



***Feasibility Study
PID 254
251MW Plant***

Prepared by:

***Southwest Power Pool
Independent Coordinator of Transmission
415 N. McKinley, Suite 140
Little Rock, AR 72205***

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Energy Resource Interconnection Service

1. Introduction

This Energy Resource Interconnection Service (ERIS) is based on the Customer's request for 251MW interconnection on Entergy's transmission system at the Wells 500kV substation. The proposed commercial operation date of the project is January 6, 2013. The objective of this study is to assess the reliability impact of the new facility on the Entergy transmission system as well as its effects on the system's existing short circuit current capability. It is also intended to determine whether the transmission system meets standards established by NERC Reliability Standards and Entergy's planning guidelines when the plant is connected to Entergy's transmission system. If not, transmission improvements will be identified.

The Feasibility Study process required a load flow analysis to determine if the existing transmission lines are adequate to handle the full output from the plant for simulated transfers to adjacent control areas. A short circuit analysis is performed to determine if the generation would cause the available fault current to surpass the fault duty of existing equipment within the Entergy transmission system.

This ERIS Feasibility Study was based on information provided by the Customer and assumptions made by Entergy's Independent Coordinator of Transmission (ICT) planning group and Entergy's Transmission Technical System Planning group. All supplied information and assumptions are documented in this report. If the actual equipment installed is different from the supplied information or the assumptions made, the results outlined in this report are subject to change.

The load flow results from the ERIS study are for information only. ERIS does not in and of itself convey any transmission service.

CLECO has been identified as an affected system. The customer will need to satisfy the requirements deemed necessary by CLECO.

2. Short Circuit Analysis/Breaker Rating Analysis

2.1 Model Information

The short circuit analysis was performed on the Entergy system short circuit model using ASPEN software. This model includes all generators interconnected to the Entergy system or interconnected to an adjacent system and having an impact on this interconnection request, IPP's with signed IOAs, and approved future transmission projects on the Entergy transmission system.

2.2 Short Circuit Analysis

The method used to determine if any short circuit problems would be caused by the addition of the PID 254 generation is as follows:

Three phase and single phase to ground faults were simulated on the Entergy base case short circuit model and the worst case short circuit level was determined at each station. The PID 254 generator was then modeled in the base case to generate a revised short circuit model. The base case short circuit results were then compared with the results from the revised model to identify any breakers that were under-rated as a result of additional short circuit contribution from PID 254

generation. Any breakers identified to be upgraded through this comparison are mandatory upgrades.

2.3 Analysis Results

The results of the short circuit analysis indicated that the additional generation due to PID 254 generation caused no increase in short circuit current such that they exceeded the fault interrupting capability of the high voltage circuit breakers within the vicinity of the PID 254 plant **with and without priors**. Priors included are: 221, 231, 238, 240, 244, 247, 250, 251, 252, and 253.

2.4 Problem Resolution

As a result of the short circuit analysis findings, no resolution was required.

3. Load Flow Analysis

3.1 Model Information

The load flow analysis was performed based on the projected 2014 summer peak load flow model. Approved future transmission projects in the 2011-2013 ICT Base Plan were used in the models for scenarios three and four. The loads were scaled based on the forecasted loads for the year. All firm power transactions between Entergy and its neighboring control areas were modeled for the year 2014 excluding short-term firm transactions on the same transmission interface. An economic dispatch was carried out on Entergy generating units after the scaling of load and modeling of transactions. The proposed 251MW generation and the associated facilities were then modeled in the case to build a revised case for the load flow analysis. Transfers were simulated between thirteen (13) control areas and Entergy using the requesting generator as the source and adjacent control area as sink

This study considered the following four scenarios:

Scenario No.	Approved Future Transmission Projects	Pending Transmission Service & Study Requests
1	Not Included	Not Included
2	Not Included	Included
3	Included	Not Included
4	Included	Included

The generator step-up transformers, generators, and interconnecting lines were modeled according to the information provided by the customer.

3.2 Load Flow Analysis

3.2.1 Load Flow Analysis:

With the above assumptions implemented, the First Contingency Incremental Transfer Capability (FCITC) values are calculated. The FCITC depends on various factors – the system load, generation dispatch, scheduled maintenance of equipment, and the configuration of the interconnected system and the power flows in effect among the interconnected systems. The FCITC is also dependent on previously confirmed firm reservations on the interface.

3.2.2 Performance Criteria

The criteria for overload violations are as follows:

A) With All Lines in Service

- The MVA flow in any branch should not exceed Rate A (normal rating).

B) Under Contingencies

- The MVA flow through any facility should not exceed Rate A.

