



***Feasibility Study  
PID 259  
36MW Plant***

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# Energy Resource Interconnection Service

## 1. Introduction

This Energy Resource Interconnection Service (ERIS) is based on the Customer's request for 36MW interconnection on Entergy's transmission system at the North Bastrop 115kV substation. The proposed commercial operation date of the project is December 31, 2013. The objective of this study is to assess the reliability impact of the new facility on the Entergy transmission system as well as its effects on the system's existing short circuit current capability. It is also intended to determine whether the transmission system meets standards established by NERC Reliability Standards and Entergy's planning guidelines when the plant is connected to Entergy's transmission system. If not, transmission improvements will be identified.

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 259 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 259 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 259 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 259 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 259 plant **with and without priors**. Priors included are: 221, 231, 238, 240, 244, 247, 250, 251, 252, 253, 254, 255, 256, and 257.

## 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. These upgrades can be found on Entergy's OASIS web page <http://www.oatioasis.com/EES/EESDocs/Disclaimer.html>. The loads were scaled based on the forecasted loads for the year. All firm power transactions between Entergy and its neighboring control areas were modeled for the year 2014 excluding short-term firm transactions on the same transmission interface. An economic dispatch was carried out on Entergy generating units after the scaling of load and modeling of transactions. The PID 259 generation interconnection point was modeled at the North Bastrop 115kV substation. These associated facilities were then modeled in the case to build a revised case for the load flow analysis. Transfers were simulated between thirteen (13) control areas and Entergy using the requesting generator as the source and adjacent control area as sink.

This study considered the following four scenarios:

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

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

## 3.2 Load Flow Analysis

### 3.2.1 Load Flow Analysis:

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 259 – 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	-291	36	36	36
AEPW	American Electric Power West	2014	-683	-13367	-507	-11696
AMRN	Ameren Transmission	2014	-284	36	36	36
CLEC	CLECO	2014	-524	-745	-430	-554
EES	Entergy	2014	36	-8148	36	-6841
EMDE	Empire District Electric Co	2014	-307	36	36	36
LAFA	Lafayette Utilities System	2014	-452	-2907	-299	-2469
LAGN	Louisiana Generating, LLC	2014	36	-2826	36	-2307
LEPA	Louisiana Energy & Power Authority	2014	-689	-430	-1445	-3361
OKGE	Oklahoma Gas & Electric Company	2014	-1196	19	-166	36
SMEPA	South Mississippi Electric Power Assoc.	2014	*	-1347	*	-1208
SOCO	Southern Company	2014	-282	36	36	-410
SPA	Southwest Power Administration	2014	-306	36	-164	36
TVA	Tennessee Valley Authority	2014	-266	36	36	36

\*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					
Champagne - Plaisance (CLECO) 138kV	16,250,000							X		X					
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X		X					
French Settlement - Sorrento 230kV	14,000,000											X			
Greenville - Leland 115kV	8,400,000	X		X			X						X	X	X
Greenwood - Humphrey 115kV	1,250,000							X		X					
Greenwood - Terrebone 115kV	12,500,000				X			X		X					
Habetz - Richard 138kV	Included in 2011 ICT Base Plan							X		X					
International Paper - Mansfield 138kV (CLECO)	23,750,000		X								X				
International Paper - Wallake 138kV (CLECO)	22,500,000		X								X				
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
Lake Village Bagby - Macon Lake 115kV	3,360,000													X	
North Crowley - Scott1 138kV	21,250,000							X		X					
Rapides (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X		X					
Ray Braswell - West Jackson 115kV	5,040,000											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					
Toledo - VP Tap 138kV	Included in 2011 ICT Base Plan		X												

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

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Addis - Big Cajun 1 230kV	Included in 2011 ICT Base Plan									X					
Ameila Bulk - Bevil 230kV	10,500,00					X									
Amelia Bulk - Helbig 230kV	17,500,000		X			X									
Bevil - Cypress 230kV	22,750,000					X									
Bonin - Cecelia 138kV	17,250,000									X					
Brookhaven - Mallalieu (MEPA) 115kV	Included in 2011 ICT Base Plan											X			
Coly - Vignes 230kV - Supplemental Upgrade	Committed to by others									X					
Cypress 500/138kV transformer 1	18,770,000		X			X									
Cypress 500/230kV transformer	19,110,000		X			X									
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X			
French Settlement - Sorrento 230kV	14,000,000											X			
Grimes - Grimes 345/138kV transformer 1	18,777,000					X		X	X						
Grimes - Grimes 345/138kV transformer 2	18,777,000					X		X	X						
Hartburg - Inland Orange 230kV	Included in 2011 ICT Base Plan		X			X									
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others		X			X									
Hartburg 500/230kV transformer 1	21,000,000		X			X									

