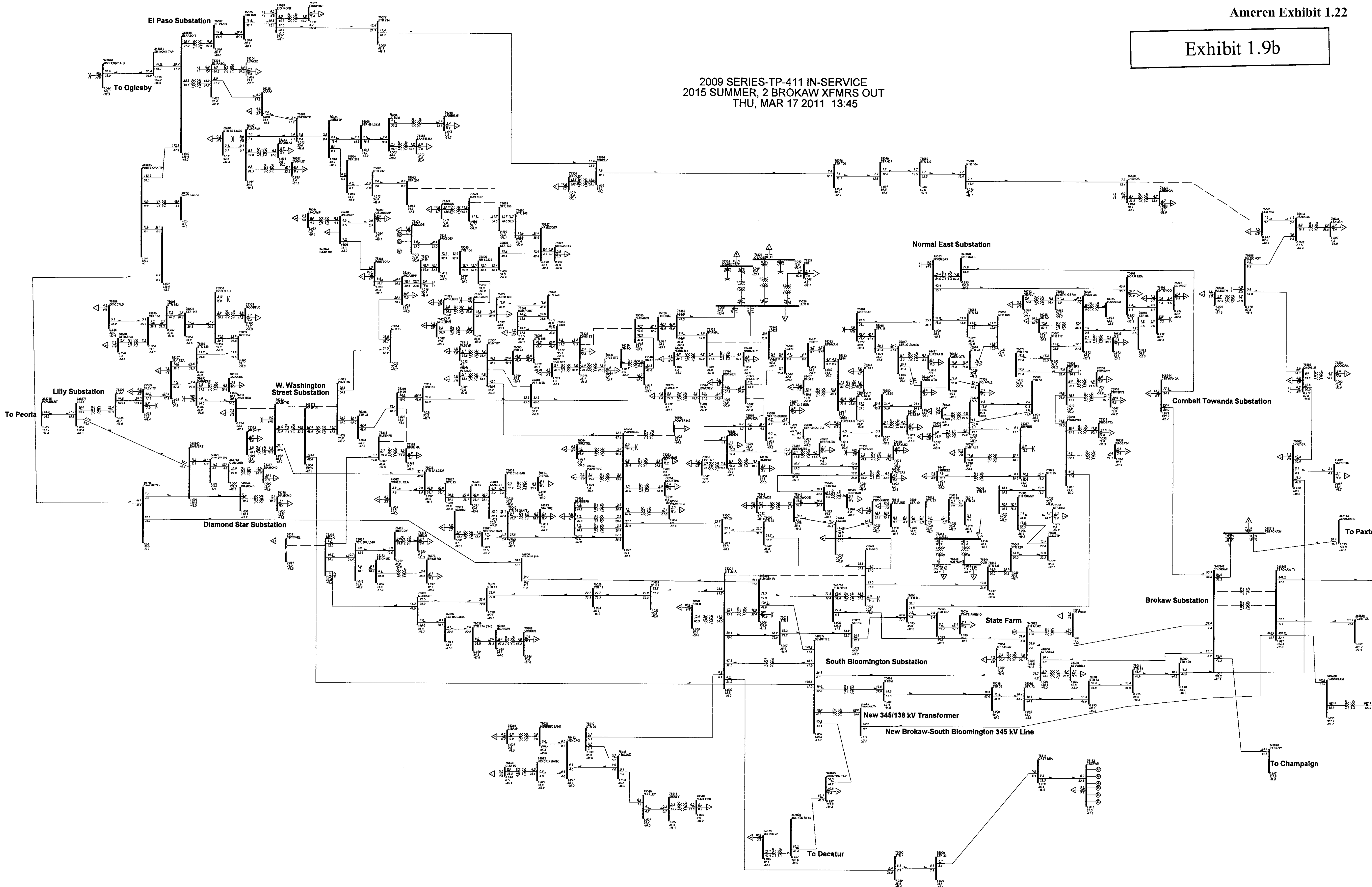
Ameren Exhibit 1.22

Exhibit 1.9



Ameren Exhibit 1.22

