Southwest Power Pool, Inc.

ENTERGY ICT TRANSMISSION PLANNING SUMMIT

August 11, 2009

Astor Crown Plaza – New Orleans, Louisiana

Dial-in: 210-234-2785

Participant Code: 316949

• N o t e s •

11:00 am – 4:30 pm

Welcome and Introductions
Bruce Rew called the meeting into order at approximately 11:00 AM. Bruce announced an ERSC meeting will be held at 12:30PM. A list of those who attended is attached.

Opening Remarks
Randy Helmick gave a presentation on the natural disasters that occurred in 2008 and how they had a significant impact on Entergy's transmission system as well as others.

Planning Process Overview
Jody Holland gave an overview of the development of the Base Plan and Construction Plan. The power point presentation can be found in the background materials posted on the SPP website. There were no questions.

Entergy 2010-2012 Draft Construction Plan
Charles Long gave a presentation on the Arkansas and Mississippi portions of the Entergy 2010-2012 Draft Construction Plan.

Becky Turner asked if the Sarepta project was still included in the CP. Charles Long said yes that project was included in the CP and will be in the Louisiana presentation.

Joe Payne gave a presentation on the Louisiana and Texas portions of the Entergy 2010-2012 Draft Construction Plan.

Terry Dodson asked how many projects were new in the CP versus past years. Joe said he thinks there is around 20 to 25% more projects than normal.

APSC asked if there was anywhere to get the cost estimates for the CP projects. Joe said the cost estimates for the CP projects are currently not available.

Steve presented an overview of the 2009 Reliability Assessment and 2010 Draft Construction Plan Evaluation.

Teri Gallup asked if anyone looks at third party impacts. Steve verified the models include the STEP projects included in the SPP area. Steve said the ICT focuses on the CP, but if the ICT sees problems on the SPP footprint, the ICT will coordinate with the RTO.

Terry Dodson asked about the reason for the significant difference in the number of thermal overloads and low voltages contained in this year's contingency scan spreadsheet versus previous years'. Steve

responded that previous years' scans did not include the draft construction plan projects whereas this year's does. The reduced load forecast also had an impact.

Breakout Planning Discussion Sessions

Arkansas (EAI)

Terri Gallup asked if the Danville project was completed or delayed. Paul Simoneaux said Entergy is waiting on line traps and CT settings. Paul said he will check on the status of the project and contact Terri.

Paul Simoneaux mentioned there will be an open house held in September regarding the new Osage substation. Terri Gallup mentioned AEP has a 345kV line connecting to Osage substation.

Ollie Burke mentioned upgrades that are being funded by OG&E are FERC mitigation upgrades and are not considered supplemental. This was shown incorrectly on a presentation slide.

Ronnie Frizzell asked if Entergy is looking around the Cabot to Beebe area for upgrades. Paul Simoneaux said Entergy is looking at larger plans around the Holland Bottoms area. Entergy looked out to 2018 and still saw some issues.

Paul Simoneaux mentioned the conductor size for the Aquila project will be 666. Ronnie Frizzell asked if Entergy took the AECC buswork into account when determining the conductor size. Jerry Reed said Entergy did take the AECC buswork into account.

Paul Simoneaux mentioned Entergy is looking at bigger projects to solve area problems in the Ebony area and welcomed any suggestions. Todd Peterson proposed a 500kV conversion or a 3rd loop around West Memphis. Ronnie Frizzell proposed a project to tie Harrisburg into Newport. Paul said Entergy has studied the Harrisburg option, but it didn't solve the problems of interest. Ronnie Frizzell mentioned upgrading the Gilmore to Osceola line.

George Heintzen mentioned the Holland Bottoms project has a proposed 2011 ISD, but overloads in the area are seen in 2010. George asked how Entergy plans to address the overloads. Paul Simoneaux said the Hamlet breaker will solve the problems in that area until the Holland Bottoms project is complete.

Paul Simoneaux mentioned there may be some issues acquiring the "right of way" for the Benton North to Benton South project. Terry McKinney said Benton passed a vote requiring all lines to be underground.

Ronnie Frizzell asked where Entergy plans to run the Jonesboro 500kV line. Paul Simoneaux said Entergy plans to build the line south of Jonesboro on the east portion of line going into Hergett. The substation site will be between the 161kV tap and 500kV line ending the AECC double loop.

Ronnie Frizzell mentioned areas of concern regarding voltage such as Lake Village Bagby to Macon Lake, south of Bagby to Chico and further south. Paul Simoneaux said he thinks the Ouachita project should provide voltage support.

