



***Feasibility Study  
PID 256  
90MW Plant***

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<b>Rev</b>	<b>Issue Date</b>	<b>Description of Revision</b>	<b>Revised By</b>	<b>Project Manager</b>
0	4/14/11	Post Feasibility Study	EC	BR

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# Energy Resource Interconnection Service

## 1. Introduction

This Energy Resource Interconnection Service (ERIS) is based on the the Customer's request for 90MW interconnection on Entergy's transmission system between the Graywood and Vincent substation. The proposed commercial operation date of the project is June 1, 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.

## 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 256 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 256 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 256 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 256 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 256 plant **with and without priors**. Priors included are: 221, 231, 238, 240, 244, 247, 250, 251, 252, 253, 254, and 255.

## 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 PID 256 generation interconnection point was modeled on the existing Graywood – Vincent 230kV transmission line. 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:

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 256 – ERIIS 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	-811	-4077	-562	-2106
AEPW	American Electric Power West	2014	-449	-2349	-321	-2298
AMRN	Ameren Transmission	2014	-1160	-4021	-596	-2132
CLEC	CLECO	2014	90	-2294	90	-1224
EES	Entergy	2014	-40	-1927	-2608	-2651
EMDE	Empire District Electric Co	2014	-712	-4527	-498	-2058
LAFA	Lafayette Utilities System	2014	-803	-2456	-824	-1251
LAGN	Louisiana Generating, LLC	2014	-445	-2278	67	-1112
LEPA	Louisiana Energy & Power Authority	2014	-1106	-2346	-1415	-1438
OKGE	Oklahoma Gas & Electric Company	2014	-625	-2025	-440	-2007
SMEPA	South Mississippi Electric Power Assoc.	2014	*	-2201	*	-1362
SOCO	Southern Company	2014	-1136	-4469	-781	-1084
SPA	Southwest Power Administration	2014	-752	-4425	-523	-2075
TVA	Tennessee Valley Authority	2014	-1051	-2216	-701	-2200

\*Actual rating of supplemental upgrade was not used to calculate FCITC

**TABLE 3.3.2: 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	17,250,000									X					
Carroll 230/138kV transformer (CLECO)	9,200,000	X	X	X			X				X		X	X	X
Champagne - Plaisance (CLECO) 138kV	16,250,000							X	X	X		X			
Conroe 1 - Conroe 2 138kV	TBD	X	X	X		X	X				X			X	X
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X	X	X		X			
French Settlement - Sorrento 230kV	14,000,000	X	X	X			X				X	X	X	X	X
Greenwood - Humphrey 115kV	1,250,000							X		X					
Greenwood - Terrebone 115kV	12,500,000							X		X					
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X		X					
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	X	X			X				X		X	X	X
International Paper - Wallake 138kV (CLECO)	23,750,000	X	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		X					
Pleasant Hill 500/161kV transformer	Included in 2011 ICT Base Plan													X	
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X		X					
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Committed to by others											X			
Scott1 - Bonin 138kV	6,250,000							X							
Semere - Scott2 138kV	20,000,000							X		X					

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Toledo - Leesville (CLECO) 138kV	28,750,000	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	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
Arizona - Citgo 138kV	2,500,000					X									
Big Three - Carlyss 230kV	3,500,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Big Three - Sabine 230kV	64,750,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bonin - Cecelia 138kV	17,250,000									X					
Carlyss - CitCon West 138kV	625,000					X									
Carlyss - Rose Bluff 230kV	3,500,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Cedar Hill - Tamina 138kV	Included in 2011 ICT Base Plan	X	X	X		X	X				X		X	X	X
Champagne - Plaisance (CLECO) 138kV	16,250,000							X							
Coly - Vignes 230kV - Supplemental Upgrade	Committed to by others					X				X		X			
Conroe Bulk2 - Plantation 138kV	3,750,000	X	X	X		X	X				X		X	X	X
Coughlin - Plaisance 138kV (CLECO)	16,250,000							X							
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
French Settlement - Sorrento 230kV	14,000,000			X								X	X		X
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X							
Hollywood - Orange 138kV	36,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hollywood - Roy S. Nelson 138kV	8,750,000	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
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	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			
Judice - Scott1 138kV	10,000,000									X					
Marshall - Mossville 138kV	21,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
McAdams 500/230kV transformer 1	Included in 2011 ICT Base Plan	X		X			X						X	X	
Mossville - Roy S. Nelson 138kV	3,750,000		X			X									
North Crowley - Scott1 138kV	21,250,000							X							
Orange - Toomey 138kV	11,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Plantation - Cedar Hill 138kV	3,750,000	X	X	X		X	X				X		X	X	X
Port Hudson 230/138 transformer 1	9,200,000									X					
Port Hudson 230/138 transformer 2	9,200,000									X					
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X		X					
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			
Scott1 - Bonin 138kV	6,250,000							X							
Semere - Scott2 138kV	20,000,000							X		X					
Toomey - Marshall 138kV	8,750,000	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
Vatican - Colton Road 138kV	15,000,000							X							
Willow Glen 500/230kV Transformer	Included in 2011 ICT Base Plan					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
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X	X	X					
Greenwood - Terrebone 115kV	12,500,000							X							
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	X	X			X				X		X	X	X
International Paper - Wallake 138kV (CLECO)	22,500,000	X	X	X			X				X		X	X	X
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X		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
Arizona - Citgo 138kV	2,500,000					X									
Big Three - Carlyss 230kV	3,500,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Big Three - Sabine 230kV	64,750,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Bonin - Cecelia 138kV	17,250,000									X					
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
Hollywood - Orange 138kV	36,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Hollywood - Roy S. Nelson 138kV	8,750,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
International Paper - Mansfield 138kV (CLECO)	23,750,000	X	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			
Marshall - Mossville 138kV	21,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Mossville - Roy S. Nelson 138kV	3,750,000		X			X									
Orange - Toomey 138kV	11,250,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Plantation - Cedar Hill 138kV	3,750,000	X	X	X		X	X				X		X	X	X
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X							
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAF A	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Toomey - Marshall 138kV	8,750,000	X	X	X	X	X	X	X	X	X	X	X	X	X	X
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
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-811
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-359
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-283
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-233
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-196
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-24
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	30
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	82
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	83