3.2.3 Power Factor Consideration / Criteria

Entergy, consistent with the FERC Large Generator Interconnection Procedures (LGIP) requires the customer to be capable of supplying at least 0.33 MVAR (*i.e.*, 0.95 lagging power factor) and absorbing at least 0.33 MVAR (*i.e.*, 0.95 leading power factor) for every MW of power injected into the grid. In the event that, under normal operating conditions, the customer facility does not meet the prescribed power factor requirements at the point of interconnection, the customer shall take necessary steps, such as the installation of reactive power compensating devices, to achieve the desired power factor.

3.3 Analysis Results

Summary of the analysis results are documented in following table for each scenario.

Table 3.3.1: Summary of Results for PID 254 – ERIS Load Flow Study

Interface		Summer Peak Case Used	FCITC Available for Scenario 1	FCITC Available for Scenario 2	FCITC Available for Scenario 3	FCITC Available for Scenario 4
AECI	Associated Electric Cooperative, Inc.	2014	-957	-2943	-621	-1069
AEPW	American Electric Power West	2014	-1153	-9012	-339	-7598
AMRN	Ameren Transmission	2014	-965	-2909	-662	130
CLEC	CLECO	2014	223	-10063	250	-8644
EES	Entergy	2014	250	-6948	-2502	-4879
EMDE	Empire District Electric Co	2014	-1001	-3216	-543	-996
LAFA	Lafayette Utilities System	2014	-374	-1354	250	250
LAGN	Louisiana Generating, LLC	2014	250	-939	250	250
LEPA	Louisiana Energy & Power Authority	2014	-98	-980	-1383	-1396
OKGE	Oklahoma Gas & Electric Company	2014	-1048	-9603	-475	-8075
SMEPA	South Mississippi Electric Power Assoc.	2014	-931	-1647	-1098	-1472
SOCO	Southern Company	2014	-727	-3301	-27	250
SPA	Southwest Power Administration	2014	-1005	-3155	-574	-1014
TVA	Tennessee Valley Authority	2014	-1170	-1502	-795	160

TABLE 3.3.2: DETAILS OF SCENARIO 1 RESULTS: (WITHOUT FUTURE PROJECTS AND WITHOUT PENDING TRANSMISSION SERVICE & STUDY REQUEST)

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Bonin - Cecelia 138kV	17,250,000									X					
Carroll 230/138kV transformer (CLECO)	9,200,000	X	X	X			X				X		X	X	X
Cedar Hill - Tamina 138kV	Included in 2011 ICT Base Plan		X												
Champagne - Plaisance (CLECO) 138kV	16,250,000							X							
Conroe 1 - Conroe 2 138kV	TBD		X												
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X							
East Leesville - Rodemacher 230kV (CLECO)	66,500,000		X				X				X			X	
French Settlement - Sorrento 230kV	14,000,000	X	X	X			X				X	X	X	X	X
Greenwood - Terrebonne 115kV	12,500,000				X			X							
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X							
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	X	X			X				X			X	X
International Paper - Wallake 138kV (CLECO)	22,500,000	X	X	X			X				X			X	X
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
North Crowley - Scott1 138kV	21,250,000							X							
Plantation - Cedar Hill 138kV	3,750,000		X												
Pleasant Hill 500/161kV transformer	Included in 2011 ICT Base Plan						X							X	
Raceland - Coteau 115kV	15,325,000									X					
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Semere - Scott2 138kV	20,000,000							X		X					
Toledo - Leesville (CLECO) 138kV	28,750,000	X	X	X			X				X		X	X	X
Toledo - VP Tap 138kV	Included in 2011 ICT Base Plan	X	X	X			X				X	X	X	X	X

TABLE 3.3.3: DETAILS OF SCENARIO 2 RESULTS: (WITHOUT FUTURE PROJECTS AND WITH PENDING TRANSMISSION SERVICE & STUDY REQUEST)

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Addis - Big Cajun 1 230kV	Included in 2011 ICT Base Plan									X					
Ameila Bulk - Bevil 230kV	10,500,000		X			X									
Amelia Bulk - Helbig 230kV	17,500,000		X			X					X				
Bevil - Cypress 230kV	22,750,000		X			X									
Big Three - Carlyss 230kV	3,500,000	X	X	X	X	X	X		X		X	X	X	X	X
Big Three - Sabine 230kV	64,750,000		X			X					X				
Bonin - Cecelia 138kV	17,250,000									X					
Carlyss - Roy S. Nelson 230kV	28,000,000					X									
Cedar Hill - Tamina 138kV	Included in 2011 ICT Base Plan		X												
Champagne - Plaisance (CLECO) 138kV	16,250,000							X							
Columbus MS (TVA) - Weyerhouser Tap (TVA) 161kV	13,750,000											X			
Coly - Vignes 230kV - Supplemental Upgrade	Committed to by others					X				X		X			
Conroe Bulk2 - Plantation 138kV	3,750,000		X												
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X							
Cypress 500/138kV transformer 1	18,000,000		X		X	X					X				
Cypress 500/230kV transformer	21,000,000		X		X	X					X				
East Leesville - Rodemacher 230kV (CLECO)	66,500,000		X				X				X			X	