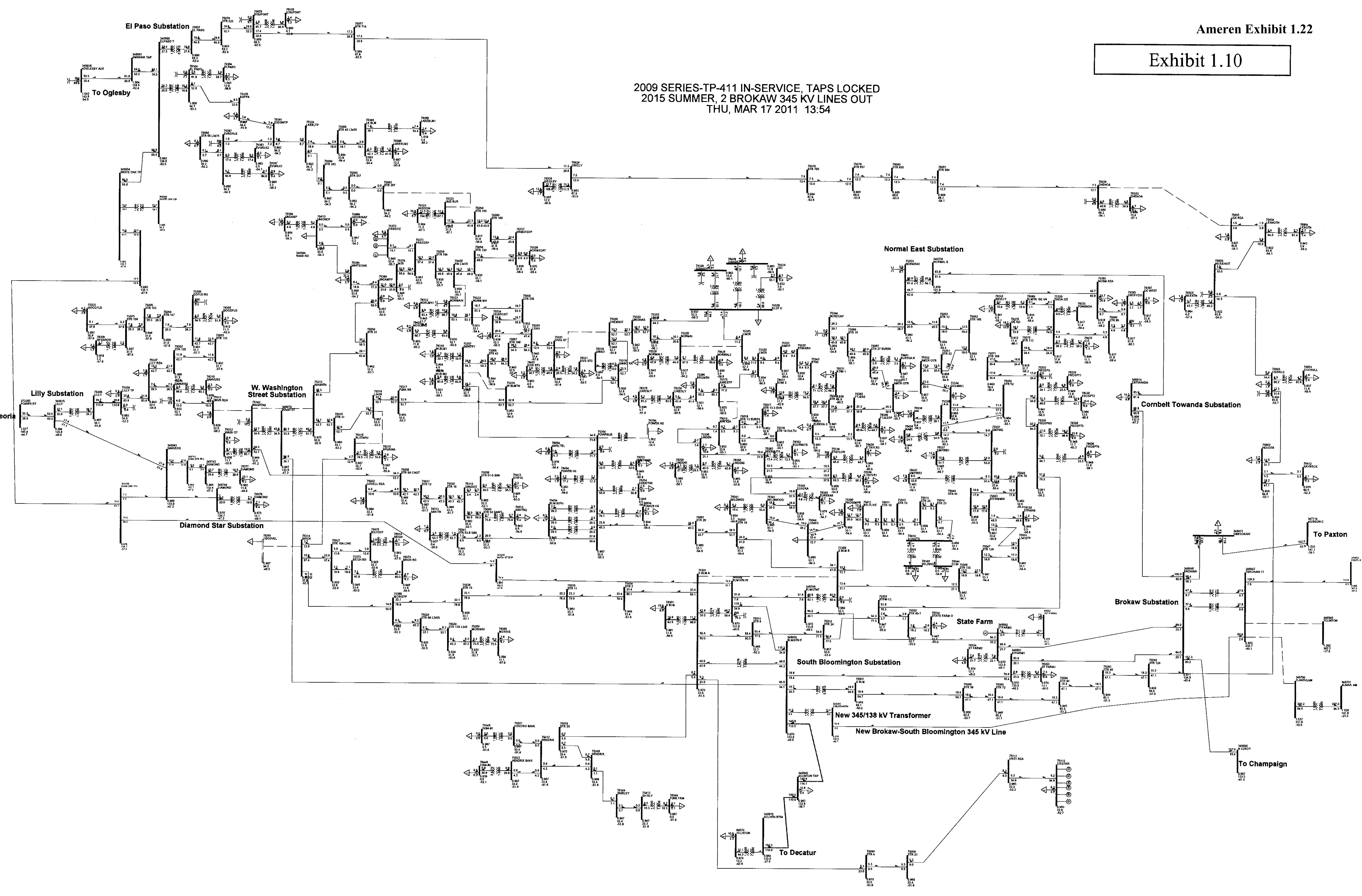
Exhibit 1.9b



Ameren Exhibit 1.22

Exhibit 1.10

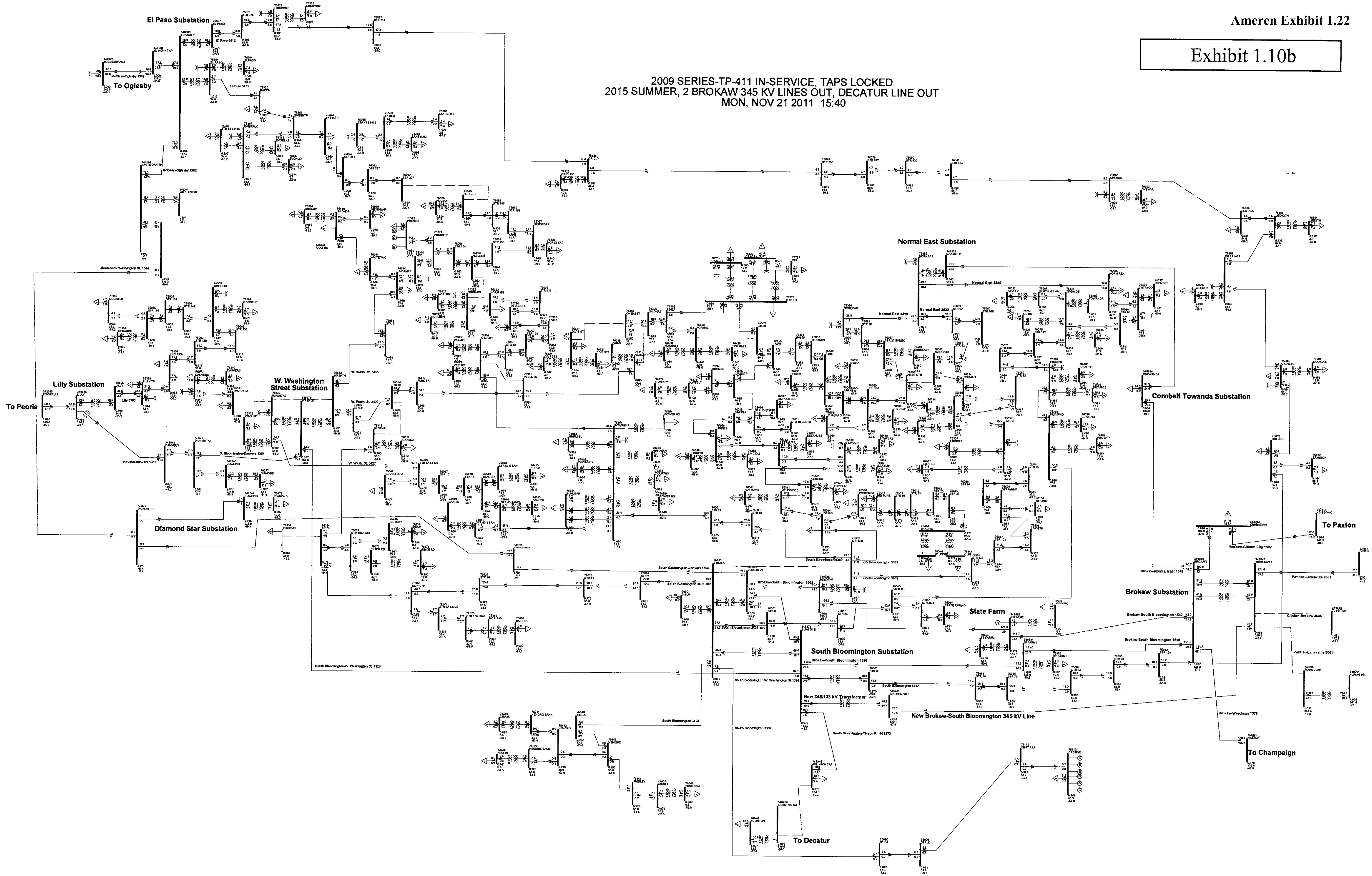
2009 SERIES-TP-411 IN-SERVICE, TAPS LOCKED
2015 SUMMER, 2 BROKAW 345 KV LINES OUT
THU, MAR 17 2011 13:54