#### AEPW

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-449
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-286
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-247
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-240
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-157
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-19
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	21
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	62
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	64

#### AMRN

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1160
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1160
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-861
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-376
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-301
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-225
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-189
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-25
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	31
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	85
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	86

#### CLECO

Limiting Element	Contingency Element	ATC
NONE	NONE	90

**EES**

Limiting Element	Contingency Element	ATC
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-40
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	33

**EMDE**

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-712
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-331
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-249
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-244
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-205
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-23
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	28
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	77
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	78

**Lafa**

Limiting Element	Contingency Element	ATC
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-803
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-393
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-335
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-280
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-278
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-220
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-184
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-178
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-144
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-112
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-105
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-69
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-53
Semere - Scott2 138kV	Wells 500/230kV transformer	-6
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	1
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	19
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	29
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	29
Greenwood - Humphrey 115kV	Webre - Wells 500kV	46
Scott1 - Bonin 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	69

**LAGN**

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-445
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-270
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-129

Limiting Element	Contingency Element	ATC
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-53
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	45

### LEPA

Limiting Element	Contingency Element	ATC
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-1106
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-561
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-480
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-478
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-432
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-396
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-350
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-314
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-303
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-222
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-198
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-135
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-93
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-65
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-56
Semere - Scott2 138kV	Wells 500/230kV transformer	-16
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	3
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	23
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	59
Greenwood - Humphrey 115kV	Webre - Wells 500kV	63
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	85

### OKGE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-625
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-305
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-256
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-219
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-215
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-22
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	25
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	72
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	74

### 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 -	Lakeover 500/115kV transformer	*



Limiting Element	Contingency Element	ATC
Supplemental Upgrade		
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sweatt (SOCO) - Lost Gap (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lost Gap (SOCO) - Hickory MS (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton South - Canton 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Newton (SOCO) - Hickory MS (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Big Cajun 2 - Webre 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Coly - McKnight 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Kemper (SOCO) - Kemper1 (SOCO) 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-902
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-473
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-433
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-433
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-288
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-196
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-173
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-173
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-138
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-122
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-102
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-37
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-34
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	4
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	43
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	48
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	70

## SOCO

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-1136
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-874
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-874
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-473
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-397
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-193
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-162
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-29

## SPA

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-752
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-340
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-263
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-243
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-204
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-23
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	29
Toledo - Leesville (CLECO) 138kV	Colfax - Rodemacher 230kV	79
Toledo - VP Tap 138kV	Colfax - Montgomery 230kV	79
Pleasant Hill 500/161kV transformer	ANO 500/161/22kV 3 Winding Transformer	82

## TVA

Limiting Element	Contingency Element	ATC
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-1051
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-1051
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-1020
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-425
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-357
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-208
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-175
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-27
Conroe 1 - Conroe 2 138kV	Oak Ridge - Porter 138kV	34

### 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	-4077
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2126
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2125
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2056
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1227
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1095
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1093
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1092
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1064
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1063
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1042
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1040
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1032
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1017
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-984
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-920
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-919
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-871
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-850
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-820
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-806
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-774
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-623
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-572
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-560
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-557
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-518
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-482
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-481
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-465
Orange - Toomey 138kV	Big Three - Sabine 230kV	-455
Marshall - Mossville 138kV	Inland - McLewis 230kV	-446
Big Three - Carlyss 230kV	Base Case	-436
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-415
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-391
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-310
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-297
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-269
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-255
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-245
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-244
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-233
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-203
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-168

Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-146
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-21
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-17
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-16
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	13
Orange - Toomey 138kV	Hollywood - Orange 138kV	21
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	33
Big Three - Sabine 230kV	Helbig - McLewis 230kV	36
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	54
Hollywood - Orange 138kV	Orange - Toomey 138kV	86

### AEPW

Limiting Element	Contingency Element	ATC
Mossville - Roy S. Nelson 138kV	Boudin - Dynegy 230kV	-2349
Mossville - Roy S. Nelson 138kV	Boudin - Carlyss 230kV	-2316
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-1911
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-1895
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-1861
Mossville - Roy S. Nelson 138kV	Vincent - Graywood 230kV	-1805
Mossville - Roy S. Nelson 138kV	Pecan Grove - Vincent 230kV	-1748
Mossville - Roy S. Nelson 138kV	Dynegy - Pecan Grove 230kV	-1628
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1075
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1048
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1042
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1041
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1014
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1014
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-994
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-991
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-987
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-963
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-939
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-876
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-876
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-855
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-804
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-797
Big Three - Carlyss 230kV	TenRusk (AEPW) - Crockett (AEPW) 345kV	-794
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-690
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-594
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-540
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-531
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-528
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-496

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-450
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-449
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-439
Orange - Toomey 138kV	Big Three - Sabine 230kV	-435
Big Three - Carlyss 230kV	Base Case	-420
Marshall - Mossville 138kV	Inland - McLewis 230kV	-416
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-387
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-365
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-284
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-228
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-227
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-225
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-223
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-220
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-191
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-188
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-155
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-139
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-20
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-17
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-16
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	7
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	11
Orange - Toomey 138kV	Hollywood - Orange 138kV	20
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	31
Big Three - Sabine 230kV	Helbig - McLewis 230kV	34
Carlyss - Rose Bluff 230kV	Boudin - Dynegey 230kV	52
Hollywood - Orange 138kV	Orange - Toomey 138kV	81