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
French Settlement - Sorrento 230kV	14,000,000	X		X			X				X	X	X	X	X
Habetz - Richard 138kV	Included in 2011 ICT Base Plan				X			X		X					
Hartburg - Inland Orange 230kV	7,000,000		X		X	X									
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others		X		X	X									
Hartburg 500/230kV transformer 1	21,000,000		X		X	X									
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan		X		X	X									
Inland - McLewis 230kV	Included in 2011 ICT Base Plan		X		X	X									
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others		X		X	X									
International Paper - Mansfield 138kV (CLECO)	23,750,000		X				X				X			X	
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
Jackson Miami - Rex Brown 115kV	Included in 2011 ICT Base Plan											X			
Judice - Scott1 138kV	10,000,000									X					
McAdams 500/230kV transformer 1	Included in 2011 ICT Base Plan	X	X	X			X				X		X	X	
North Crowley - Scott1 138kV	21,250,000				X			X		X					
Philadelphia MS (TVA) - South Philadelphia 161kV	1,250,000											X			
Plantation - Cedar Hill 138kV	3,750,000		X												

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Port Hudson 230/138 transformer 1	9,200,000									X					
Port Hudson 230/138 transformer 2	9,200,000									X					
PPG - Verdine 230kV	3,500,000					X									
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			
Richard - Scott1 138kV	Included in 2011 ICT Base Plan							X							
Roy S. Nelson - Verdine 230kV	5,250,000					X									
Semere - Scott2 138kV	20,000,000							X		X					

TABLE 3.3.4: DETAILS OF SCENARIO 3 RESULTS: (WITH FUTURE PROJECTS AND WITHOUT PENDING TRANSMISSION SERVICE & STUDY REQUEST)

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Carroll 230/138kV transformer (CLECO)	9,200,000	X	X	X			X				X		X	X	X
Conroe 1 - Conroe 2 138kV	TBD		X												
East Leesville - Rodemacher 230kV (CLECO)	66,500,000	X	X				X				X			X	
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	X	X			X				X			X	X
International Paper - Wallake 138kV (CLECO)	22,500,000	X	X	X			X				X			X	X
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
Jackson Miami - Rex Brown 115kV	Included in 2011 ICT Base Plan											X			
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Willow Glen - Evergreen 230kV ckt 2	Included in 2011 ICT Base Plan						X			X					

TABLE 3.3.5: DETAILS OF SCENARIO 4 RESULTS: (WITH FUTURE PROJECTS AND WITH PENDING TRANSMISSION SERVICE & STUDY REQUEST)

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAFA	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Ameila Bulk - Bevil 230kV	10,500,000					X									
Amelia Bulk - Helbig 230kV	17,500,000		X			X					X				
Bevil - Cypress 230kV	22,750,000					X									
Big Three - Carlyss 230kV	3,500,000		X			X					X				
Big Three - Sabine 230kV	64,750,000		X			X					X				
Bonin - Cecelia 138kV	17,250,000									X					
Carlyss - Roy S. Nelson 230kV	28,000,000					X									
Columbus MS (TVA) - Weyerhouser Tap (TVA) 161kV	13,750,000											X			
Conroe Bulk2 - Plantation 138kV	3,750,000		X												
Cypress 500/138kV transformer 1	18,000,000		X		X	X					X				
Cypress 500/230kV transformer	21,000,000		X		X	X					X				
East Leesville - Rodemacher 230kV (CLECO)	66,500,000	X	X					X			X			X	
Fancy Point - Port Hudson 230kV ckt 1	19,250,000									X					
Fancy Point - Port Hudson 230kV ckt 2	19,250,000									X					
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
Hartburg - Inland Orange 230kV	7,000,000		X		X	X									

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others		X		X	X									
Hartburg 500/230kV transformer 1	21,000,000		X		X	X									
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan		X		X	X									
Inland - McLewis 230kV	Included in 2011 ICT Base Plan		X		X	X									
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others		X		X	X									
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	X	X			X				X			X	X
Jackson Miami - Jackson Monument Street 115kV	3,500,000											X			
Jackson Miami - Rex Brown 115kV	Included in 2011 ICT Base Plan											X			
Philadelphia MS (TVA) - South Philadelphia 161kV	1,250,000											X			
Plantation - Cedar Hill 138kV	3,750,000		X												
Port Hudson 230/138 transformer 1	9,200,000									X					
Port Hudson 230/138 transformer 2	9,200,000									X					
PPG - Verdine 230kV	3,500,000					X									
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			
Roy S. Nelson - Verdine 230kV	5,250,000					X									