Ameren Exhibit 1.22

Exhibit 1.10b

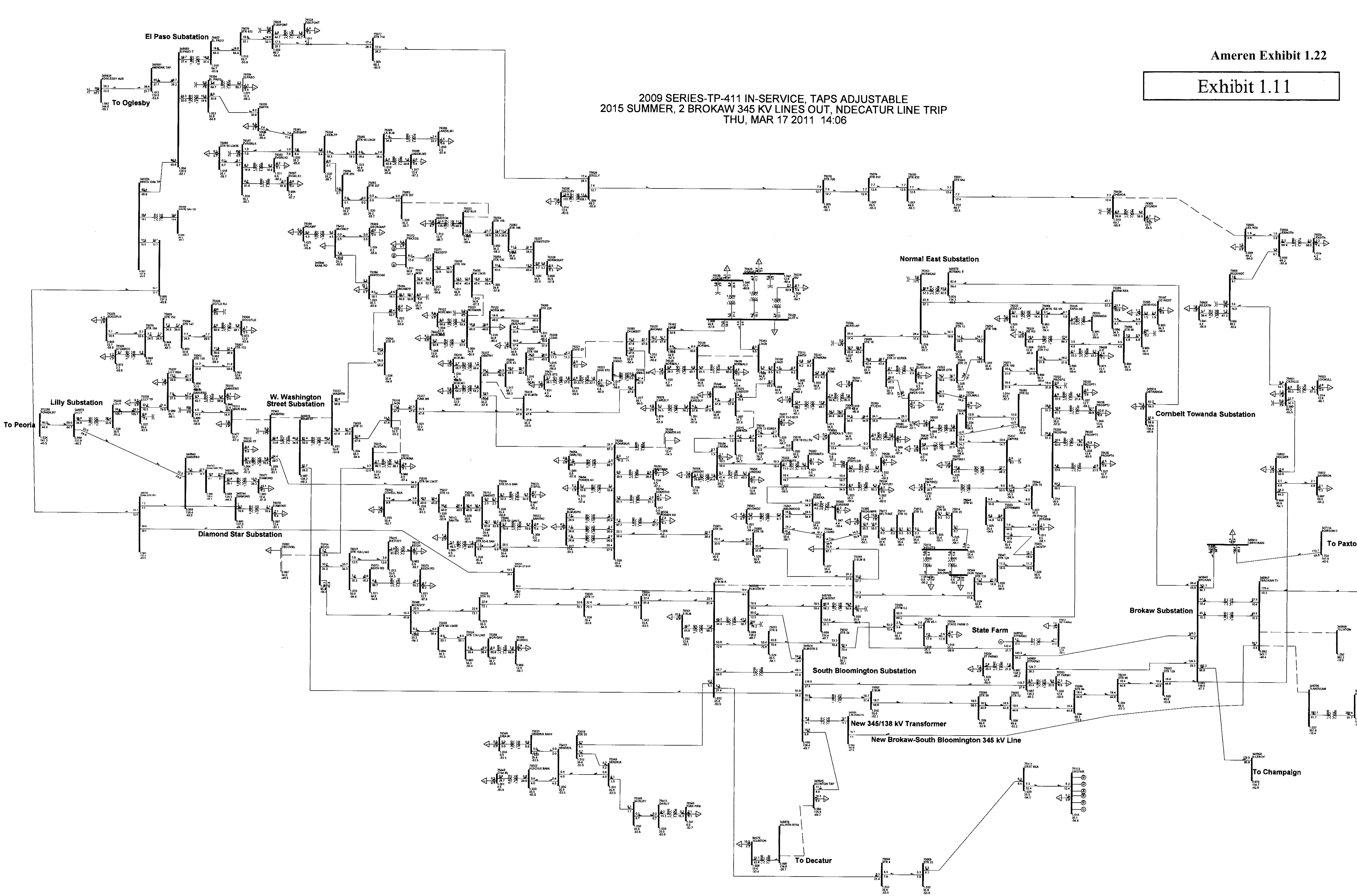
2009 SERIES-TP-411 IN-SERVICE, TAPS LOCKED
2015 SUMMER, 2 BROKAW 345 KV LINES OUT, DECATUR LINE OUT
MON, NOV 21 2011 15:40



