



***System Impact Study
PID 261
61MW Plant***

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Energy Resource Interconnection Service

1. Introduction

This Energy Resource Interconnection Service (ERIS) is based on the PID 261 request for 61MW interconnection on Entergy's transmission system at the Standard 115kV substation. The proposed commercial operation date of the project is December 31, 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. ERIS does not in and of itself convey any transmission service.

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. The load flow results from the ERIS study are for informational purposes only.

This 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 estimated cost of interconnection facilities is \$2.8 Million; which covers the cost of adding a new breaker and bay to the Standard 115kV substation.

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 261 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 261 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 261 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 261 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 261 plant **with and without priors**. Priors included are: 221, 231, 238, 240, 244, 247, 250, 251, 252, 253, 254, 256, 257, 259, and 260.

2.4 Problem Resolution

As a result of the short circuit analysis findings, no resolution was required on the Entergy Transmission System.

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. These upgrades can be found on Entergy's OASIS web page <http://www.oatioasis.com/EES/EESDocs/Disclaimer.html>. 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 PID 261 generation interconnection point was modeled at the Standard 115kV substation. These 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:

The load flow analysis was performed as a DC analysis using PSS/E and PSS/MUST software by Power Technologies Incorporated (PTI). A Transmission Reliability Margin (TRM) that effectively reduced line ratings by 5% was used in the model. 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. The details of each scenario list each limiting element, the contingency for the limiting element, and the Available Transfer Capacity (ATC). The ATC is equal to the FCITC.

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 95% Rate A.

3.2.3 Analysis Results

It was determined there are no Entergy transmission system upgrades required for this ERIS request. Summary of the analysis results are documented in Table 3.2.1 for each scenario. Detailed results for each of the 13 studied interfaces for Scenarios 1, 2, 3 and 4 are included in Tables 3.2.2 - 3.2.5.

Table 3.2.1: Summary of Results for PID 261 – 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	-575	-546	-624	-748
AEPW	American Electric Power West	2014	-634	-1930	-756	-1515
AMRN	Ameren Transmission	2014	-598	-717	-648	-603
CLEC	CLECO	2014	-493	-753	-146	-621
EES	Entergy	2014	-921	-3339	-998	-1535
EMDE	Empire District Electric Co	2014	-527	-568	-573	-928
LAFA	Lafayette Utilities System	2014	-342	-754	-44	-676
LAGN	Louisiana Generating, LLC	2014	-1132	-454	-1243	-388
LEPA	Louisiana Energy & Power Authority	2014	-1249	-1116	-1343	-280

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
OKGE	Oklahoma Gas & Electric Company	2014	-763	-1441	-525	-1159
SMEPA	South Mississippi Electric Power Assoc.	2014	-872	-1358	-917	-1220
SOCO	Southern Company	2014	-710	-476	-769	-343
SPA	Southwest Power Administration	2014	-547	-1248	-594	-1012
TVA	Tennessee Valley Authority	2014	-666	-503	-720	-422

4. Facilities at the Point of Interconnection

The Interconnection Customer's designated Point of Interconnection (POI) is the Standard 115V substation. The estimated cost of interconnection facilities is \$2.8 Million; which covers the cost of adding a new breaker and bay to the Standard 115kV substation along with the relocation of a microwave tower. This cost is based on parametric estimating techniques for a "typical" site. Cost may significantly change based on specific project parameters that are not known at this time. Costs specific to this interconnection will be developed during the Facilities Study. The interconnection customer is responsible for constructing all facilities needed to deliver generation to the POI.