Mississippi (EMI)

John Simpson mentioned he is working on a Large Generator Interconnection Agreement (LGIA) that has to be finalized in August. One of the upgrades in the LGIA is to build a second autotransformer at McAdams. Entergy has added a project to their new 2010 -2012 Draft Construction Plan to add a second autotransformer at McAdams for reliability needs. John asked if he would have to pay for the upgrade

and receive supplemental rights or if Entergy would pay for this upgrade though the base rate. Jody Holland explained that the current Base Plan is used to determine if the upgrade is Base Plan or Supplemental. The upgrade would be considered Supplemental because that project is not in the current Base Plan. Jody recommended that John notify his Entergy contacts working on his contract of this situation and see if they can work out a mutual agreement since Entergy believes the upgrade is needed for reliability.

John Heisey asked when a line or project becomes effective in the AFC Models. Kyle Watson said the AFC models have the project added when the project is placed in-service or is energized.

Louisiana (ELL, EGSL, ENOI)

Becky Turner asked if there have been any impacts on the El Dorado Autotransformer and McNeil transformers. The ICT said there have not been any impacts and that is due to the load reduction.

Becky Turner asked if a sensitivity analysis has been performed with Entegra turned on to pmax with the loss of Sarepta to Longwood 115kV line. Edin Habibovic had analyzed that scenario back in 2005. No issues were identified at that time using the models developed back in the 2004/2005 time frame. A sensitivity analysis has not been performed using later model versions.

Becky Turner asked how long is the outage scheduled for the Ray Braswell – Baxter Wilson upgrade. The ICT said that information is stated in the Facility Study Report with an in-service date of 2010.
Becky Turner asked how upgrades are put into the short term models. Steve said the upgrades are not put in the short term models until they are energized or are in-service.

Michael Gravolet asked what impact did the Amite South Import Improvement projects have on the Little Gypsy – Fairview 230kV line. Anique Hutchins said the projects did alleviate loading on that line.

Michael Gravolet asked if the Bayou Steel substation was owned by a Customer or by Entergy. Entergy said Bayou Steel is Customer owned. Carol Barfield asked if Bayou Steel is an existing substation. Entergy said Bayou Steel is an existing substation.

Roberto Paliza asked for a follow-up on the Webre – Wells 500kV problems. Joe Payne said he believes the problems caused by the Webre – Wells 500kV contingency were reduced by the load reduction and Acadiana Load Pocket projects.

Roberto Paliza asked why there is a difference in the Texas area beyond the three year Construction Plan window of what upgrades Entergy identifies and the ICT identifies, for example the upgrades at China & Amelia. Entergy and the ICT think in the difference could be the result of how load forecasts in the models are weather normalized. The Base Case models used by the ICT are weather normalized at 96°F. Entergy also performs a screen with the load forecasted for 100°F.

Texas (ETI)

George Kithas asked if the Jacinto – Lewis Creek 138kV to 230kV upgrade is actually going to be completed. George stated that the Sam Houston Electric Coop had to cancel their order of transformers because Entergy was unsure if they were going to complete the upgrade. Doug Powell said the project will be completed, but it will take time because the project requires a lot of coordination with other projects in Western Region. Also, there will have to be some major generation outages in the area during the conversion that will take time to plan. George Kithas said there needs to be some type of commitment from Entergy so Sam Houston Electric Coop can reorder the transformers. Doug Powell said Entergy was watching the real time loads in the Western Region to verify that the upgrades were going to be needed before committing 100% to the project. Doug said he will schedule a meeting in August to discuss the project timeline.

Jeff Chambliss asked if the Fawil Construction Plan project will require high speed relaying. Doug Powell said he will have to get back with Jeff on that.

John Chiles asked why the Alden SVC was removed from the Construction Plan. Keith Kliebert said this project fixed voltage issues in the area and could possibly appear in the CP in the future if a stability analysis identifies a need for the project.

Economic Studies and Other Planning Studies
Doug Bowman presented an overview of the ISTEP.

Charles Long asked what kV levels were monitored for the ISTEP. Doug Bowman said the ICT monitored the 500kV and will evaluate underlying system later in the ISTEP process.

Southeast Inter-Regional Planning Process (SIRPP)
Eddie Filat gave an update on the Southeast Inter-Regional Planning Process (SIRPP).