## AMRN

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-4021
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2155
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2150
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2071
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1244
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1102
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1099
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1098
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1070
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1068
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1047
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1045
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1038

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1024
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-991
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-926
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-925
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-873
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-856
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-825
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-808
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-783
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-626
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-577
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-564
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-560
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-521
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-486
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-485
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-469
Orange - Toomey 138kV	Big Three - Sabine 230kV	-458
Marshall - Mossville 138kV	Inland - McLewis 230kV	-449
Big Three - Carlyss 230kV	Base Case	-437
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-419
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-394
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-320
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-298
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-278
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-258
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-248
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-246
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-235
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-205
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-170
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-147
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-101
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-101
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-21
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-18
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-17
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	13
Orange - Toomey 138kV	Hollywood - Orange 138kV	21
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	33
Big Three - Sabine 230kV	Helbig - McLewis 230kV	36
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	54
Hollywood - Orange 138kV	Orange - Toomey 138kV	87

## CLECO

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2294
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1281
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1240
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1232
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1231
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1207
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1202
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1200
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1178
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1172
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1172
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-1094
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-1036
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1026
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-967
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-962
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-741
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-713
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-698
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-663
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-606
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-580
Orange - Toomey 138kV	Big Three - Sabine 230kV	-532
Big Three - Carlyss 230kV	Base Case	-492
Marshall - Mossville 138kV	Hartburg - Roy S. Nelson 500kV	-354
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-347
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-273
Marshall - Mossville 138kV	Cypress 500/138kV transformer 1	-233
Marshall - Mossville 138kV	Stowell - PID 247 138kV	-182
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-178
Marshall - Mossville 138kV	Cypress - Lumberton 138kV	-172
Marshall - Mossville 138kV	Amelia Bulk - China Bulk 230kV	-164
Hollywood - Roy S. Nelson 138kV	Hartburg - Roy S. Nelson 500kV	-70
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-26
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-20
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-19
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-11
Big Three - Sabine 230kV	Bevil - Cypress 230kV	13
Big Three - Sabine 230kV	Inland - McLewis 230kV	13
Orange - Toomey 138kV	Hollywood - Orange 138kV	26
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	37
Big Three - Sabine 230kV	Helbig - McLewis 230kV	40
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	59

**EES**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Carlyss - CitCon West 138kV	Mossville - Roy S. Nelson 138kV	-1927
Mossville - Roy S. Nelson 138kV	Boudin - Dynegy 230kV	-1907
Mossville - Roy S. Nelson 138kV	Boudin - Carlyss 230kV	-1882
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-1870
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-1755
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-1658
Mossville - Roy S. Nelson 138kV	Vincent - Graywood 230kV	-1458
Mossville - Roy S. Nelson 138kV	Pecan Grove - Vincent 230kV	-1414
Mossville - Roy S. Nelson 138kV	Dynegy - Pecan Grove 230kV	-1322
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1028
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1027
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1025
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1001
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1000
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-981
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-979
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-976
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-967
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-917
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-904
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-845
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-838
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-796
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-785
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-769
Big Three - Carlyss 230kV	Hollywood - Roy S. Nelson 138kV	-763
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-648
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-577
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-517
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-506
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-495
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-488
Orange - Toomey 138kV	Big Three - Sabine 230kV	-429
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-424
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-423
Big Three - Carlyss 230kV	Base Case	-420
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-412
Marshall - Mossville 138kV	Inland - McLewis 230kV	-392
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-366
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-345
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-334
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-309
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-288
Arizona - Citgo 138kV	Mossville - Roy S. Nelson 138kV	-287
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-278
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-219



Limiting Element	Contingency Element	ATC
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-211
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-206
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-205
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-171
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-141
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-133
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-19
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-16
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-15
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-8
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	11
Orange - Toomey 138kV	Hollywood - Orange 138kV	19
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	31
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	32
Big Three - Sabine 230kV	Helbig - McLewis 230kV	34
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	50
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	71
Hollywood - Orange 138kV	Orange - Toomey 138kV	77

## EMDE

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-4527
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2077
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2070
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2027
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1195
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1085
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1083
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1082
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1054
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1053
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1032
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1030
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1023
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1005
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-975
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-910
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-906
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-871
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-840
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-813
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-804
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-757
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-616
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-565

Limiting Element	Contingency Element	ATC
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-553
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-552
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-514
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-475
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-474
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-460
Orange - Toomey 138kV	Big Three - Sabine 230kV	-451
Marshall - Mossville 138kV	Inland - McLewis 230kV	-439
Big Three - Carlyss 230kV	Base Case	-432
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-409
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-386
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-294
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-288
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-251
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-250
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-241
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-240
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-231
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-200
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-165
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-145
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-21
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-17
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-16
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	11
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	11
Orange - Toomey 138kV	Hollywood - Orange 138kV	21
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	32
Big Three - Sabine 230kV	Helbig - McLewis 230kV	35
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	53
Hollywood - Orange 138kV	Orange - Toomey 138kV	85

## LAFB

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2456
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1319
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1299
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1270
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1269
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1243
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1237
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1235
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1210
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1210