TABLE 3.2.2: DETAILS OF SCENARIO 1 RESULTS: (WITHOUT FUTURE PROJECTS AND WITHOUT PENDING TRANSMISSION SERVICE & STUDY REQUEST)

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAFA	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Bonin - Cecelia 138kV	11,760,000									X					
Carroll 230/138kV transformer (CLECO)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
Champagne - Plaisance (CLECO) 138kV	10,920,000	X	X	X		X	X	X	X	X	X	X	X	X	X
Coughlin - Plaisance 138kV (CLECO)	Other Ownership	X	X	X		X	X	X	X	X	X	X	X	X	X
Downsville - Ruston East 115kV	7,560,000	X	X		X		X				X			X	
East Leesville - Rodemacher 230kV (CLECO)	Other Ownership		X								X				
French Settlement - Sorrento 230kV	7,200,000											X			
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X		X					
International Paper - Mansfield 138kV (CLECO)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
International Paper - Wallake 138kV (CLECO)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
Jackson Miami - Jackson Monument Street 115kV	2,520,000											X			
Leach - Toledo Bend 138 kV	1,680,000					X			X						
North Crowley - Scott1 138kV	14,280,000							X		X					
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Other Ownership							X							
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Committed to by others	X	X	X	X	X	X	X	X	X	X	X	X	X	X

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Richard - Scott1 138kV	23,520,000							X							
Ruston East - Vienna 115kV	2,520,000	X	X		X		X				X			X	
Scott1 - Bonin 138kV	4,200,000							X		X					
Semere - Scott2 138kV	13,440,000							X		X					

TABLE 3.2.3: 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
Bonin - Cecelia 138kV	11,760,000									X					
Brookhaven - Mallalieu (MEPA) 115kV	Included in 2011 ICT Base Plan											X			
Champagne - Plaisance (CLECO) 138kV	10,920,000	X	X	X		X	X	X	X	X	X	X	X	X	X
Colonial Academy - Richard 138kV	9,240,000							X							
Coly - Vignes 230kV - Supplemental Upgrade	Committed to by others									X					
Coughlin - Plaisance 138kV (CLECO)	Other Ownership	X	X	X		X	X	X	X	X	X	X	X	X	X
Cypress 500/138kV transformer 1	18,770,000					X									
Cypress 500/230kV transformer	19,110,000					X									
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
French Settlement - Sorrento 230kV	7,200,000											X			
Grimes - Grimes 345/138kV transformer 2	12,000,000					X		X	X						
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X		X					

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Hartburg - Inland Orange 230kV	Included in 2011 ICT Base Plan					X									
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others					X									
Hartburg 500/230kV transformer 1	19,110,000					X									
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan					X									
Inland - McLewis 230kV	Included in 2011 ICT Base Plan					X									
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others					X									
Jackson Miami - Jackson Monument Street 115kV	2,520,000											X			
Jackson Miami - Rex Brown 115kV	1,680,000											X			
Judice - Scott1 138kV	6,720,000									X					
Leach - Toledo Bend 138 kV	1,680,000					X		X							
Mallalieu (MEPA) - Norfield 115kV	Included in 2011 ICT Base Plan											X			
North Crowley - Scott1 138kV	14,280,000							X		X					
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Other Ownership							X							
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Committed to by others		X	X	X	X		X	X	X	X	X	X	X	X

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAFa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Richard - Scott1 138kV	23,520,000							X		X					
Scott1 - Bonin 138kV	4,200,000							X		X					
Semere - Scott2 138kV	13,440,00							X		X					
Willow Glen - Evergreen 230kV ckt 2	3,600,000									X					

TABLE 3.2.4: 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)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
Coughlin - Plaisance 138kV (CLECO)	Other Ownership							X		X					
Downsville - Ruston East 115kV	7,560,000	X	X		X		X				X			X	
East Leesville - Rodemacher 230kV (CLECO)	Other Ownership		X												
International Paper - Mansfield 138kV (CLECO)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
International Paper - Wallake 138kV (CLECO)	Other Ownership	X	X	X		X	X		X	X	X	X	X	X	X
Jackson Miami - Jackson Monument Street 115kV	2,520,000											X			
Leach - Toledo Bend 138 kV	1,680,000					X			X						
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Committed to by others	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Rilla - Frostkraft 115kV - Supplemental Upgrade	Committed to by others	X	X	X	X	X	X	X	X	X	X	X	X	X	X