Eastern Interconnect Planning Collaborative (EIPC)
George Bartlett gave a status update on the Eastern Interconnect Planning Collaborative (EIPC). David asked who provided the guidance for the EIPC. George said he believes FERC does.

Closing Remarks
Bruce Rew closed the meeting at approximately 4:15PM.

ETEC’s comments received 08/21/09

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Description	Cost Allocation Guideline	Project Category
Block load addition	Projects needed to accommodate the addition of block loads beyond expected normal load growth	Attachment T	CP (load related)
Load growth	Projects needed to reliably serve expected normal load growth	Attachment T	CP (load related)
Transmission Reliability - Maintaining Infrastructure	Projects needed to maintain existing infrastructure or existing levels of reliability	Attachment T	CP (AM related)
Transmission Reliability - Meeting Planning Criteria	Projects needed to meet NERC Reliability Standards, SERC Supplements, and Entergy Transmission Local Planning Criteria	ICT to determine	CP (others)
Transmission Reliability - Regulatory	Projects to satisfy regulatory requirements	ICT to determine	CP (others)
Transmission Service	Projects needed to accommodate new transmission service requests	ICT to determine	CP (others)
Economic	Projects anticipated to yield production cost savings	ICT to determine	CP (others)
Enhanced Transmission Reliability	Projects yielding transmission reliability levels above those specified in local planning criteria	ICT to determine	CP (others)
Customer Driven	Customer driven (other than reliability)	ICT to determine	CP (others)
Generation Interconnection	Projects to interconnect new generation	ICT to determine	CP (others)

Terminology (Funding Comments)

Approved	Project construction is funded and Entergy is committed to completing it by the projected in service date
Proposed & In Target	Project is currently funded for scoping and preliminary engineering and the expected construction commencement date is within the 3-year Construction Plan horizon

Caveats!

This list of approved and proposed projects is fluid.
Budget adjustments throughout the year could alter this list.
"Out-of-cycle" projects, such as customer-driven projects, could be appended to the list as needed.

Notes:

"Carryover" projects are those projects approved in prior budget year, but whose in-service date is expected to be beyond budgeted year.

Addendum: Identified Target Areas

Identified Target Areas are areas with reliability concerns. For some areas, specific potential projects have been identified. However, the construction start dates of the potential projects or possible solution sets are beyond the 3-year Construction Plan horizon. These projects and associated projects are not part of the 2010-2012 Entergy Construction Plan.

Introduction

Entergy 2010-2012 Draft Construction Plan

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Enhanced Transmission Reliability | Projects yielding transmission reliability levels above those specified in local planning criteria | ICT to determine | CP (others)
Customer Driven | Customer driven (other than reliability) | ICT to determine | CP (others)
Generation Interconnection | Projects to interconnect new generation | ICT to determine | CP (others)

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This page contains no comments

Construction Plan Projects Relating To:

- Transmission Reliability - Meeting Planning Criteria
- Transmission Reliability - Regulatory
- Transmission Service
- Economic
- Enhanced Transmission Reliability
- Customer Driven
- Generation Interconnection

Entergy 2010-2012 Draft Construction Plan

Construction Plan Projects Relating To:

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- Transmission Reliability - Regulatory
- Transmission Service
- Economic
- Enhanced Transmission Reliability
- Customer Driven
- Generation Interconnection

Page 2 of 13

May 2009 Rev.

Number: 1 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:43:28 PM
REV2 Should state the month of "August" as for the updated revision