Ameren Exhibit 1.22

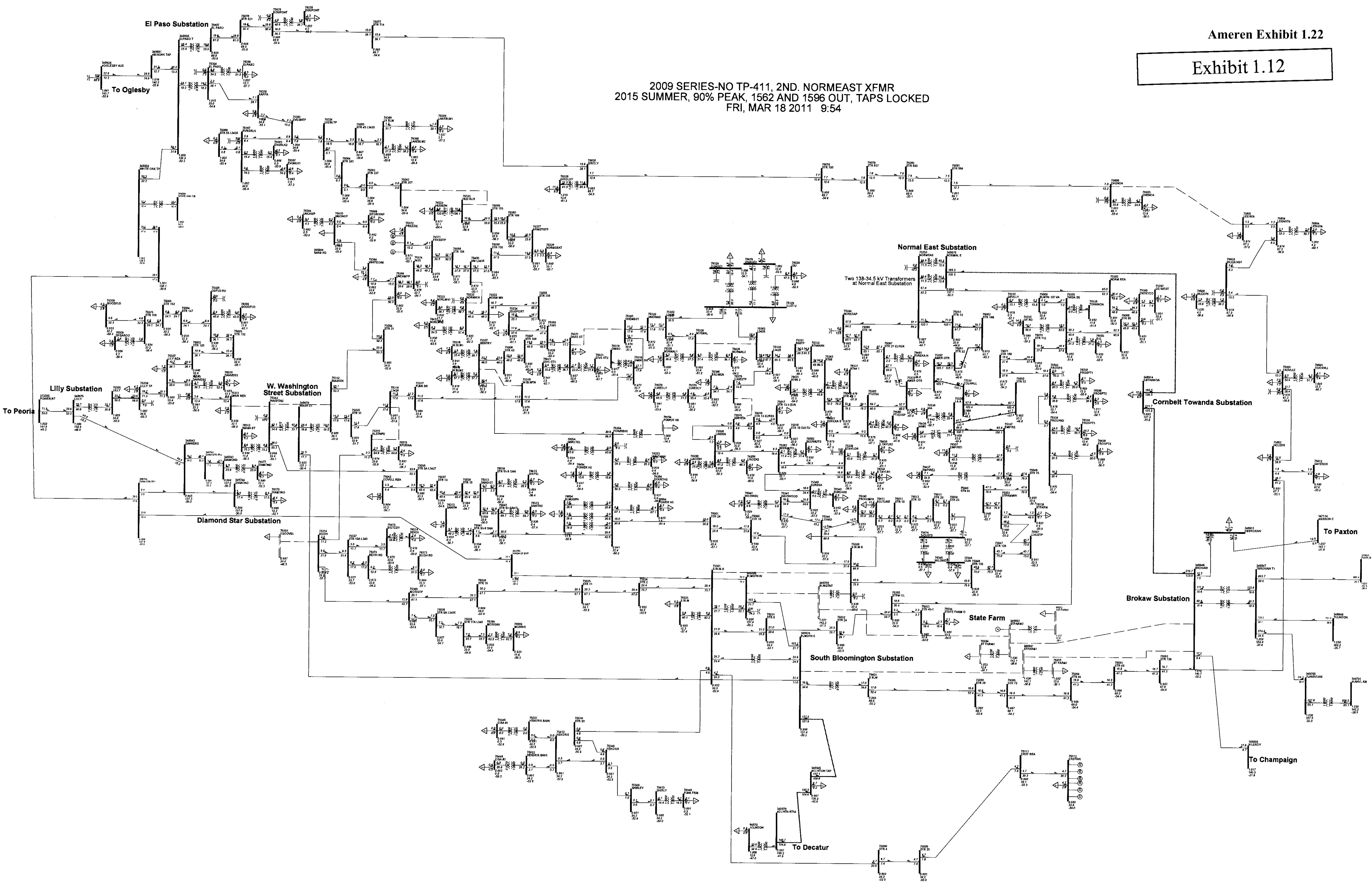
Exhibit 1.11

2009 SERIES-TP-411 IN-SERVICE, TAPS ADJUSTABLE
2015 SUMMER, 2 BROKAW 345 KV LINES OUT, NDECATUR LINE TRIP
THU, MAR 17 2011 14:06



Ameren Exhibit 1.22

Exhibit 1.12



Correspondence Between Ameren and MISO

Date	Description
02/05/2008	Email with attachment - from Curtis E. Stepanek (Ameren) to Scott D. Goodwin (MISO) - Additional presentation slide to add to Central SPM Meeting covering South Bloomington 345/138 kV Transformer Addition and Brokaw-South Bloomington 345 kV Line Addition
02/15/2008	Email with attachment - from John E. Sullivan (Ameren) to Tom White (MISO) with updated MISO project list.
04/29/2008	Email - from Curtis E. Stepanek (Ameren) to Michael Dantzler (MISO), with brief discussion on cost sharing for a number of projects, one of which is the Brokaw-South Bloomington 345 kV line project.
05/29/2008	Slide presentation for MISO 5/29/2008 Central SPM Meeting. Relevant slides which discuss the Brokaw-South Bloomington project are on pages 6-8.
06/06/2008	List of transmission projects within the MISO footprint, of which Project 2069, the South Bloomington 345/138 kV Substation and Brokaw-South Bloomington 345 kV Line, is listed on the first page.
07/16/2008	Email - from Curtis E. Stepanek (Ameren) to Michael Dantzler (MISO), with comments on justifications for a number of transmission projects, one of which is the Brokaw-South Bloomington project (MISO Project ID 2069). Comments centered on