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Willow Glen - Evergreen 230kV ckt 2	Included in 2011 ICT Base Plan					X				X					

3.3.1 DETAILS OF SCENARIO 1 – 2014

AECI

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-957
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-957
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-903
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-382
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-316
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-177
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-148
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-36
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	99
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	122
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	204

AEPW

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1153
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1153
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-476
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-258
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-205
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-173
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-167
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-83
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-25
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	29
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	70
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	85
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	180
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	195
Toledo - Leesville (CLECO) 138kV	Colfax - Montgomery 230kV	202
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	230

AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-965
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-915
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-915
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-402
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-338
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-172
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-144
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-38
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	104
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	127
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	201

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	223

CLECO

Limiting Element	Contingency Element	ATC
Greenwood - Terrebonne 115kV	Richard - Wells 500kV	223

EES

Limiting Element	Contingency Element	ATC
NONE	NONE	250

EMDE

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1001
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1001
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-783
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-351
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-274
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-183
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-154
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-106
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-33
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	92
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	112
Pleasant Hill 500/161kV transformer	ANO 500/161/22kV 3 Winding Transformer	165
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	209
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	231
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	238

Lafa

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-374
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-227
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-108
Semere - Scott2 138kV	Habetz - Richard 138kV	-92
Semere - Scott2 138kV	Greenwood - Terrebonne 115kV	-51
Semere - Scott2 138kV	Wells 500/230kV transformer	-7
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	40
North Crowley - Scott1 138kV	Habetz - Richard 138kV	53
Habetz - Richard 138kV	Wells 500/230kV transformer	87
Habetz - Richard 138kV	Greenwood - Terrebonne 115kV	104
North Crowley - Scott1 138kV	Wells 500/230kV transformer	108
Greenwood - Terrebonne 115kV	Richard - Wells 500kV	136
Habetz - Richard 138kV	Acadian - Bonin 230kV (Lafa)	139
North Crowley - Scott1 138kV	Greenwood - Terrebonne 115kV	160
North Crowley - Scott1 138kV	Richard - Scott1 138kV	207

LAGN

Limiting Element	Contingency Element	ATC
NONE	NONE	250

LEPA

Limiting Element	Contingency Element	ATC
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-98
Semere - Scott2 138kV	Wells 500/230kV transformer	-16
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	55
Raceland - Coteau 115kV	Terrebonne 230/115kV transformer	135
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	155

OKGE

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1048
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1048
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-679
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-321
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-238
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-189
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-159
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-99
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-31
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	85
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	104
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	214
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	215
Toledo - Leesville (CLECO) 138kV	Colfax - Montgomery 230kV	244
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	247

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams 500/230kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Eldorado EHV - Sterlington 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Magee (SMEPA) - Creek 161kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Colum (SMEPA) - SW Lonestar (SMEPA) 161kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Pelahatchie - Rankin 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	SilverCreekTie(SMEPA) - Prentiss (SMEPA) 161kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Mosel (SMEPA) - Creek (SMEPA) 161kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-931
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-393
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-393
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-203
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-179
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-179
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-104
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-88
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-62
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-38
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	4
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	44
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	72
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	116
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	133
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	167
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	210

SOCO

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-727
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-727
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-514
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-153
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-128
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-47
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	130
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	159
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	194
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	198

SPA

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1005
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1005
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-831
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-360
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-291

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-182
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-153
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-109
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-34
Pleasant Hill 500/161kV transformer	ANO 500/161/22kV 3 Winding Transformer	83
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	94
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	115
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	208
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	235
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	238

TVA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-1170
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-846
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-846
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-458
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-410
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-162
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-136
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-42
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	117
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	143
French Settlement - Sorrento 230kV	Franklin - Mcknight 500kV	193
French Settlement - Sorrento 230kV	Front Street - Michoud 230kV	210

3.3.2 DETAILS OF SCENARIO 2 - 2014

AECI

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-2943
Big Three - Carlyss 230kV	Roy S. Nelson - Richard 500kV	-2243
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1425
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-961
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	221
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	221