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1209
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-1190
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-1130
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1098
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-1086
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-952
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-765
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-750
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-734
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-685
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-624
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-610
Orange - Toomey 138kV	Big Three - Sabine 230kV	-548
Big Three - Carlyss 230kV	Base Case	-500
Vatican - Colton Road 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-397
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-357
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-281
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-200
Marshall - Mossville 138kV	Stowell - PID 247 138kV	-190
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-187
Vatican - Colton Road 138kV	Cocodrie - Vil Plat 230kV	-153
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-143
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-131
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-104
Vatican - Colton Road 138kV	Vil Plat - West Fork 230kV	-69
Marshall - Mossville 138kV	Chemical Road - SRW Conoco 138kV	-45
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-28
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-20
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-19
Marshall - Mossville 138kV	Grimes - Frontier 345kV	-18
Marshall - Mossville 138kV	Holly Springs - Newton Bulk 138kV	-13
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-12
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	5
Marshall - Mossville 138kV	Holly Springs - Jasper 138kV	10
Big Three - Sabine 230kV	Bevil - Cypress 230kV	13
Big Three - Sabine 230kV	Inland - McLewis 230kV	13
Semere - Scott2 138kV	Wells 500/230kV transformer	25
Orange - Toomey 138kV	Hollywood - Orange 138kV	27
Marshall - Mossville 138kV	Hanks - Gulfway 230kV	35
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	38
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	40
Big Three - Sabine 230kV	Helbig - McLewis 230kV	41
Habetz - Richard 138kV	Acadian - Bonin 230kV (LAFA)	54
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	60
Vatican - Colton Road 138kV	Wells (CLECO) - West Fork (CLECO) 230kV	60
Vatican - Colton Road 138kV	Champagne - Krotz Spring 138kV	72
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	83

## LAGN

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2278
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1162
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1161
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1159
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1130
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1127
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1104
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1104
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1101
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1095
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1051
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1019
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-981
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-920
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-867
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-860
Big Three - Carlyss 230kV	Hollywood - Roy S. Nelson 138kV	-831
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-664
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-624
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-611
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-594
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-550
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-535
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-533
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-507
Marshall - Mossville 138kV	Inland - McLewis 230kV	-494
Orange - Toomey 138kV	Big Three - Sabine 230kV	-483
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-461
Big Three - Carlyss 230kV	Base Case	-454
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-432
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-405
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-315
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-278
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-276
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-247
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-230
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-190
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-162
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-158
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-23
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-19
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-17
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-10
Big Three - Sabine 230kV	Bevil - Cypress 230kV	12
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
Orange - Toomey 138kV	Hollywood - Orange 138kV	23

Limiting Element	Contingency Element	ATC
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	35
Big Three - Sabine 230kV	Helbig - McLewis 230kV	38
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	55

## LEPA

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2346
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1243
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1216
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1215
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1197
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1184
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1182
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1171
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1158
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1157
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1131
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-1056
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1049
Big Three - Carlyss 230kV	Hartburg - Roy S. Nelson 500kV	-1037
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-1000
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-919
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-715
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-684
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-670
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-640
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-588
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-556
Orange - Toomey 138kV	Big Three - Sabine 230kV	-516
Big Three - Carlyss 230kV	Base Case	-479
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-466
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-436
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-337
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-296
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-265
Marshall - Mossville 138kV	Crockett - Grimes 345kV	-251
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-229
Marshall - Mossville 138kV	Cypress 500/138kV transformer 1	-229
Marshall - Mossville 138kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-186
Marshall - Mossville 138kV	TenRusk (AEPW) - Crockett (AEPW) 345kV	-180
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-178
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-172
Judice - Scott1 138kV	Sellers Road (CLECO) - Labbe (LAFA) 230kV	-165
Judice - Scott1 138kV	Sellers Road (CLECO) - Segura (CLECO) 230kV	-163
Judice - Scott1 138kV	Segura (CLECO) 230/138kV transformer'	-158
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	-142

Limiting Element	Contingency Element	ATC
Port Hudson 230/138 transformer 2	Port Hudson 230/138 transformer 1	-51
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	-42
Port Hudson 230/138 transformer 1	Port Hudson 230/138 transformer 2	-28
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-25
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-19
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-18
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-11
Big Three - Sabine 230kV	Bevil - Cypress 230kV	13
Big Three - Sabine 230kV	Inland - McLewis 230kV	13
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	17
Orange - Toomey 138kV	Hollywood - Orange 138kV	25
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	36
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	38
Big Three - Sabine 230kV	Helbig - McLewis 230kV	40
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	58
Semere - Scott2 138kV	Wells 500/230kV transformer	67

## OKGE

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2025
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2010
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-1995
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1161
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1075
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1071
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1070
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1043
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1042
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1021
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1019
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1013
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-993
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-964
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-900
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-892
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-872
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-830
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-805
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-802
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-738
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-610
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-558
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-546
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-546
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-509
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-468
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-467

Limiting Element	Contingency Element	ATC
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-454
Orange - Toomey 138kV	Big Three - Sabine 230kV	-446
Marshall - Mossville 138kV	Inland - McLewis 230kV	-433
Big Three - Carlyss 230kV	Base Case	-429
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-403
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-380
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-291
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-267
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-243
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-237
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-236
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-232
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-229
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-196
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-162
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-143
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-21
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-17
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-16
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	10
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	11
Orange - Toomey 138kV	Hollywood - Orange 138kV	21
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	32
Big Three - Sabine 230kV	Helbig - McLewis 230kV	35
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	53
Hollywood - Orange 138kV	Orange - Toomey 138kV	84

## SMEPA

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2201
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1514
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1161
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1152
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1151
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1121
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1119
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1097
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1096
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1095
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1094
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1049
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-984
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-979
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-915

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-889
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-863
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-727
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-727
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-708
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-663
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-620
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-607
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-594
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-587
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-561
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-549
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-549
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-531
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-524
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-522
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-504
Marshall - Mossville 138kV	Inland - McLewis 230kV	-484
Orange - Toomey 138kV	Big Three - Sabine 230kV	-482
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-474
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-465
Big Three - Carlyss 230kV	Base Case	-455
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-451
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-442
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-424
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-409
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-397
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-315
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-270
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-269
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-247
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-224
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-217
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-185
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-159
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-157
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-76
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-38
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-38
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-23
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-18
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-17
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-16
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-16