the presence of additional generating capacity present in the powerflow model utilized by MISO in their study work, and possible effects on nearby 138 kV line loading following completion fo the Brokaw-South Bloomington 345 kV line project.
08/06/2008	Cost allocation information for the Brokaw-South Bloomington Project. Relevant slides are on pages 73-77.
09/22/2009	Email with attachment - from Curtis E. stepanek (Ameren) to Tom White (MISO) with requested updates to the MISO Project List, due 9/25/2009
06/22/2010	Email with attachment - from Curtis E. stepanek (Ameren) to Tom White (MISO) with requested updates to the MISO Project List, due 6/25/2010
09/15/2011	Email with attachment - from John Sullivan (Ameren) to Tomas White and David K. Duebner (MISO), with latest updates regarding the MISO Project List. The Brokaw-South Bloomington project (MISO Project ID 2069) is included in this update, with in-service date updated to 6/1/2015.
09/20/2011	Email with attachment - from John Sullivan (Ameren) to Tomas White and David K. Duebner (MISO), with latest updates regarding the MISO Project List. The Brokaw-South Bloomington project (MISO Project ID 2069) is included in this update, with in-service date updated to 6/1/2015. Some additional updating to the project entries as requested by MISO are included in this listing.
09/21/2011	Email with attachment - from Tom White (MISO) to John E Sullivan (Ameren) with updated MISO project list, with MISO Project and Facility numbers assigned.