AEPW

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-9012
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-8700
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-8614
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-8480
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-8068
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-7660
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-6169
Bevil - Cypress 230kV	Hartburg 500/230kV transformer 1	-5972
Bevil - Cypress 230kV	Hartburg - Inland Orange 230kV	-5956
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-5797
Bevil - Cypress 230kV	Inland - McLewis 230kV	-5465
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-5153
Ameila Bulk - Bevil 230kV	Hartburg 500/230kV transformer 1	-5112
Ameila Bulk - Bevil 230kV	Hartburg - Inland Orange 230kV	-5096
Bevil - Cypress 230kV	Helbig - McLewis 230kV	-5052
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-4889
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-4884
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-4767
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-4722
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-4638
Ameila Bulk - Bevil 230kV	Inland - McLewis 230kV	-4606
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-4585
Ameila Bulk - Bevil 230kV	Helbig - McLewis 230kV	-4193
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-4019
Big Three - Carlyss 230kV	Hollywood - Roy S. Nelson 138kV	-3722
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-3562
Big Three - Carlyss 230kV	Hollywood - Orange 138kV	-3452
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-2698
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-2202
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-2195
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-1978
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-1971
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-1795
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-700

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-444
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-381
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-339
Cypress 500/138kV transformer 1	Big Three - Carlyss 230kV	-94
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	-57
Cypress 500/138kV transformer 1	Big Three - Sabine 230kV	3
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	133

AMRN

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-2909
Big Three - Carlyss 230kV	Roy S. Nelson - Richard 500kV	-2333
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1446
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-994
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	211
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	211

CLECO

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-10063
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-9715
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-9619
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-9469
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-9009
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-6889
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-6752
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-6022
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-2529
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-2514
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-2506
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-2258
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-2049
North Crowley - Scott1 138kV	Wells 500/230kV transformer	31
Habetz - Richard 138kV	Wells 500/230kV transformer	41

EES

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-6948
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-6021
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-5738
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-5719
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-5681
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-5391
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-4498

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-4493
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-4402
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-4387
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-4364
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-4287
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-4252
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-4069
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-3822
Big Three - Carlyss 230kV	Hollywood - Roy S. Nelson 138kV	-3594
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-3576
Big Three - Carlyss 230kV	Hollywood - Orange 138kV	-3359
Bevil - Cypress 230kV	Hartburg 500/230kV transformer 1	-3311
Bevil - Cypress 230kV	Hartburg - Inland Orange 230kV	-3302
Bevil - Cypress 230kV	Inland - McLewis 230kV	-3055
Ameila Bulk - Bevil 230kV	Hartburg 500/230kV transformer 1	-2885
Ameila Bulk - Bevil 230kV	Hartburg - Inland Orange 230kV	-2876
Bevil - Cypress 230kV	Helbig - McLewis 230kV	-2842
Ameila Bulk - Bevil 230kV	Inland - McLewis 230kV	-2622
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-2469
Ameila Bulk - Bevil 230kV	Helbig - McLewis 230kV	-2402
Carlyss - Roy S. Nelson 230kV	Roy S. Nelson - Verdine 230kV	-2221
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-1989
Inland - McLewis 230kV	Bevil - Cypress 230kV	-1867
Inland - McLewis 230kV	Ameila Bulk - Bevil 230kV	-1669
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-1652
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-1647
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-1538
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-1491
Hartburg - Inland Orange 230kV	Bevil - Cypress 230kV	-1456
Helbig - McLewis 230kV	Bevil - Cypress 230kV	-1373
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-1358
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-1341
Carlyss - Roy S. Nelson 230kV	PPG - Verdine 230kV	-1297
Hartburg - Inland Orange 230kV	Ameila Bulk - Bevil 230kV	-1259
Helbig - McLewis 230kV	Ameila Bulk - Bevil 230kV	-1168
Inland - McLewis 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-958
Inland - McLewis 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-752
Cypress 500/138kV transformer 1	Crockett - Grimes 345kV	-389
Bevil - Cypress 230kV	Big Three - Carlyss 230kV	-387
Roy S. Nelson - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-331
PPG - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-322
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-314
Bevil - Cypress 230kV	Big Three - Sabine 230kV	-264
Cypress 500/138kV transformer 1	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-123
Cypress 500/138kV transformer 1	TenRusk (AEPW) - Crockett (AEPW) 345kV	-99
Cypress 500/138kV transformer 1	Big Three - Carlyss 230kV	-76

Limiting Element	Contingency Element	ATC
Bevil - Cypress 230kV	Cypress - Lumberton 138kV	-2
Cypress 500/138kV transformer 1	Big Three - Sabine 230kV	3
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	97
Willow Glen 500/230kV Transformer	Willow Glen - Willow Glen 2 500/138kV transformer 1	110
Bevil - Cypress 230kV	Kountze - Lumberton 138kV	126
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	129
Ameila Bulk - Bevil 230kV	Big Three - Carlyss 230kV	209
Coly - Vignes 230kV - Supplemental Upgrade	Belle Helene - Licar 230kV	238