Limiting Element	Contingency Element	ATC
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-10
Big Three - Sabine 230kV	Bevil - Cypress 230kV	12
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
Orange - Toomey 138kV	Hollywood - Orange 138kV	23
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	29
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	34
Big Three - Sabine 230kV	Helbig - McLewis 230kV	38
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	56
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Licar 230kV	65

## SOCO

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-4669
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2263
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2136
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1130
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1125
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1124
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1095
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1093
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1071
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1070
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1065
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1057
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1018
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-955
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-951
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-883
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-879
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-843
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-825
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-818
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-644
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-597
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-584
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-576
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-535
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-504
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-503
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-485
Orange - Toomey 138kV	Big Three - Sabine 230kV	-469
Marshall - Mossville 138kV	Inland - McLewis 230kV	-466
Big Three - Carlyss 230kV	Base Case	-446
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-434
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-408
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-368
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-319

Limiting Element	Contingency Element	ATC
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-306
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-272
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-258
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-257
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-241
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-214
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-177
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-152
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-152
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-76
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-76
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-22
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-18
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-17
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	12
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	18
Orange - Toomey 138kV	Hollywood - Orange 138kV	22
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	34
Big Three - Sabine 230kV	Helbig - McLewis 230kV	37
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	55
Hollywood - Orange 138kV	Orange - Toomey 138kV	90

## SPA

Limiting Element	Contingency Element	ATC
McAdams 500/230kV transformer 1	Choctaw MS (TVA) - Clay (TVA) 500kV	-4425
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2094
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2089
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2037
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1206
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1088
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1086
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1085
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1057
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1056
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1035
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1033
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1025
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1008
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-977
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-912
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-911
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-870
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-842
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-815

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	LeBrook (AEPW) - TenRusk (AEPW) 345kV	-804
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-763
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-618
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-567
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-555
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-553
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-515
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-477
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-476
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-461
Orange - Toomey 138kV	Big Three - Sabine 230kV	-452
Marshall - Mossville 138kV	Inland - McLewis 230kV	-441
Big Three - Carlyss 230kV	Base Case	-433
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-411
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-387
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-297
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-295
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-258
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-252
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-242
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-241
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-232
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-201
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-166
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-145
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-21
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-17
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-16
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	11
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	12
Orange - Toomey 138kV	Hollywood - Orange 138kV	21
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	33
Big Three - Sabine 230kV	Helbig - McLewis 230kV	35
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	54
Hollywood - Orange 138kV	Orange - Toomey 138kV	85

## TVA

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2216
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-2110
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1117
Big Three - Carlyss 230kV	Hartburg 500/230kV transformer 1	-1114
Big Three - Carlyss 230kV	Hartburg - Inland Orange 230kV	-1113
Big Three - Carlyss 230kV	Inland - McLewis 230kV	-1084

Limiting Element	Contingency Element	ATC
Big Three - Carlyss 230kV	Bevil - Cypress 230kV	-1083
Big Three - Carlyss 230kV	Ameila Bulk - Bevil 230kV	-1061
Big Three - Carlyss 230kV	Helbig - McLewis 230kV	-1060
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1052
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1042
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1006
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-944
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-939
Big Three - Carlyss 230kV	Crockett - Grimes 345kV	-875
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-871
Big Three - Carlyss 230kV	Amelia Bulk - China Bulk 230kV	-835
Big Three - Carlyss 230kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-813
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-808
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-636
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-588
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-575
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-569
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-529
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-496
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-495
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-478
Orange - Toomey 138kV	Big Three - Sabine 230kV	-464
Marshall - Mossville 138kV	Inland - McLewis 230kV	-459
Big Three - Carlyss 230kV	Base Case	-442
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-427
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-402
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-350
Cedar Hill - Tamina 138kV	Oak Ridge - Porter 138kV	-304
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-303
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-266
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-254
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-252
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-238
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-210
Hollywood - Roy S. Nelson 138kV	Helbig - McLewis 230kV	-174
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-150
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-149
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-92
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-92
Hollywood - Orange 138kV	Marshall - Mossville 138kV	-22
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	-18
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	-17
Hollywood - Orange 138kV	Toomey - Marshall 138kV	-9
Conroe Bulk2 - Plantation 138kV	Oak Ridge - Porter 138kV	0
Big Three - Sabine 230kV	Bevil - Cypress 230kV	12
Big Three - Sabine 230kV	Inland - McLewis 230kV	12
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	16

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Orange - Toomey 138kV	Hollywood - Orange 138kV	22
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	33
Big Three - Sabine 230kV	Helbig - McLewis 230kV	36
Carlyss - Rose Bluff 230kV	Boudin - Dynegy 230kV	55
Hollywood - Orange 138kV	Orange - Toomey 138kV	88

### 3.3.3 DETAILS OF SCENARIO 3 - 2014

#### AECI

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-562
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-21
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-19

#### AEPW

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-321
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-13
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-12

#### AMRN

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-596
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-22
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-20

#### 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	-2608
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-2599

#### EMDE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-498
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-19
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-18

#### Lafa

Limiting Element	Contingency Element	ATC
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-824
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-328
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	32

## LAGN

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	67

## LEPA

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1415
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1410
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-507
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	36

## OKGE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-440
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-16
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-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	Canton South - Canton 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover 500/115kV transformer	*
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	Southwest Lonestar (SMEPA) - Prentiss (SMEPA) 161kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Sweatt (SOCO) - Lost Gap (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lost Gap (SOCO) - Hickory MS (SOCO) 115kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	McAdams 500/230kV transformer 2	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Canton - Yandell Road 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Base Case	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	1063
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-427
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-321
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-293
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-293
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-273

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-258
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-171
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-41

### **SOCO**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-781
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-29
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-25

### **SPA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-523
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-20
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-18

### **TVA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-701
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-26
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-23