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Donaghey - Conway South: Reconductor with 666 ACSS	EAI	Winter 2009	Approved	Design/Scoping	Increase Load Serving capability in Conway Area
Transmission Reliability - Meeting Planning Criteria	Hamlet: Install Breaker on Conway Industrial Line	EAI	Summer 2009	Approved	Construction	Eliminate risk for transmission contingency
Transmission Reliability - Meeting Planning Criteria	Danville Substation: Upgrade Terminal Equipment to match or exceed Magazine line ratings	EAI	Fall 2009	Approved	Construction	Project to eliminate overloads for loss of ANO-Ft. Smith EHV line
Transmission Service	SMEPA (Plum Point): * Dell-Manilla 161kV line: Upgrade to at least 247MVA * Manilla-Monette 161kV line: Upgrade to at least 247MVA * Jonesboro North-Paragould South 161kV line: Upgrade to at least 247MVA * Jonesboro North-Jonesboro 161kV line: Upgrade to at least 247MVA	EAI	Summer 2010	Approved	Construction	Transmission service
Transmission Reliability - Meeting Planning Criteria	Sarepta Project (NW Louisiana/South Arkansas Voltage Support Plan) Add 10.8 MVAR capacitor bank at Emerson 115 kV substation	EAI	Summer 2011	Approved	Design/Scoping	Revised bank size to 10.8 MVAR instead of 32.4 MVAR
Transmission Reliability - Meeting Planning Criteria	Warren East - Add Capacitor Bank (10.8 MVAR, 115 kV)	EAI	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Osage Creek-Grandview New Line Build new 161 kV line from Grandview (tap on Eureka-Table Rock Line) to Osage Creek	EAI	2012	Proposed & In Target	Scoping	Project to increase reliability to load in NW Arkansas, specifically along the Harrison - Eureka Springs 161 kV line Exploring other options with customer
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms (Cabot EHV): Construct 500/115 kV substation	EAI	2013	Proposed & In Target	Design/Scoping	Project to improve reliability in Little Rock during heavy transfers and and loss of Mabelvale autotransformer
Transmission Reliability - Meeting Planning Criteria	Gillette: Install 10.8 MVAR Capacitor Bank	EAI	Summer 2009	Approved	Construction	Final part of 2 part project to improve voltage profile in the area between Helena and Stuttgart
Transmission Service	Transmission Service (OG&E) Upgrade ANO - Russellville North OGE Upgrade Russellville East - Russellville South OGE	EAI	Winter 2011	Approved	Design/Scoping	
Transmission Service	Transmission Service (Aquilla) Upgrade Hot Springs - Bismark Upgrade Bismark - Alpine Upgrade Alpine - Amity	EAI	Winter 2011	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Carter and Elton: Upgrade 69 kV capacitor bank at Elton to 14 MVAR; Add 69 kV, 14 MVAR capacitor bank at Carter	EGSL	2010	Proposed & In Target	Design/Scoping	Formerly Serpent and Elton
Transmission Reliability - Meeting Planning Criteria	Construct New Youngsville 138 kV Distribution Substation	EGSL	2011	Proposed & In Target	Design/Scoping	Shifts load off Lafayette to Holiday to Billeaud 69 kV Line. (Replaces Lafayette to Holiday to Billeaud Upgrade)
Transmission Reliability - Meeting Planning Criteria	Alchem - Monochem: Upgrade 138 kV line	EGSL	2011	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Acadiana Area Improvement Project Phase 1 Projects (2011) Construct new Sellers Road to Meaux 230 kV Line Add 450 MVA, 230-138 kV auto at Meaux Add new 138 kV line bay at Moril (Segura Line) Add new 500 kV position for Cleco autotransformer at Richard	EGSL	2011	Approved	Design/Scoping	