EMDE

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-3216
Big Three - Carlyss 230kV	Roy S. Nelson - Richard 500kV	-2122
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1385
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-927
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-897
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-569
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	219
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	231
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	231

Lafa

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-1354
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-1178
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-1086
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-910
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-669
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-493
Semere - Scott2 138kV	Wells 500/230kV transformer	-93
North Crowley - Scott1 138kV	Richard - Scott1 138kV	-81
Habetz - Richard 138kV	Acadian - Bonin 230kV (Lafa)	-16
Semere - Scott2 138kV	Bonin - Cecelia 138kV	-7
Semere - Scott2 138kV	Habetz - Richard 138kV	5
Semere - Scott2 138kV	Richard - Scott1 138kV	10
North Crowley - Scott1 138kV	Wells 500/230kV transformer	10
Habetz - Richard 138kV	Wells 500/230kV transformer	12
Habetz - Richard 138kV	Flander - Acadian 230kV (Lafa)	75
Richard - Scott1 138kV	Wells 500/230kV transformer	181
Richard - Scott1 138kV	North Crowley - Richard 138kV	204

LAGN

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-939
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-647
Willow Glen 500/230kV Transformer	Willow Glen - Willow Glen 2 500/138kV transformer 1	230

LEPA

Limiting Element	Contingency Element	AT C
Addis - Big Cajun 1 230kV	Jaguar - Tap Point Esso 230kV	-980
Port Hudson 230/138 transformer 2	Port Hudson 230/138 transformer 1	-392
Port Hudson 230/138 transformer 1	Port Hudson 230/138 transformer 2	-372
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-240
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-236
Semere - Scott2 138kV	Wells 500/230kV transformer	-227
North Crowley - Scott1 138kV	Richard - Scott1 138kV	-221
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	-78
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFA)	-52
Semere - Scott2 138kV	Bonin - Cecelia 138kV	-8
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	26
North Crowley - Scott1 138kV	Wells 500/230kV transformer	28
Habetz - Richard 138kV	Wells 500/230kV transformer	34
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	57
Judice - Scott1 138kV	Sellers Road (CLECO) - Labbe (LAFA) 230kV	59
Judice - Scott1 138kV	Sellers Road (CLECO) - Segura (CLECO) 230kV	62
Judice - Scott1 138kV	Segura (CLECO) 230/138kV transformer'	67
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	75
Willow Glen 500/230kV Transformer	Willow Glen - Willow Glen 2 500/138kV transformer 1	89
Coly - Vignes 230kV - Supplemental Upgrade	Belle Helene - Licar 230kV	139

OKGE

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-9603
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-8579
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-7657
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-3455
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-3382
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-2780
Big Three - Carlyss 230kV	Roy S. Nelson - Richard 500kV	-2007
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1344
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-896
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-832
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-528
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	190
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	242
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	242

SMEPA

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1647
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1626

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-1521
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-796
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-796
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-787
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-699
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-621
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-592
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-560
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-524
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-519
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-501
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-469
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-286
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-110
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-58
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-58
Philadelphia MS (TVA) - South Philadelphia 161kV	Philadelphia MS (TVA) - Sebastopol (TVA) 161kV	81
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	90
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	91
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	91
Florence - South Jackson 115kV - Supplemental Upgrade	South Jackson - Pop Spring 115kV	110
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	120
Columbus MS (TVA) - Weyerhouser Tap (TVA) 161kV	Sturgis MS (TVA) - NW Louisville (TVA) 161kV	121
Florence - South Jackson 115kV - Supplemental Upgrade	Georgetown - Pop Spring 115kV	132
Florence - South Jackson 115kV - Supplemental Upgrade	Kemper (SOCO) - Kemper1 (SOCO) 230kV	138
Florence - South Jackson 115kV - Supplemental Upgrade	Georgetown - Silver Creek 115kV	138
Florence - South Jackson 115kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	147
Florence - South Jackson 115kV - Supplemental Upgrade	Sebastopol (TVA) - Five Points MS (TVA) 161kV	155
Florence - South Jackson 115kV - Supplemental Upgrade	Homewood (SMEPA) - Five Points MS (TVA) 161kV	178
Willow Glen 500/230kV Transformer	Willow Glen - Willow Glen 2 500/138kV transformer 1	205
Coly - Vignes 230kV - Supplemental Upgrade	Belle Helene - Licar 230kV	220
Rex Brown W - Rex Brown C 115kV ckt 1	Klean - Jackson Northeast 115kV	242
Columbus MS (TVA) - Weyerhouser Tap (TVA) 161kV	NW Louisville (TVA) - Louisville MS (TVA) 161kV	247

SOCO

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-3301
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1541
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-1185
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	168
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	168