Limiting Elements	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	LAFA	LAGN	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan		X			X									
Inland - McLewis 230kV	Included in 2011 ICT Base Plan		X			X									
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others		X			X									
International Paper - Mansfield 138kV (CLECO)	23,750,000		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					
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					
Ray Braswell - West Jackson 115kV	5,040,000											X			
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			
Roy S. Nelson 500/230kV auto	21,000,000				X	X									
Roy S. Nelson - Verdine 230kV	5,250,000					X									
Semere - Scott2 138kV	20,000,000							X							
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												
Champagne - Plaisance (CLECO) 138kV	16,250,000							X							
Coughlin - Plaisance 138kV (CLECO)	22,500,000							X							
Greenwood - Terrebone 115kV	12,500,000				X			X		X					
International Paper - Mansfield 138kV (CLECO)	23,750,000		X												
International Paper - Wallake 138kV (CLECO)	22,500,000		X												
Jackson Miami - Jackson Monument Street 115kV	3,750,000											X			
Lake Village Bagby - Macon Lake 115kV	3,360,000										X			X	
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	19,250,000							X		X					
Ray Braswell - West Jackson 115kV	5,040,000											X			
Ray Braswell 500/230kV transformer ckt2 - Supplemental	Committed to by others											X			
Willow Glen - Evergreen 230kV ckt 2	Included in 2011 ICT Base Plan									X					

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

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Ameila Bulk - Bevil 230kV	10,500,000					X									
Amelia Bulk - Helbig 230kV	17,500,000		X												
Bevil - Cypress 230kV	22,750,000					X									
Bonin - Cecelia 138kV	17,250,000									X					
Cypress 500/138kV transformer 1	18,770,000		X			X									
Cypress 500/230kV transformer	19,110,000		X			X									
Florence - South Jackson 115kV - Supplemental Upgrade	Committed to by others											X	X		
Grimes - Grimes 345/138kV transformer 1	18,777,000					X		X	X	X					
Grimes - Grimes 345/138kV transformer 2	18,777,000					X		X	X	X					
Grimes - Mt. Zion 138kV	15,960,000							X	X						
Hartburg - Inland Orange 230kV	Included in 2011 ICT Base Plan		X			X									
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Committed to by others		X			X									
Hartburg 500/230kV transformer 1	19,110,000		X			X									
Helbig - McLewis 230kV	Included in 2011 ICT Base Plan		X			X									
Inland - McLewis 230kV	Included in 2011 ICT Base Plan		X			X									

Limiting Element	Est. Cost	AECI	AEPW	AMRN	CLECO	EES	EMDE	Lafa	Lagn	LEPA	OKGE	SMEPA	SOCO	SPA	TVA
Inland - McLewis 230kV - Supplemental Upgrade	Committed to by others		X			X									
International Paper - Mansfield 138kV (CLECO)	23,750,000		X												
Jackson Miami - Jackson Monument Street 115kV	3,500,000											X			
Jackson Miami - Rex Brown 115kV	Included in 2011 ICT Base Plan											X			
Ray Braswell - West Jackson 115kV	5,040,000											X			
Rex Brown W - Rex Brown C 115kV ckt 1	TBD											X			
Roy S. Nelson 500/230kV auto	19,110,000				X	X									
Roy S. Nelson - Verdine 230kV	5,250,000					X									

### 3.3.1 DETAILS OF SCENARIO 1 – 2014

#### AECI

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-291

#### AEPW

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-683
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-239
Toledo - VP Tap 138kV	Colfax - Rodemacher 230kV	-64

#### AMRN

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-284

#### CLECO

Limiting Element	Contingency Element	ATC
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-524

#### EES

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### EMDE

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-307

#### Lafa

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-452
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-386
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-319
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-303
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-258
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-253
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-222
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-193
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-156
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-135
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-112
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-73
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-64

Limiting Element	Contingency Element	ATC
Semere - Scott2 138kV	Wells 500/230kV transformer	-7
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	1
Greenwood - Humphrey 115kV	Webre - Wells 500kV	17
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	23
Scott1 - Bonin 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	29
North Crowley - Scott1 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	32