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Hamlet 161 kV Substation: Install 161 kV Breaker on Conway Industrial Line	EAI	Summer 2009	Approved	Complete	Eliminate risk for transmission contingency
Transmission Reliability - Meeting Planning Criteria	Gillette 115 kV Substation: Install 10.8 MVAR Capacitor Bank	EAI	Summer 2009	Approved	Construction	Final part of 2 part project to improve voltage profile in the area between Helena and Stuttgart
Transmission Reliability - Meeting Planning Criteria	Conway West - Donaghey 161 kV Line: Reconductor with 666 ACSS	EAI	Summer 2009	Approved	Complete	Increase Load Serving capability in Conway Area
Transmission Reliability - Meeting Planning Criteria	Danville 161 kV Substation: Upgrade Terminal Equipment to match or exceed Magazine line ratings	EAI	Fall 2009	Approved	Construction	Project to eliminate overloads for loss of ANO-Ft. Smith EHV line
Transmission Reliability - Meeting Planning Criteria	Donaghey - Conway South 161 kV Line: Reconductor with 666 ACSS	EAI	Winter 2009	Approved	Design/Scoping	Increase Load Serving capability in Conway Area
Transmission Service	SMEPA (Plum Point): * Dell - Manilla 161kV Line: Upgrade to at least 247MVA * Manilla - Monette 161kV Line: Upgrade to at least 247MVA * Jonesboro North - Paragould South 161kV Line: Upgrade to at least 247MVA * Jonesboro North - Jonesboro 161kV Line: Upgrade to at least 247MVA	EAI	Summer 2010	Approved	Construction	Transmission service
Transmission Reliability - Meeting Planning Criteria	Beebe 115 kV Substation: Install 21.6 MVAR Capacitor Bank	EAI	2010	Proposed & In Target	Design/Scoping	Project to address ICT 100 MW rule
Transmission Reliability - Meeting Planning Criteria	Mt. Ida 115 kV Substation: Install 10.8 MVAR Capacitor Bank	EAI	2010	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Melbourn - Sage 161 kV Line: Upgrade line to at least 1200 A	EAI	Winter 2010	Proposed & In Target	Design/Scoping	
Transmission Service	Transmission Service (OG&E) Upgrade ANO - Russellville North 161 kV Line to 546 MVA Upgrade Russellville East - Russellville South 161 kV Line to 448 MVA	EAI	Winter 2010	Approved	Design/Scoping	Accelerated ISD one year
Transmission Reliability - Meeting Planning Criteria	Sarepta Project (NW Louisiana/South Arkansas Voltage Support Plan) Add 10.8 MVAR capacitor bank at Emerson 115 kV substation	EAI	Summer 2011	Approved	Design/Scoping	Revised bank size to 10.8 MVAR instead of 32.4 MVAR
Transmission Reliability - Meeting Planning Criteria	Osage Creek-Grandview New Line Build new 161 kV (At Least 1200 A) line from Grandview (Planned SPA 161 kV Substation tapped on the Eureka - Table Rock 161 kV Line) to Osage Creek	EAI	2011	Proposed & In Target	Design/Scoping	Project to increase reliability to load in NW Arkansas, specifically along the Harrison - Eureka Springs 161 kV line Exploring other options with customer. Accelerated ISD.
Transmission Reliability - Meeting Planning Criteria	Harrison East to Everton Road 161 kV Line: Upgrade Harrison East Terminal Equipment to 1200 A	EAI	2011	Proposed & In Target	Design/Scoping	Replaces St. Joe to Hilltop project identified in the ICT base plan.
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms (Cabot EHV): Construct new 500/161/115 kV substation Phase 1 Projects (2011) Tap the Keo - ISES 500 kV Line Tap the Cabot - Jacksonville North 115 kV Line Install 500 kV and 115 kV Busses and a 600 MVA 500 kV / 115 kV Autotransformer	EAI	2011	Proposed & In Target	Design/Scoping	Project to improve reliability in Little Rock during heavy transfers and and loss of Mabelvale autotransformer. Accelerated ISD 2 years.
Transmission Service	Transmission Service (Aquilla) Upgrade Hot Springs - Bismark 115 kV Line to 176 MVA Upgrade Bismark - Alpine 115 kV Line to 176 MVA Upgrade Alpine - Amity 115 kV Line to 176 MVA	EAI	Winter 2011	Approved	Design/Scoping	Hot Springs to Bismark was identified as a base plan difference project

Page: 3

Number: 1 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:15 AM
REV2 Issue from REV1 partially resolved. Ignore PSS/E error or change bank size to 10.2MVAr instead 21.6MVAr

REV1 Size of the bank at Emerson (both CP revisions) doesn't match with the IDEV definition and description. The IDEV definition shows a 10.2MVAr unit with a 21.6MVAr step. The IDEV descriptions indicates a 21.6MVAr unit.

Number: 2 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:13 AM
REV2 Issue resolved

REV1 improper input for the proposed size of cap bank at 335254 and 335257

Number: 3 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:07 AM
REV2 IDEV file is missing. The model "Final_U2" does not include the change

REV1 Project description is missing from REV1 list (IDEV file is included in ZIP file)

Number: 4 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:09 AM
REV2 This could be "Ward capacitor bank"? Beebe project doesn't have a corresponding IDV and "EAI 2010S Ward Capacitor Bank Rev 0.idv" doesn't relate to any listed project