SPA

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-3155
Big Three - Carlyss 230kV	Roy S. Nelson - Richard 500kV	-2146
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1399
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-927
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-915
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-580
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	232
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	232
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	232

TVA

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Webre - Wells 500kV	-1502
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-1077
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	196
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	196

3.3.3 DETAILS OF SCENARIO 3 - 2014

AECI

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-621
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-413
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-78
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-23
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-20

AEPW

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-339
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-303
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-57
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-13
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-13
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	213

AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-662
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-25
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-21

CLECO

Limiting Element	Contingency Element	ATC
NONE	NONE	250

EES

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-2502
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-2494

EMDE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-543
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-385
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-72
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-20
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-18

Lafa

Limiting Element	Contingency Element	ATC
NONE	NONE	250

LAGN

Limiting Element	Contingency Element	ATC
NONE	NONE	250

LEPA

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1383
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1379

OKGE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-475
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-358
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-67
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-18
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-17

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams - Pickens 230kV	-9246
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton - Pickens 230kV	-8998
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Eldorado EHV - Sterlington 500kV	-8942
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Baxter Wilson - Perryville 500kV	-8918
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Newton (SOCO) - Hoye Ave (SOCO) 115kV	-8913
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Hoye Ave (SOCO) - Esco Tap (SOCO) 115kV	-8860
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Esco Tap (SOCO) - Forest (SOCO) 115kV	-8860
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Magee (SMEPA) - Creek 161kV	-8753
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	-7985
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1098
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-443
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-333
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell 500/230kV transformer ckt1 and ckt2 Test Contingency	-310
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-303
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-303
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-283

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-267
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-177
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-43
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	169
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	169
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	212
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	249

SOCO

Limiting Element	Contingency Element	ATC
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-27

SPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-574
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-392
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-74
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-21
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-19

TVA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-795
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-30
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-24

3.3.4 DETAILS OF SCENARIO 4 - 2014

AECI

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-1069
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-737
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	124

AEPW

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-7585
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-6877
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-6333
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-5449
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-5177
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-4849
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-4795
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-4469
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-2473
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-1475
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-1469
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-1235
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-1056
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-953
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-941
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-784
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-541
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-199
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	68
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	139

AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	130

CLECO

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-8644
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-7838
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-7218
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-6474
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-5901
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-5716
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-5526

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-5094
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-1719
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-1711
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-1439
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-1230

EES

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-4879
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-4484
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-4171
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-4039
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-3471
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-3330
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-3119
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-2914
Bevil - Cypress 230kV	Hartburg 500/230kV transformer 1	-2769
Bevil - Cypress 230kV	Hartburg - Inland Orange 230kV	-2761
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-2524
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-2513
Bevil - Cypress 230kV	Inland - McLewis 230kV	-2496
Ameila Bulk - Bevil 230kV	Hartburg 500/230kV transformer 1	-2327
Ameila Bulk - Bevil 230kV	Hartburg - Inland Orange 230kV	-2320
Bevil - Cypress 230kV	Helbig - McLewis 230kV	-2289
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-2233
Ameila Bulk - Bevil 230kV	Inland - McLewis 230kV	-2046
Carlyss - Roy S. Nelson 230kV	Roy S. Nelson - Verdine 230kV	-1988
Ameila Bulk - Bevil 230kV	Helbig - McLewis 230kV	-1832
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-1084
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-1079
Carlyss - Roy S. Nelson 230kV	PPG - Verdine 230kV	-1055
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-956
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-912
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-842
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-782
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-411
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-203
Bevil - Cypress 230kV	Big Three - Carlyss 230kV	-170
Roy S. Nelson - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-120
PPG - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-97
Bevil - Cypress 230kV	Big Three - Sabine 230kV	-49
Cypress 500/138kV transformer 1	Crockett - Grimes 345kV	128
Bevil - Cypress 230kV	Cypress - Lumberton 138kV	232
Inland - McLewis 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	249

EMDE

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-996
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-686
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	108

Lafa

Limiting Element	Contingency Element	ATC
NONE	NONE	250

LAGN

Limiting Element	Contingency Element	ATC
NONE	NONE	250

LEPA

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1396
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1389
Fancy Point - Port Hudson 230kV ckt 1	Fancy Point - Port Hudson 230kV ckt 2	-80
Port Hudson 230/138 transformer 2	Port Hudson 230/138 transformer 1	-78
Port Hudson 230/138 transformer 1	Port Hudson 230/138 transformer 2	-56
Fancy Point - Port Hudson 230kV ckt 2	Fancy Point - Port Hudson 230kV ckt 1	-3
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	137

OKGE

Limiting Element	Contingency Element	ATC
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-8075
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-7135
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-3096
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-1339
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-1178
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-927
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-639
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	95