TABLE 3.2.5: 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
Champagne - Plaisance (CLECO) 138kV	10,920,000	X	X	X		X	X	X	X	X	X	X	X	X	X
Coughlin - Plaisance 138kV (CLECO)	Other Ownership	X	X	X		X	X	X	X	X	X	X	X	X	X
Cypress 500/138kV transformer 1	18,770,000					X									
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others					X									
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan					X									
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others					X									
Jackson Miami - Jackson Monument Street 115kV	2,520,000											X			
Jackson Miami - Rex Brown 115kV	1,680,000											X			
Leach - Toledo Bend 138 kV	1,680,000					X			X						
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Other Ownership							X							

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAFA	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Committed to by others	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Rilla - Frostkraft 115kV - Supplemental Upgrade	Committed to by others	X	X	X	X	X	X	X	X	X	X	X	X	X	X

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

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

PID	Substation	MW	In Service Date
	NONE		

Prior transmission service requests that were included in this study:

OASIS #		PSE	MW	Begin	End
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	Not modeled	Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728400	Not modeled	Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728415	Not modeled	Brazos Electric Cooperative	100	1/1/2012	1/1/2017
74728420	Not modeled	Brazos Electric Cooperative	100	1/1/2012	1/1/2017
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
74846159		AEPM	65	1/1/2015	1/1/2020
74899933		Entergy Services (SPO)	322	2/1/2011	2/1/2041
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
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
75009400		Entergy Services (SPO)	1	1/1/2012	1/1/2042
75009407		Entergy Services (SPO)	1	1/1/2012	1/1/2042
75206836		ETEC	125	1/1/2015	2/1/2020

APPENDIX B: Detailed Results for Scenario 1 – 2014

AECI

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-575
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-521
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-293
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-226
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-205
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-157
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-113
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-82
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-38
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	55

AEPW

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-634
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-390
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-375
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-353
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-251
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-226
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-177
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-147
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-138
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-117
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-47
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	67

AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-598
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-302
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-235
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-200
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-110
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-66
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-37

Limiting Element	Contingency Element	ATC
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	53

CLECO

Limiting Element	Contingency Element	ATC
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-493
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-148
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-69

EES

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-921
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-436
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-361
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-174
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-171
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-93
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-46
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-32
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	45

EMDE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-527
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-467
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-278
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-214
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-207
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-140
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-117
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-104
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-40
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	57

Lafa

Limiting Element	Contingency Element	ATC
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-342
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-305
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-248

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-240
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-209
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-201
Semere - Scott2 138kV	Wells 500/230kV transformer	-178
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-170
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-163
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-138
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-124
North Crowley - Scott1 138kV	Richard - Scott1 138kV	-106
Habetz - Richard 138kV	Wells 500/230kV transformer	-48
North Crowley - Scott1 138kV	Wells 500/230kV transformer	-42
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-40
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFA)	-24
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-3
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	4
Scott1 - Bonin 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	37
Richard - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	38

LAGN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-1132
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-552
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-444
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-176
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-156
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-86
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-42
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-29
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	42

LEPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-1249
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-950
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-848
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-829
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-699
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-654
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-652

Limiting Element	Contingency Element	ATC
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-531
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-490
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-301
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-252
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-215
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-204
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-155
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFA)	-93
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	-54
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-30
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-17
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	51

OKGE

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-763
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-480
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-429
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-425
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-262
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-223
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-188
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-132
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-129
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-122
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-42
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	60

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Brookhaven - Wesson 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/230kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	James Road (SMEPA) - Wesson 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Hazelhurst - James Road (SMEPA) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Keo - West Memphis EHV 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Attala - Conehoma 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell - West Jackson 115kV	*

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Copiah Switching Station - Hazelhurst 115kV	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-872
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-842
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-657
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-657
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-409
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-330
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-171
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-160
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-134
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-134
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-88
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-30
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-26
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-17
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	33
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	43
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	60

SOCO

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-710
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-348
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-278
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-179
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-98
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-37
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-33
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	48

SPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-547
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-457
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-283
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-215
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-212
Ruston East - Vienna 115kV	Eldorado EHV - Sterlington 500kV	-137
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-116
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-114
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-40
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	57

TVA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-666
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-326
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-261
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-189
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-104
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-45
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-35
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	51