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Acadiana Area Improvement Project Phase 2 Projects (2012) Construct new Labbe to Sellers Road 230 kV Line Add new 500 kV position for Cleco autotransformer at Wells	EGSL	2012	Approved	Design/Scoping	Projected in-service date contingent on LUS approval of its portion of this project.
Transmission Reliability - Meeting Planning Criteria	Acadia: Add 36 MVAR Cap Bank	EGSL	Summer 2009	Approved	Construction	
Transmission Reliability - Meeting Planning Criteria	Loblolly-Hammond Build 230 kV Line	EGSL/ELL	2013	Approved	Design/Scoping	ROW acquisition and permitting under way
Transmission Reliability - Meeting Planning Criteria	Waterford 4: Blackstart generator interconnection	EGSL	Summer 2009	Approved	Construction	
Transmission Reliability - Meeting Planning Criteria	Sarepta Project (NW Louisiana/South Arkansas Voltage Support Plan) Construct a new 345-115 kV substation consisting of a 500 MVA auto Cut station into EL Dorado to Longwood 345 kV line. Add 32.4 MVAR capacitor bank at Luckey 115 kV substation 4/10 Add 32.4 MVAR capacitor bank at Vienna 115 kV substation 10/09	ELL	2011	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Southeast LA Coastal Improvement Plan: Phase 2 Build Peters Road-Oakville 230kV Line and Substation	ELL	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Bogalusa to Adams Creek 230 kV No. 2 - Upgrade terminal equipment at Bogalusa	ELL	2011	Proposed & In Target	Design/Scoping	Upgrade terminal equipment to thermal rating of conductor
Transmission Service	Ouachita Transmission Service Split Sterlington 115 kV bus and replace 500-115 auto #2 with 750 MVA Upgrade Walnut Grove to Swartz 115 kV line Upgrade Frostcraft to Rilla 115 kV line Upgrade Sterlington to Log Cabin 115 kV like Loop Sterlington to North Crossett into North Bastrop Add 43 MVAR, 115 kV capacitor bank at Riser	ELL	2012	Approved	Design/Scoping	Final ISD's to be determined
Economic	Delhi 115 kV Substation - Add 10 Ohm series reactor	EAI	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Indianola-Greenwood: Upgrade jumpers and buswork (Morehead, Ilta Bena, Greenwood)	EMI	Winter 2009	Approved	Design/Scoping	Improve reliability in the Greenwood area Need Mobile
Transmission Reliability - Meeting Planning Criteria	Magee Sub: Replace Switches	EMI	2010	Approved	Construction	Project to increase tie capability with SMEPA in coordination with SMEPA's upgrade of their autotransformers at Magee (SMEPA would not allow necessary outages thus project delayed)
Transmission Service	Hornlake - TH Allen TVA Line upgrade	EMI	2011	Proposed & In Target	Design/Scoping	Project to improve the voltage profile in the Southaven area, specifically the 115kV system south of Getwell
Transmission Service	Grand Gulf Uprate Project Baxter Wilson to Ray Braswell 500 kV line uprate breakers and switches	EMI	2011	Proposed & In Target	Design/Scoping	Project to increase the thermal capacity of the 500 kV line.
Transmission Service	Ouachita Transmission Service Move Sterlington 600 MVA auto to Baxter Wilson 500 (Second 500-115 kV auto)	EMI	2012	Approved	Design/Scoping	Final ISD's to be determined