SMEPA

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1472
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-585
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-464
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-463
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-438
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-438
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-424
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-397

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-300
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-288
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-253
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-206
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-181
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-162
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-106
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-106
Florence - South Jackson 115kV - Supplemental Upgrade	South Jackson - Pop Spring 115kV	34
Florence - South Jackson 115kV - Supplemental Upgrade	Kemper (SOCO) - Kemper1 (SOCO) 230kV	46
Florence - South Jackson 115kV - Supplemental Upgrade	Georgetown - Pop Spring 115kV	56
Florence - South Jackson 115kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	57
Florence - South Jackson 115kV - Supplemental Upgrade	Georgetown - Silver Creek 115kV	63
Florence - South Jackson 115kV - Supplemental Upgrade	Sebastopol (TVA) - Five Points MS (TVA) 161kV	89
Florence - South Jackson 115kV - Supplemental Upgrade	Sturgis MS (TVA) - NW Louisville (TVA) 161kV	96
Philadelphia MS (TVA) - South Philadelphia 161kV	Philadelphia MS (TVA) - Sebastopol (TVA) 161kV	157
Columbus MS (TVA) - Weyerhouser Tap (TVA) 161kV	Sturgis MS (TVA) - NW Louisville (TVA) 161kV	204
Florence - South Jackson 115kV - Supplemental Upgrade	Base Case	227

SOCO

Limiting Element	Contingency Element	ATC
NONE	NONE	250

SPA

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-1014
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-699
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	114

TVA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	160

APPENDIX A: Prior Generation Interconnection and Transmission Service Requests Used in Study Models

Prior Generation Interconnection NRIS requests that were included in this study:

PID	Substation	MW	In Service Date
PID 221	Wolfcreek	875	In Service
PID 223	PID-223 Tap	125	10/1/2010
PID 224	PID-224 Tap	100	12/1/2009
PID 233	PID-233	150	4/30/2011
PID 238	Hinds 230kV	550	In Service
PID 240	Hot Springs 500kV	650	In Service
PID 247	Stowell 138kV	180	12/1/2011

Prior transmission service requests that were included in this study:

OASIS #		PSE	MW	Begin	End
1668165		Entergy Services (SPO)	600	1/1/2013	1/1/2043
74597193		NRG Power Marketing	300	1/1/2013	1/1/2018
74597198		NRG Power Marketing	300	1/1/2013	1/1/2018
74728369		Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728395		Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728400		Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728415		Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728420		Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74789476		Entergy Services (SPO)	74	1/1/2012	1/1/2016
74799834		Cargill Power Markets	101	7/1/2012	7/1/2017
74799836		Cargill Power Markets	101	7/1/2012	7/1/2017
74799837		Cargill Power Markets	101	7/1/2012	7/1/2017
74799848		Cargill Power Markets	101	7/1/2013	7/1/2018
74799851		Cargill Power Markets	101	7/1/2013	7/1/2018
74799853		Cargill Power Markets	101	7/1/2013	7/1/2018
74835023		AECI / APM	103	1/1/2012	1/1/2017
74846159		AEPM	65	1/1/2015	1/1/2020
74899933		Entergy Services (SPO)	322	2/1/2011	2/1/2041
74899954		Entergy Services (SPO)	1	2/1/2011	2/1/2014
74899956		Entergy Services (SPO)	100	2/1/2011	2/1/2014
74899968		Entergy Services (SPO)	65	1/1/2013	1/1/2015
74899969		Entergy Services (SPO)	50	1/1/2012	1/1/2015
74899972		Entergy Services (SPO)	1	1/1/2015	1/1/2045
74899974		Entergy Services (SPO)	1	1/1/2015	1/1/2045
74899976		Entergy Services (SPO)	1	1/1/2015	1/1/2045
74899980		Entergy Services (SPO)	584	1/1/2015	1/1/2045
74899988		Entergy Services (SPO)	1	6/1/2012	6/1/2042
74899989		Entergy Services (SPO)	485	6/1/2012	6/1/2042
74899993		Entergy Services (SPO)	1	6/1/2012	6/1/2042
74899996		Entergy Services (SPO)	450	6/1/2012	6/1/2042
74900000		Entergy Services (SPO)	620	6/1/2012	6/1/2042
74900014		Entergy Services (SPO)	35	6/1/2012	6/1/2042
74900016		Entergy Services (SPO)	20	6/1/2012	6/1/2042
74901827		Entergy Services (SPO)	1	2/1/2011	2/1/2041
75009400		Entergy Services (SPO)	1	1/1/2012	1/1/2042
5029832		Entergy Services (SPO)	130	6/1/2015	6/1/2045