APPENDIX C: Detailed Results for Scenario 2 – 2014

AECI

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-546
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-452
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-379
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-285
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-118
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-24

AEPW

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1930
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-668
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-554
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-463
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-349
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-144
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-30

AMRN

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-717
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-532
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-441
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-369
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-278
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-115
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-24

CLECO

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-753

EES

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-3339
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-2931
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-2863
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-2773
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-2322
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-1583

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-504
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-453
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-397
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-375
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-314
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-237
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-177
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-162
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-98
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-20
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	52
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	52

EMDE

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-568
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-471
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-394
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-297
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-122
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-25

LAFa

Limiting Element	Contingency Element	ATC
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-754
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-439
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-401
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-385
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-364
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-345
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-307
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-297
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-268
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-258
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-231
Semere - Scott2 138kV	Wells 500/230kV transformer	-222
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-199
North Crowley - Scott1 138kV	Richard - Scott1 138kV	-195
Semere - Scott2 138kV	Bonin - Cecelia 138kV	-155
Semere - Scott2 138kV	Richard - Wells 500kV	-136
Semere - Scott2 138kV	Habetz - Richard 138kV	-97
North Crowley - Scott1 138kV	Wells 500/230kV transformer	-87
Habetz - Richard 138kV	Wells 500/230kV transformer	-80
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFa)	-71

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-57
Richard - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-23
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-14
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-12
Richard - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	9
Habetz - Richard 138kV	Flander - Acadian 230kV (LAFA)	24
Scott1 - Bonin 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	26
Colonial Academy - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	48
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	49
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	49
North Crowley - Scott1 138kV	Richard - Wells 500kV	55

LAGN

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-454
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-415
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-344
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-288
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-217
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-163
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-89
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-18
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	50
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	50

LEPA

Limiting Element	Contingency Element	ATC
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-1116
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-1013
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-995
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-890
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-865
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-767
Willow Glen - Evergreen 230kV ckt 2	Willow Glen - Evergreen 230kV ckt 1	-561
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-481
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-432
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-384
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-335
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-327
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-311
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFA)	-271
Semere - Scott2 138kV	Richard - Wells 500kV	-206
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	-152
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	-150
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	-127

Limiting Element	Contingency Element	ATC
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-90
Richard - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-90
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-64
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	-45
Coly - Vignes 230kV - Supplemental Upgrade	Belle Helene - Licar 230kV	-42
Judice - Scott1 138kV	Sellers Road (CLECO) - Labbe (LAFA) 230kV	-19
Judice - Scott1 138kV	Sellers Road (CLECO) - Segura (CLECO) 230kV	-16
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-13
Judice - Scott1 138kV	Segura (CLECO) 230/138kV transformer'	-11
Richard - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	33

OKGE

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1441
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-594
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-492
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-412
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-310
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-128
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-26

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Keo - West Memphis EHV 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Brookhaven - Wesson 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/230kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Attala - Conehoma 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	James Road (SMEPA) - Wesson 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Birmingham Steel - West Memphis EHV 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Jackson Miami - Rex Brown 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Hazelhurst - James Road (SMEPA) 115kV	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1358
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-721
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-721
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-560

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-560
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-554
Brookhaven - Mallalieu (MEPA) 115kV	Bogalusa - Adams Creek 500/230kV transformer	-433
Brookhaven - Mallalieu (MEPA) 115kV	Bogalusa - Franklin 500kV	-433
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-426
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-400
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-359
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-353
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-296
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-295
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-284
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-281
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-264
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-222
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-104
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-92
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-49
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-49
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-19
Mallalieu (MEPA) - Norfield 115kV	Bogalusa - Adams Creek 500/230kV transformer	60
Mallalieu (MEPA) - Norfield 115kV	Bogalusa - Franklin 500kV	60

SOCO

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-476
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-400
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-394
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-330
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-248
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-102
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-21

SPA

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1248
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-563
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-467
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-391

Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-294
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-121
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-25