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms (Cabot EHV): Construct new 500/161/115 kV substation Phase 2 Projects(2012) Install 161 kV Bus and a 600 MVA 500 kV / 161 kV Autotransformer	EAI	2012	Proposed & In Target	Design/Scoping	Project to improve reliability in Little Rock during heavy transfers and and loss of Mabelvale autotransformer. Accelerated ISD 2 years.
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms - Hamlet 161 kV Line: Construct new 161 kV Line Convert Hamlet SS to a breaker station (Single Bus Single Breaker Scheme) Move the Quitman line from Gold Creek to Hamlet SS Move the Gravel Ridge line from Gold Creek to Hamlet SS Construct a line rated at least 1200 A from Hamlet SS to Holland Bottoms	EAI	2012	Proposed & In Target	Design/Scoping	In lieu of Morrilton East - Gleason - Tyler upgrade.
Transmission Reliability - Meeting Planning Criteria	Warren East 115 kV Substation: Install 10.8 MVAR Capacitor Bank	EAI	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Ebony 161 kV Switching Station: Install 6 Breaker Ring Bus Lines Terminating Into New Ebony Substation (ratings unchanged): Ebony - Kuhn Road 161 kV Line Ebony - WM Lehi - WM Polk - WM EHV 161 kV Line Ebony - WM Dover - WM Gateway 161 kV Line Ebony - Marked Tree 161 kV Line Ebony - WM Lehi - WM EHV 161 kV Line	EAI	2012	Proposed & In Target	Design/Scoping	Project in-lieu of WM Lehi capacitor bank
Transmission Reliability - Meeting Planning Criteria	Jonesboro to Hergett 161 kV Line: Upgrade 161 kV Line to at least 340 MVA	EAI	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Benton North to Benton South: Construct New 115 kV Line Rated at least 170 MVA Install Switching Stations at Benton North and Benton South	EAI	2012	Proposed & In Target	Design/Scoping	Alternative project to Bauxite capacitor bank (addresses ICT 100 MW rule)
Transmission Service	Westar Transmission Service Monette - Paragould 161kV Line: Upgrade to at least 246 MVA Paragould Substation: Upgrade the switch B6673 from 600A to 2000A Russellville South - Dardanelle Dam (SPA) 161kV Line: Upgrade to 416 MVA	EAI	Summer 2012	Approved	Design/Scoping	Monette to Paragould upgrade was identified as a base plan difference project.
Transmission Reliability - Meeting Planning Criteria	Acadia 138 kV Substation: Install 36 MVAR Capacitor Bank	EGSL	Summer 2009	Approved	Complete	
Transmission Reliability - Meeting Planning Criteria	Carter and Elton: Upgrade 69 kV capacitor bank at Elton to 14 MVAR, Add 69 kV, 14 MVAR capacitor bank at Carter	EGSL	2010	Proposed & In Target	Design/Scoping	Formerly Serpent and Elton
Transmission Reliability - Meeting Planning Criteria	Construct New Youngsville 138 kV Distribution Substation	EGSL	2011	Proposed & In Target	Design/Scoping	Shifts load off Lafayette to Holiday to Billeaud 69 kV Line. (Replaces Lafayette to Holiday to Billeaud Upgrade). May be delayed one year due to feasibility of ROW acquisiton.
Transmission Reliability - Meeting Planning Criteria	Alchem - Monochem 138 kV Line: Upgrade 138 kV line to 275 MVA	EGSL	2011	Approved	Design/Scoping	Also required for TSR's
Transmission Reliability - Meeting Planning Criteria	Addis to Cajun 230 kV line - Upgrade Limiting Section With Double-Bundled 649.5 ACAR (654 MVA)	EGSL	2011	Approved	Design/Scoping	Increase capacity of existing 230 kV line. Also required for TSR's
Transmission Reliability - Meeting Planning Criteria	Acadiana Area Improvement Project Phase 1 Projects (2011) Construct new Sellers Road to Meaux 230 kV Line Add 450 MVA, 230-138 kV auto at Meaux Add new 138 kV line bay at Morlf (Segura Line) Add new 500 kV position for Cleco autotransformer at Richard	EGSL	2011	Approved	Design/Scoping	

Page: 4

Number: 1 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:00 AM
REV2 IDEV Size of cap bank 37.7MVAr doesn't match with the description

REV1 IDEV Size of cap bank 37.7MVAr doesn't match with the description

Number: 2 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:49 AM
REV2 Waterford project doesn't have a corresponding IDEV

REV1 Waterford project doesn't have a corresponding IDEV

Number: 3 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:53 AM
REV2 Issue resolved. MVAr effective is 30.5 (32.4MVAr cap size)

REV1 Size of capacitors at Luckey and Vienna (both CP revisions) doesn't match with the IDEV definition file (30.5MVAr)

Number: 4 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:43:00 PM
REV2 Improper "purge" command at 2nd IDEV file for 337581-337415; line has been moved to 337581-337414 at 1st IDEV

REV1 Python file to be applied prior to the IDEV pertaining Sterlington; needs notice

Number: 5 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:57 AM
REV2 Bus 337450 already in the model - LTAP command included in "ELL-N 2010S Adjust load by year based on the Info inside IDV-Sacksonia and Cap Bank at Delhi.idv" is unnecessary

REV1 Bus 337450 already in the model - LTAP command included in "ELL-N Sacksonia and Cap Bank at Delhi.idv" is unnecessary

Number: 6 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:38 AM
REV1 Grand Gulf project doesn't have a corresponding IDEV

Number: 7 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:44:13 PM
REV2 Missing the IDEV file for Russelville South - Dardanelle upgrade (see "EAI 2012S Wester Facility Study.idv" as included in REV1)

Number: 8 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:38 AM
REV2 The item should be highlighted since has a different approach than REV1. However, if the line has been uprated corresponding to a temperature of 100C (not 100F as indicated by the IDEV), there is no issue. If the line has been resaged (as stated in the IDEV), the IDEV file should include different electrical parameters

Number: 9 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:40 AM
REV2 Addis - Cajun line upgrade should include electrical characteristics