### LAGN

Limiting Element	Contingency Element	ATC
NONE	NONE	36

### LEPA

Limiting Element	Contingency Element	ATC
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-689
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-588
Semere - Scott2 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-527
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-487
Semere - Scott2 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-427
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-419
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-385
Habetz - Richard 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-374
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-338
Coughlin - Plaisance 138kV (CLECO)	Cocodrie - Vil Plat 230kV	-280
Habetz - Richard 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-244
Champagne - Plaisance (CLECO) 138kV	Cocodrie - Vil Plat 230kV	-170
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-99
Coughlin - Plaisance 138kV (CLECO)	Vil Plat - West Fork 230kV	-81
North Crowley - Scott1 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	4
Greenwood - Humphrey 115kV	Webre - Wells 500kV	19
Champagne - Plaisance (CLECO) 138kV	Vil Plat - West Fork 230kV	29

### OKGE

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-1196
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-418

### SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Andrus - Holy Bluff 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Clinton Industrial - Holy Bluff 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell - Clinton Industrial 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover - Ray Braswell 500kV	*

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Bagby 230/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Gerald Andrus - Bagby 230kV	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-802
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-601
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-601
Ray Braswell - West Jackson 115kV	South Jackson 230/115kV transformer 1	-571
French Settlement - Sorrento 230kV	Fairview - Gypsy 230kV	-250
French Settlement - Sorrento 230kV	Fairview - Madisonville 230kV	-210
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-174
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-157
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-157
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-33
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	4

#### SOCO

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-282

#### SPA

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-306
Lake Village Bagby - Macon Lake 115kV	Eldorado EHV - Sterlington 500kV	-238

#### TVA

Limiting Element	Contingency Element	ATC
Greenville - Leland 115kV	Gerald Andrus SES - Indianola 230kV	-266

### 3.3.2 DETAILS OF SCENARIO 2 - 2014

#### AECI

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### AEPW

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-13367
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-12990
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-12879
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-12644
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-12151
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-9730
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-9311
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-8425
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-3691
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	11

#### AMRN

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### CLECO

Limiting Element	Contingency Element	ATC
Roy S. Nelson 500/230kV auto	Cypress - Hartburg 500kV	-745

#### EES

Limiting Element	Contingency Element	ATC
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-8148
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-7798
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-7793
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-7732
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-7407
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-6509
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-5842
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-5736
Bevil - Cypress 230kV	Hartburg 500/230kV transformer 1	-4722
Bevil - Cypress 230kV	Hartburg - Inland Orange 230kV	-4710
Bevil - Cypress 230kV	Inland - McLewis 230kV	-4444
Ameila Bulk - Bevil 230kV	Hartburg 500/230kV transformer 1	-4282
Ameila Bulk - Bevil 230kV	Hartburg - Inland Orange 230kV	-4270
Bevil - Cypress 230kV	Helbig - McLewis 230kV	-4203
Ameila Bulk - Bevil 230kV	Inland - McLewis 230kV	-3994

Limiting Element	Contingency Element	ATC
Ameila Bulk - Bevil 230kV	Helbig - McLewis 230kV	-3745
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-3742
Inland - McLewis 230kV	Bevil - Cypress 230kV	-3162
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-3070
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-3070
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-3069
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-3061
Inland - McLewis 230kV	Ameila Bulk - Bevil 230kV	-2954
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-2870
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-2791
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-2701
Hartburg - Inland Orange 230kV	Bevil - Cypress 230kV	-2701
Helbig - McLewis 230kV	Bevil - Cypress 230kV	-2601
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-2584
Hartburg - Inland Orange 230kV	Ameila Bulk - Bevil 230kV	-2493
Helbig - McLewis 230kV	Ameila Bulk - Bevil 230kV	-2385
Inland - McLewis 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-2154
Inland - McLewis 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-1937
Bevil - Cypress 230kV	Big Three - Carlyss 230kV	-1772
Bevil - Cypress 230kV	Big Three - Sabine 230kV	-1603
Roy S. Nelson - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-1360
Cypress 500/138kV transformer 1	Big Three - Carlyss 230kV	-1263
Cypress 500/138kV transformer 1	Big Three - Sabine 230kV	-1142
Cypress 500/138kV transformer 1	Crockett - Grimes 345kV	-1132
Ameila Bulk - Bevil 230kV	Big Three - Carlyss 230kV	-1084
Bevil - Cypress 230kV	Cypress - Lumberton 138kV	-1071
Cypress 500/138kV transformer 1	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-962
Cypress 500/138kV transformer 1	TenRusk (AEPW) - Crockett (AEPW) 345kV	-936
Bevil - Cypress 230kV	Kountze - Lumberton 138kV	-931
Ameila Bulk - Bevil 230kV	Big Three - Sabine 230kV	-909
Roy S. Nelson 500/230kV auto	Cypress - Hartburg 500kV	-799
Bevil - Cypress 230kV	Cypress - Honey 138kV	-646
Bevil - Cypress 230kV	Bragg - Honey 138kV	-467
Ameila Bulk - Bevil 230kV	Cypress - Lumberton 138kV	-411
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-365
Ameila Bulk - Bevil 230kV	Kountze - Lumberton 138kV	-264
Cypress 500/230kV transformer	Hartburg 500/230kV transformer 1	-179
Cypress 500/230kV transformer	Hartburg - Inland Orange 230kV	-170
Hartburg 500/230kV transformer 1	Bevil - Cypress 230kV	-147
Inland - McLewis 230kV	Big Three - Carlyss 230kV	-108