### 3.3.4 DETAILS OF SCENARIO 4 - 2014

#### AECI

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2106
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1051
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-988
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-957
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-936
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-908
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-871
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-790
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-739
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-578
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-577
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-512
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-506
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-494
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-474
Orange - Toomey 138kV	Big Three - Sabine 230kV	-412
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-399
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-364
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-363
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-341
Marshall - Mossville 138kV	Inland - McLewis 230kV	-326
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-315
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-251
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-210
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-189
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-146
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-110
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-108
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-88
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-85
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-84
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-66
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-60
Big Three - Sabine 230kV	Bevil - Cypress 230kV	40
Hollywood - Orange 138kV	Marshall - Mossville 138kV	43
Hollywood - Orange 138kV	Toomey - Marshall 138kV	55
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	62
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	62
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	63
Orange - Toomey 138kV	Hollywood - Orange 138kV	82

**AEPW**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Mossville - Roy S. Nelson 138kV	Boudin - Dynegy 230kV	-2298
Mossville - Roy S. Nelson 138kV	Boudin - Carlyss 230kV	-2265
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-1875
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-1839
Mossville - Roy S. Nelson 138kV	Vincent - Graywood 230kV	-1751
Mossville - Roy S. Nelson 138kV	Pecan Grove - Vincent 230kV	-1693
Mossville - Roy S. Nelson 138kV	Dynegy - Pecan Grove 230kV	-1573
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1047
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1005
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-945
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-906
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-893
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-843
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-831
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-749
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-658
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-550
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-536
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-488
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-478
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-467
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-454
Orange - Toomey 138kV	Big Three - Sabine 230kV	-394
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-377
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-341
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-339
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-318
Marshall - Mossville 138kV	Inland - McLewis 230kV	-305
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-295
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-240
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-187
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-181
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-104
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-102
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-100
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-81
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-78
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-61
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-50
Big Three - Sabine 230kV	Bevil - Cypress 230kV	38
Hollywood - Orange 138kV	Marshall - Mossville 138kV	40
Hollywood - Orange 138kV	Toomey - Marshall 138kV	51
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	59
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	59
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	60
Orange - Toomey 138kV	Hollywood - Orange 138kV	77

Limiting Element	Contingency Element	ATC
Big Three - Sabine 230kV	Inland - McLewis 230kV	88

### AMRN

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2132
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1057
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-994
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-964
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-942
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-914
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-877
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-796
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-748
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-582
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-580
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-515
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-510
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-498
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-477
Orange - Toomey 138kV	Big Three - Sabine 230kV	-414
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-403
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-367
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-366
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-343
Marshall - Mossville 138kV	Inland - McLewis 230kV	-329
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-318
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-253
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-213
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-190
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-151
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-111
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-110
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-93
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-86
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-85
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-66
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-60
Big Three - Sabine 230kV	Bevil - Cypress 230kV	40
Hollywood - Orange 138kV	Marshall - Mossville 138kV	43
Hollywood - Orange 138kV	Toomey - Marshall 138kV	55
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	62
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	62
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	63
Orange - Toomey 138kV	Hollywood - Orange 138kV	82

## CLECO

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1224
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1162
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1151
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1109
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-1032
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1011
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-959
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-683
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-643
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-627
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-612
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-607
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-552
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-495
Orange - Toomey 138kV	Big Three - Sabine 230kV	-479
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-293
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-220
Marshall - Mossville 138kV	Hartburg - Roy S. Nelson 500kV	-170
Marshall - Mossville 138kV	Cypress 500/138kV transformer 1	-153
Marshall - Mossville 138kV	Stowell - PID 247 138kV	-108
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-104
Marshall - Mossville 138kV	Cypress - Lumberton 138kV	-93
Marshall - Mossville 138kV	Kountze - Lumberton 138kV	-71
Big Three - Sabine 230kV	Bevil - Cypress 230kV	45
Hollywood - Orange 138kV	Marshall - Mossville 138kV	53
Hollywood - Orange 138kV	Toomey - Marshall 138kV	68
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	70
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	70
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	71

## EES

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-2651
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-2639
Mossville - Roy S. Nelson 138kV	Boudin - Dynegy 230kV	-1864
Mossville - Roy S. Nelson 138kV	Boudin - Carlyss 230kV	-1839
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-1728
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-1628
Mossville - Roy S. Nelson 138kV	Vincent - Graywood 230kV	-1413
Mossville - Roy S. Nelson 138kV	Pecan Grove - Vincent 230kV	-1369
Mossville - Roy S. Nelson 138kV	Dynegy - Pecan Grove 230kV	-1276
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-982
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-945
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-925
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-862

Limiting Element	Contingency Element	ATC
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-859
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-824
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-800
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-715
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-614
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-534
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-523
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-475
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-447
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-446
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-436
Orange - Toomey 138kV	Big Three - Sabine 230kV	-388
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-354
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-321
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-320
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-300
Marshall - Mossville 138kV	Inland - McLewis 230kV	-287
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-278
Arizona - Citgo 138kV	Mossville - Roy S. Nelson 138kV	-235
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-235
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-177
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-173
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-157
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-92
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-91
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-78
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-71
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-55
Big Three - Sabine 230kV	Bevil - Cypress 230kV	37
Hollywood - Orange 138kV	Marshall - Mossville 138kV	38
Hollywood - Orange 138kV	Toomey - Marshall 138kV	49
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	58
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	58
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	59
Orange - Toomey 138kV	Hollywood - Orange 138kV	74
Big Three - Sabine 230kV	Inland - McLewis 230kV	87

## EMDE

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2058
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2049
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1166
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1041
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-979
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-946
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-927
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-895