TVA

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-503
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-494
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-417
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-349
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	-263
Coughlin - Plaisance 138kV (CLECO)	Wells (CLECO) - West Fork (CLECO) 230kV	-108
Champagne - Plaisance (CLECO) 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	-22

APPENDIX D: Detailed Results for Scenario 3 – 2014

AECI

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-624
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-307
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-258
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-158
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-90
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	40

AEPW

Limiting Element	Contingency Element	ATC
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Rodemacher 230kV	-756
East Leesville - Rodemacher 230kV (CLECO)	Colfax - Montgomery 230kV	-467
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-413
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-233
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-183
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-171
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-112
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16

AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-648
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-317
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-268
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-73
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	40

CLECO

Limiting Element	Contingency Element	ATC
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-146
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-75
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-18
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	46

EES

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-998
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-461
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-413
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-184
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-52
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	39

EMDE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-573
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-290
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-237
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-140
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-112
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	40

Lafa

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-44
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-17
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	43
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	49

LAGN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-1243
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-586
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-514
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-187
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-47
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-17
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	42

LEPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-1343
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-668
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-555
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-33
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-17
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	42
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	52

OKGE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-525
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-273
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-217
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-140
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-127
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sterlington 500/115kV transformer 3 and Sterlington - El Dorado 500kV line TestContingency SterlingtonUpgrades	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton South - Canton 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Eldorado EHV - Sterlington 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sterlington 500/115kV transformer 1 and 3 TestContingency	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sweatt (SOCO) - Lost Gap (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams 500/230kV transformer 2	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Rex Brown - Rex Brown C 230/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	*
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-917

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-743
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-433
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-379
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-29
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-2
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	41

SOCO

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-769
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-367
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-318
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-41
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	40

SPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-594
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-295
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-246
Downsville - Ruston East 115kV	Eldorado EHV - Sterlington 500kV	-137
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-122
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16

TVA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-720
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-343
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-298
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-51
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	-16
Rilla - Frostkraft 115kV - Supplemental Upgrade	Lamkin - Walnut Grove East 115kV	40

APPENDIX E: Detailed Results for Scenario 4 – 2014

AECI

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-748
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-232
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-148
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-74
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	10
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	49

AEPW

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1515
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-283
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-181
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-90
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	12
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	50

AMRN

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-603
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-226
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-145
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-72
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	10
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	49

CLECO

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-621
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	57

EES

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-1535
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-951

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-941
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-493
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-432
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-194
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-185
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-124
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-61
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	8
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	48

EMDE

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-928
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-241
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-154
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-76
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	10
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	49

LAF A

Limiting Element	Contingency Element	ATC
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-676
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-366
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-124
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-79
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-39
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	5
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	53

LAGN

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-388
Leach - Toledo Bend 138 kV	Dolet Hills - S.W. Shreveport 345kV (CLECO)	-187
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-177
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-113
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-56
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	8
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	52

LEPA

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-280
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-131
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-83
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-41
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	6
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	52

OKGE

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1159
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-252
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-161
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-80
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	11
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	49

SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton - Pickens 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sweatt (SOCO) - Lost Gap (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton South - Canton 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams 500/230kV transformer 2	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lost Gap (SOCO) - Hickory MS (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1220
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-384
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-255
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-242
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-242
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-242
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-235
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-193
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-181
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-116

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-112
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-92
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-92
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-68
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-58
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	3
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	8
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	10
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	50
Florence - South Jackson 115kV - Supplemental Upgrade	South Jackson - Pop Spring 115kV	52
Florence - South Jackson 115kV - Supplemental Upgrade	Kemper (SOCO) - Kemper1 (SOCO) 230kV	58

SOCO

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-343
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-202
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-130
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-64
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	9
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	50

SPA

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-1012
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-239
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-153
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-76
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	10

TVA

Limiting Element	Contingency Element	ATC
Ray Braswell - Baxter Wilson 500kV - Supplemental Upgrade	Franklin - Grand Gulf 500kV	-422
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-214
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-137
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-68
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	9
Rilla - Frostkraft 115kV - Supplemental Upgrade	Sterlington - Walnut Grove East 115kV	49