#### EMDE

Limiting Element	Contingency Element	ATC
NONE	NONE	36



**Lafa**

Limiting Element	Contingency Element	ATC
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-2907
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-2907
Vatican - Colton Road 138kV	Cocodrie - Vil Plat 230kV	-136
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-96
Vatican - Colton Road 138kV	Vil Plat - West Fork 230kV	-62
Semere - Scott2 138kV	Wells 500/230kV transformer	27

**LAGN**

Limiting Element	Contingency Element	ATC
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-2826
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-2826

**LEPA**

Limiting Element	Contingency Element	ATC
Addis - Big Cajun 1 230kV	Coly - McKnight 500kV	-430
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	-317
Willow Glen 500/230kV Transformer	Coly 500/230kV transformer	-259
Judice - Scott1 138kV	Sellers Road (CLECO) - Labbe (Lafa) 230kV	-179
Judice - Scott1 138kV	Sellers Road (CLECO) - Segura (CLECO) 230kV	-176
Judice - Scott1 138kV	Segura (CLECO) 230/138kV transformer'	-171
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-155
Bonin - Cecelia 138kV	Acadia GSU - Colonial Academy 138kV	-152
Bonin - Cecelia 138kV	Acadia GSU - Scanlan 138kV	-45
Port Hudson 230/138 transformer 2	Port Hudson 230/138 transformer 1	-42
Port Hudson 230/138 transformer 1	Port Hudson 230/138 transformer 2	-23
Coly - Vignes 230kV - Supplemental Upgrade	A.A.C. - Polsky Carville 230kV	22

**OKGE**

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	19

**SMEPA**

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1347
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-658
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-658
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-631
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-544
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-522
Ray Braswell - West Jackson 115kV	South Jackson 230/115kV transformer 1	-493
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson	-489

Limiting Element	Contingency Element	ATC
	115kV	
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-481
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-423
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-421
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-399
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-369
Brookhaven - Mallalieu (MEPA) 115kV	Bogalusa - Franklin 500kV	-310
Brookhaven - Mallalieu (MEPA) 115kV	Bogalusa - Adams Creek 500/230kV transformer	-310
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-193
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-69
French Settlement - Sorrento 230kV	Bogalusa - Franklin 500kV	-53
French Settlement - Sorrento 230kV	Bogalusa - Adams Creek 500/230kV transformer	-53
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-14
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-14

#### SOCO

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### SPA

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### TVA

Limiting Element	Contingency Element	ATC
NONE	NONE	36

### 3.3.3 DETAILS OF SCENARIO 3 - 2014

#### AECI

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### AEPW

Limiting Element	Contingency Element	ATC
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-507
Carroll 230/138kV transformer (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-28
International Paper - Wallake 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-19

#### AMRN

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### CLECO

Limiting Element	Contingency Element	ATC
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-430

#### EES

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### EMDE

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### Lafa

Limiting Element	Contingency Element	ATC
Rapidies (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-299
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-261
Coughlin - Plaisance 138kV (CLECO)	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-217
Champagne - Plaisance (CLECO) 138kV	Cocodrie (CLECO) - Vil Plat (CLECO) 230kV	-142
Coughlin - Plaisance 138kV (CLECO)	Vil Plat (CLECO) - West Fork (CLECO) 230kV	-61
Champagne - Plaisance (CLECO) 138kV	Vil Plat (CLECO) - West Fork (CLECO) 230kV	15