Limiting Element	Contingency Element	ATC
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-863
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-781
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-722
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-571
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-569
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-507
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-500
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-488
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-470
Orange - Toomey 138kV	Big Three - Sabine 230kV	-408
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-395
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-359
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-358
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-336
Marshall - Mossville 138kV	Inland - McLewis 230kV	-322
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-311
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-249
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-205
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-187
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-136
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-108
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-107
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-84
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-83
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-78
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-65
Big Three - Sabine 230kV	Bevil - Cypress 230kV	39
Hollywood - Orange 138kV	Marshall - Mossville 138kV	42
Hollywood - Orange 138kV	Toomey - Marshall 138kV	54
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	61
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	61
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	62
Orange - Toomey 138kV	Hollywood - Orange 138kV	81

## LAF A

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1251
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1204
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1177
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1136
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1084
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-1057
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-994
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-700
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-690
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-651
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-636

Limiting Element	Contingency Element	ATC
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-621
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-565
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-514
Orange - Toomey 138kV	Big Three - Sabine 230kV	-490
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-299
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-225
Marshall - Mossville 138kV	Stowell - PID 247 138kV	-112
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-107
Marshall - Mossville 138kV	Chemical Road - SRW Conoco 138kV	34
Big Three - Sabine 230kV	Bevil - Cypress 230kV	46
Hollywood - Orange 138kV	Marshall - Mossville 138kV	55
Marshall - Mossville 138kV	Grimes - Frontier 345kV	60
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	63
Marshall - Mossville 138kV	Holly Springs - Newton Bulk 138kV	69
Hollywood - Orange 138kV	Toomey - Marshall 138kV	70
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	71
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	71
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	72

## LAGN

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1112
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1046
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1035
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1012
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-997
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-929
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-854
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-644
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-614
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-551
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-545
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-538
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-502
Orange - Toomey 138kV	Big Three - Sabine 230kV	-436
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-435
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-404
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-403
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-377
Marshall - Mossville 138kV	Inland - McLewis 230kV	-362
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-349
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-330
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-266
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-200
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-124
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-123

Limiting Element	Contingency Element	ATC
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-95
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-92
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-74
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-66
Big Three - Sabine 230kV	Bevil - Cypress 230kV	42
Hollywood - Orange 138kV	Marshall - Mossville 138kV	47
Hollywood - Orange 138kV	Toomey - Marshall 138kV	59
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	66
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	66
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	67
Orange - Toomey 138kV	Hollywood - Orange 138kV	88

## LEPA

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1438
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1432
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1189
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1123
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1118
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-1072
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-1038
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-999
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-928
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-661
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-660
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-603
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-589
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-587
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-537
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-476
Orange - Toomey 138kV	Big Three - Sabine 230kV	-466
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-284
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-214
Marshall - Mossville 138kV	Crockett - Grimes 345kV	-155
Marshall - Mossville 138kV	Cypress 500/138kV transformer 1	-151
Marshall - Mossville 138kV	Stowell - PID 247 138kV	-105
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-100
Marshall - Mossville 138kV	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-99
Marshall - Mossville 138kV	TenRusk (AEPW) - Crockett (AEPW) 345kV	-94
Marshall - Mossville 138kV	Cypress - Lumberton 138kV	-93
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	25
Big Three - Sabine 230kV	Bevil - Cypress 230kV	44
Hollywood - Orange 138kV	Marshall - Mossville 138kV	51
Hollywood - Orange 138kV	Toomey - Marshall 138kV	65
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	69
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	69
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	70



## OKGE

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2007
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-1989
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1132
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1031
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-969
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-935
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-917
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-880
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-854
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-772
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-704
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-565
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-560
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-502
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-494
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-482
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-465
Orange - Toomey 138kV	Big Three - Sabine 230kV	-404
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-390
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-354
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-353
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-331
Marshall - Mossville 138kV	Inland - McLewis 230kV	-317
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-306
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-246
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-200
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-185
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-126
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-106
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-105
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-83
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-82
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-69
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-64
Big Three - Sabine 230kV	Bevil - Cypress 230kV	39
Hollywood - Orange 138kV	Marshall - Mossville 138kV	42
Hollywood - Orange 138kV	Toomey - Marshall 138kV	53
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	61
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	61
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	62
Orange - Toomey 138kV	Hollywood - Orange 138kV	80
Big Three - Sabine 230kV	Inland - McLewis 230kV	90

## SMEPA

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1362
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1115
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1048
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-1032
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-998
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-974
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-930
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-852
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-619
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-615
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-549
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-546
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-536
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-511
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-503
Orange - Toomey 138kV	Big Three - Sabine 230kV	-437
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-433
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-402
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-396
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-395
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-377
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-377
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-370
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-356
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-355
Marshall - Mossville 138kV	Inland - McLewis 230kV	-355
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-342
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-339
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-323
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-266
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-254
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-231
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-204
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-200
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-188
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-145
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-121
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-120
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-94
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-93
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-92
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-73
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-66
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-61

Limiting Element	Contingency Element	ATC
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-61
Big Three - Sabine 230kV	Bevil - Cypress 230kV	42
Hollywood - Orange 138kV	Marshall - Mossville 138kV	46
Hollywood - Orange 138kV	Toomey - Marshall 138kV	59
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	65
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	65
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	66
Florence - South Jackson 115kV - Supplemental Upgrade	South Jackson - Pop Spring 115kV	72
Florence - South Jackson 115kV - Supplemental Upgrade	Kemper (SOCO) - Kemper1 (SOCO) 230kV	82
Orange - Toomey 138kV	Hollywood - Orange 138kV	88

## SOCO

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1084
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1020
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-996
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-969
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-944
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-902
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-822
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-600
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-597
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-530
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-528
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-516
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-489
Orange - Toomey 138kV	Big Three - Sabine 230kV	-425
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-417
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-381
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-380
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-356
Marshall - Mossville 138kV	Inland - McLewis 230kV	-341
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-329
Marshall - Mossville 138kV	Helbig - McLewis 230kV	-311
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-259
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-195
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-173
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-122
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-116
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-114
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-89
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-89
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-69
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-63
Big Three - Sabine 230kV	Bevil - Cypress 230kV	41

Limiting Element	Contingency Element	ATC
Hollywood - Orange 138kV	Marshall - Mossville 138kV	45
Hollywood - Orange 138kV	Toomey - Marshall 138kV	57
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	64
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	64
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	65
Orange - Toomey 138kV	Hollywood - Orange 138kV	85

## SPA

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2075
Hollywood - Roy S. Nelson 138kV	Cypress - Hartburg 500kV	-2068
Hollywood - Orange 138kV	Cypress - Hartburg 500kV	-1177
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1043
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-981
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-949
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-929
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-899
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-865
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-784
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-728
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-572
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-572
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-508
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-502
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-490
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-471
Orange - Toomey 138kV	Big Three - Sabine 230kV	-409
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-396
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-361
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-360
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-337
Marshall - Mossville 138kV	Inland - McLewis 230kV	-323
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-312
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-249
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-207
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-187
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-140
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-109
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-107
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-85
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-83
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-82
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-65
Big Three - Sabine 230kV	Bevil - Cypress 230kV	39
Hollywood - Orange 138kV	Marshall - Mossville 138kV	42
Hollywood - Orange 138kV	Toomey - Marshall 138kV	54
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	61

Limiting Element	Contingency Element	ATC
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	61
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	62
Orange - Toomey 138kV	Hollywood - Orange 138kV	81

## TVA

Limiting Element	Contingency Element	ATC
Marshall - Mossville 138kV	Cypress - Hartburg 500kV	-2200
Marshall - Mossville 138kV	Big Three - Carlyss 230kV	-1071
Marshall - Mossville 138kV	Big Three - Sabine 230kV	-1008
Marshall - Mossville 138kV	Hollywood - Roy S. Nelson 138kV	-981
Hollywood - Roy S. Nelson 138kV	Big Three - Carlyss 230kV	-956
Big Three - Sabine 230kV	Cypress - Hartburg 500kV	-932
Hollywood - Roy S. Nelson 138kV	Big Three - Sabine 230kV	-890
Marshall - Mossville 138kV	Hollywood - Orange 138kV	-810
Orange - Toomey 138kV	Cypress - Hartburg 500kV	-772
Big Three - Carlyss 230kV	Cypress - Hartburg 500kV	-593
Hollywood - Orange 138kV	Big Three - Carlyss 230kV	-589
Hollywood - Orange 138kV	Big Three - Sabine 230kV	-523
Hollywood - Roy S. Nelson 138kV	Marshall - Mossville 138kV	-520
Hollywood - Roy S. Nelson 138kV	Toomey - Marshall 138kV	-508
Orange - Toomey 138kV	Big Three - Carlyss 230kV	-484
Orange - Toomey 138kV	Big Three - Sabine 230kV	-420
Hollywood - Roy S. Nelson 138kV	Orange - Toomey 138kV	-410
Marshall - Mossville 138kV	Hartburg 500/230kV transformer 1	-375
Marshall - Mossville 138kV	Hartburg - Inland Orange 230kV	-374
Marshall - Mossville 138kV	Bevil - Cypress 230kV	-350
Marshall - Mossville 138kV	Inland - McLewis 230kV	-336
Marshall - Mossville 138kV	Ameila Bulk - Bevil 230kV	-324
Toomey - Marshall 138kV	Big Three - Carlyss 230kV	-256
Toomey - Marshall 138kV	Cypress - Hartburg 500kV	-220
Toomey - Marshall 138kV	Big Three - Sabine 230kV	-192
Plantation - Cedar Hill 138kV	Oak Ridge - Porter 138kV	-164
Hollywood - Roy S. Nelson 138kV	Hartburg 500/230kV transformer 1	-113
Hollywood - Roy S. Nelson 138kV	Hartburg - Inland Orange 230kV	-112
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-111
Orange - Toomey 138kV	Hollywood - Roy S. Nelson 138kV	-87
Hollywood - Roy S. Nelson 138kV	Bevil - Cypress 230kV	-87
Hollywood - Roy S. Nelson 138kV	Inland - McLewis 230kV	-68
Hollywood - Roy S. Nelson 138kV	Mossville - Roy S. Nelson 138kV	-62
Big Three - Sabine 230kV	Bevil - Cypress 230kV	40
Hollywood - Orange 138kV	Marshall - Mossville 138kV	44
Hollywood - Orange 138kV	Toomey - Marshall 138kV	56
Big Three - Sabine 230kV	Hartburg 500/230kV transformer 1	63
Big Three - Sabine 230kV	Ameila Bulk - Bevil 230kV	63
Big Three - Sabine 230kV	Hartburg - Inland Orange 230kV	64
Orange - Toomey 138kV	Hollywood - Orange 138kV	84

## 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	12/31/2013
PID 238	Lakeover	550	In Service
PID 240	Hot Springs	650	In Service
PID 247	PID-247	180	6/1/2011

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 Coop	100	1/1/2012	1/1/2017
74728395	Brazos Electric Coop	100	1/1/2012	1/1/2017
74728400	Brazos Electric Coop	100	1/1/2012	1/1/2017
74728415	Brazos Electric Coop	100	1/1/2012	1/1/2017
74728420	Brazos Electric Coop	100	1/1/2012	1/1/2017
74789476	Entergy Services (SPO)	1	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
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)	1	2/1/2013	2/1/2015
74899969	Entergy Services (SPO)	1	2/1/2012	2/1/2015
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	6/1/2022
74899989	Entergy Services (SPO)	485	6/1/2012	6/1/2022
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
75009407	Entergy Services (SPO)	1	1/1/2012	1/1/2042
75029832	Entergy Services (SPO)	130	6/1/2015	6/1/2045