#### LAGN

Limiting Element	Contingency Element	ATC
NONE	NONE	36

## LEPA

Limiting Element	Contingency Element	ATC
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1445
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1440
Rapides (CLECO) - Rodemacher (CLECO) 230kV	Rodemacher (CLECO) - Sherwood (CLECO) 230kV	-441
Greenwood - Terrebone 115kV	Webre - Wells 500kV	-284

## OKGE

Limiting Element	Contingency Element	ATC
Lake Village Bagby - Macon Lake 115kV	Eldorado EHV - Sterlington 500kV	-166

## SMEPA

Limiting Element	Contingency Element	ATC
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/230kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell 500/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Angie - Adams Creek 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Angie (SOCO) - Hattisburg SW (SOCO) 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Andrus - Holy Bluff 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Clinton Industrial - Holy Bluff 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Ray Braswell - Clinton Industrial 230kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Lakeover - Ray Braswell 500kV	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Bagby 230/115kV transformer 1	*
Ray Braswell 500/230kV transformer ckt2 - Supplemental Upgrade	Gerald Andrus - Bagby 230kV	*
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-942
Ray Braswell - West Jackson 115kV	South Jackson 230/115kV transformer 1	-459
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-379
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-290
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-264
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-264
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-242
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-233
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-155
Jackson Miami - Jackson Monument Street 115kV	North Jackson - Jackson Canton Road 115kV	-37

**SOCO**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
NONE	NONE	36

**SPA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Lake Village Bagby - Macon Lake 115kV	Eldorado EHV - Sterlington 500kV	-164

**TVA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
NONE	NONE	36

### 3.3.4 DETAILS OF SCENARIO 4 - 2014

#### AECI

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### AEPW

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-11696
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-10754
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-10021
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-8984
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-8615
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-8199
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-8098
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-7673
Amelia Bulk - Helbig 230kV	Cypress - Hartburg 500kV	-2266
International Paper - Mansfield 138kV (CLECO)	Dolet Hills - S.W. Shreevport 345kV (CLECO)	-79

#### AMRN

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### CLECO

Limiting Element	Contingency Element	ATC
Roy S. Nelson 500/230kV auto	Cypress - Hartburg 500kV	-554

#### EES

Limiting Element	Contingency Element	ATC
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-6841
Inland - McLewis 230kV - Supplemental Upgrade	Cypress - Hartburg 500kV	-6391
Cypress 500/138kV transformer 1	Cypress 500/230kV transformer	-6107
Helbig - McLewis 230kV	Cypress - Hartburg 500kV	-6024
Cypress 500/230kV transformer	Cypress 500/138kV transformer 1	-5363
Hartburg - Inland Orange 230kV	Cypress - Hartburg 500kV	-5039
Hartburg 500/230kV transformer 1	Cypress - Hartburg 500kV	-4796
Inland - McLewis 230kV	Cypress - Hartburg 500kV	-4560
Bevil - Cypress 230kV	Hartburg 500/230kV transformer 1	-4202
Bevil - Cypress 230kV	Hartburg - Inland Orange 230kV	-4192
Bevil - Cypress 230kV	Inland - McLewis 230kV	-3903
Ameila Bulk - Bevil 230kV	Hartburg 500/230kV transformer 1	-3748
Ameila Bulk - Bevil 230kV	Hartburg - Inland Orange 230kV	-3738
Bevil - Cypress 230kV	Helbig - McLewis 230kV	-3673
Ameila Bulk - Bevil 230kV	Inland - McLewis 230kV	-3439

Limiting Element	Contingency Element	ATC
Ameila Bulk - Bevil 230kV	Helbig - McLewis 230kV	-3201
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-2698
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-2698
Cypress 500/138kV transformer 1	Hartburg 500/230kV transformer 1	-2451
Cypress 500/138kV transformer 1	Hartburg - Inland Orange 230kV	-2444
Cypress 500/138kV transformer 1	Inland - McLewis 230kV	-2238
Cypress 500/138kV transformer 1	Helbig - McLewis 230kV	-2075
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-1641
Bevil - Cypress 230kV	Big Three - Carlyss 230kV	-1621
Bevil - Cypress 230kV	Big Three - Sabine 230kV	-1454
Hartburg - Inland Orange 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-1423
Roy S. Nelson - Verdine 230kV	Carlyss - Roy S. Nelson 230kV	-1163
Ameila Bulk - Bevil 230kV	Big Three - Carlyss 230kV	-942
Inland - McLewis 230kV - Supplemental Upgrade	Bevil - Cypress 230kV	-913
Bevil - Cypress 230kV	Cypress - Lumberton 138kV	-911
Cypress 500/138kV transformer 1	Big Three - Carlyss 230kV	-859
Bevil - Cypress 230kV	Kountze - Lumberton 138kV	-772
Ameila Bulk - Bevil 230kV	Big Three - Sabine 230kV	-768
Cypress 500/138kV transformer 1	Crockett - Grimes 345kV	-742
Cypress 500/138kV transformer 1	Big Three - Sabine 230kV	-739
Inland - McLewis 230kV - Supplemental Upgrade	Ameila Bulk - Bevil 230kV	-684
Cypress 500/138kV transformer 1	LeBrock (AEPW) - TenRusk (AEPW) 345kV	-569
Roy S. Nelson 500/230kV auto	Cypress - Hartburg 500kV	-558
Cypress 500/138kV transformer 1	TenRusk (AEPW) - Crockett (AEPW) 345kV	-544
Bevil - Cypress 230kV	Cypress - Honey 138kV	-434
Helbig - McLewis 230kV	Bevil - Cypress 230kV	-324
Bevil - Cypress 230kV	Bragg - Honey 138kV	-259
Ameila Bulk - Bevil 230kV	Cypress - Lumberton 138kV	-257
Ameila Bulk - Bevil 230kV	Kountze - Lumberton 138kV	-111
Helbig - McLewis 230kV	Ameila Bulk - Bevil 230kV	-86

#### EMDE

Limiting Element	Contingency Element	ATC
NONE	NONE	36

#### Lafa

Limiting Element	Contingency Element	ATC
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-2469
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-2469
Grimes - Mt. Zion 138kV	Hartburg - Mount Olive 500kV	-192

## LAGN

Limiting Element	Contingency Element	ATC
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-2307
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-2307
Grimes - Mt. Zion 138kV	Hartburg - Mount Olive 500kV	-179

## LEPA

Limiting Element	Contingency Element	ATC
Grimes - Grimes 345/138kV transformer 2	Grimes - Grimes 345/138kV transformer 1	-3361
Grimes - Grimes 345/138kV transformer 1	Grimes - Grimes 345/138kV transformer 2	-3361
Willow Glen - Evergreen 230kV ckt 2	Bayou Laboutte 500/230kV transformer 1	-1469
Willow Glen - Evergreen 230kV ckt 2	Iberville - Bayou Laboutte 230kV	-1462
Bonin - Cecelia 138kV	Colonial Academy - Richard 138kV	26

## OKGE

Limiting Element	Contingency Element	ATC
NONE	NONE	36

## SMEPA

Limiting Element	Contingency Element	ATC
Jackson Miami - Jackson Monument Street 115kV	South Jackson 230/115kV transformer 1	-1208
Ray Braswell - West Jackson 115kV	South Jackson 230/115kV transformer 1	-470
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Ray Braswell 115kV	-454
Jackson Miami - Jackson Monument Street 115kV	Klean - Jackson Northeast 115kV	-363
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - Rex Brown E 115kV	-340
Jackson Miami - Jackson Monument Street 115kV	Jackson HICO - North Jackson 115kV	-340
Jackson Miami - Jackson Monument Street 115kV	Jackson Forrest Hill - Southwest Jackson 115kV	-317
Rex Brown W - Rex Brown C 115kV ckt 1	South Jackson 230/115kV transformer 1	-312
Jackson Miami - Jackson Monument Street 115kV	Klean - Flowood 115kV	-306
Jackson Miami - Jackson Monument Street 115kV	Choctaw MS (TVA) - Clay (TVA) 500kV	-226
Jackson Miami - Jackson Monument Street 115kV	Lake Castle - Lakeover 230kV	-208
Jackson Miami - Jackson Monument Street 115kV	Ray Braswell - West Jackson 115kV	-184
Rex Brown W - Rex Brown C 115kV ckt 1	Ray Braswell 500/115kV transformer 1	-178
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-132
Jackson Miami - Rex Brown 115kV	South Jackson 230/115kV transformer 1	-83
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Franklin 500kV	-55
Florence - South Jackson 115kV - Supplemental Upgrade	Bogalusa - Adams Creek 500/230kV transformer	-55



**SOCO**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
Florence - South Jackson 115kV - Supplemental Upgrade	Choctaw MS (TVA) - Clay (TVA) 500kV	-410

**SPA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
NONE	NONE	36

**TVA**

<b>Limiting Element</b>	<b>Contingency Element</b>	<b>ATC</b>
NONE	NONE	36

## 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
PID 254	Wells 500kV	251	1/1/2013
PID 255	Colton 138kV	251	1/1/2013

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