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 1 Add 2nd Cap Bank at Winona Upgrade Cap Bank at Greenwood Install Cap Bank at Schlater	EMI	2013	Proposed & In Target	Scoping	Project to improve reliability in the area between Tillatoba, Indianola, and Attalla for various 115 kV and 230 kV contingencies. Previous project was to add 2nd Tillatoba auto - this project provides better value
Transmission Reliability - Meeting Planning Criteria	Ridgeland-Madison Reliability Improvement Rebuild Lakeover - Ridgeland Line	EMI	2014	Proposed & In Target	Design/Scoping	Project to serve rapid load growth North of Jackson
Transmission Reliability - Meeting Planning Criteria	Ridgeland-Madison Reliability Improvement Build Lakeover-Sunnybrook	EMI	2011	Proposed & In Target	Design/Scoping	Project to serve rapid load growth North of Jackson
Transmission Reliability - Meeting Planning Criteria	Ray Braswell - Wyndale-Byram (S. Jackson) 115kV Line	EMI	2012	Proposed & In Target	Design/Scoping	Project to alleviate overloads flowing south on the 115 kV system between Jackson and south Louisiana
Transmission Reliability - Meeting Planning Criteria	Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 2 Build 230 kV line from Tillatoba to South Grenada Install Auto at South Grenada	EMI	2014	Proposed & In Target	Design/Scoping	Project to improve reliability in the area between Tillatoba, Indianola, and Attalla for various 115 kV and 230 kV contingencies. Previous project was to add 2nd Tillatoba auto - this project provides better value
Transmission Reliability - Meeting Planning Criteria	Liberty-Gloster: Upgrade 115 kV Line For Natchez De-listing	EMI	Winter 2009	Approved	Construction	Project required to maintain reliability in the Natchez area after loss of local generation
Transmission Reliability - Meeting Planning Criteria	Paterson 115kV: Restore 4 breakers	ENOI	Summer 2009	Approved	Construction	
Enhanced Transmission Reliability	Warren Substation - Add two breakers	EMI	Winter 2009	Approved	Design/Scoping	
Generation Interconnection	Sheco Jacinto - Generator Interconnection	EMI	Summer 2009	Approved	Construction	
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 1) Relocate Sheco's Caney Creek 138 kV Substation	ETI	Winter 2010	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 2) Jacinto-Lewis Creek: Convert to 230 kV operation. Add 450 MVA 230-138 Auto at Lewis Creek	ETI	Summer 2011*	Approved	Design/Scoping	* Projected In-Service date is being re-evaluated due to change in load forecast.
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 3) Upgrade South Beaumont to Fontenot Corner 138 kV line	ETI	Summer 2011*	Approved	Design/Scoping	* Projected In-Service date is being re-evaluated due to change in load forecast.
Transmission Service	Grand Gulf Uprate Project Upgrade Hartburg to Inland Orange to McLewis 230 kV line	ETI	2011	Proposed & In Target	Design/Scoping	Project to increase the thermal capacity of the 230 kV line.
Transmission Reliability - Meeting Planning Criteria	Tamina - Cedar Hill Reconductor	ETI	Winter 2011	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Porter - Tamina: Replace Breaker/Switches	ETI	Fall 2009	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Newton Bulk: Replace/Re-tap CT to increase rating on Holly Springs line	ETI	Summer 2009	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Beaumont 69 kV Improvement Plan: Option 2	ETI	Summer 2009	Approved	Construction	
Transmission Reliability - Meeting Planning Criteria	College Station 138kV Switching Station Close N.O and upgrade protection to create 3 terminal line	ETI	Summer 2009	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Pawll: Upgrade 138/69 kV Auto	ETI	Summer 2009	Approved	Construction	

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Acadiana Area Improvement Project Phase 2 Projects (2012) Construct new Labbe to Sellers Road 230 kV Line Add new 500 kV position for Cleco autotransformer at Wells	EGSL	2012	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Construct 2nd Dynergy to Pecan Grove 230 kV line	EGSL	2012	Proposed & In Target	Design/Scoping	Project to replace upgrade of Nelson to Moss Bluff as identified in ICT Base Plan
Transmission Reliability - Meeting Planning Criteria	Tejac to Marydale: Upgrade 69 kV transmission line	EGSL	2012	Approved	Design/Scoping	Increase thermal capacity of 69 kV line.
Transmission Reliability - Meeting Planning Criteria	Loblolly-Hammond Build 230 kV Line	EGSL	2012	Approved	Design/Scoping	ROW acquisition and permitting under way. Accelerated ISD.
Transmission Reliability - Meeting Planning Criteria	Nelson to Mossville - Upgrade 138 kV Line	EGSL	2013	Proposed & In Target	Design/Scoping	Increase thermal capacity
Transmission Reliability - Meeting Planning Criteria	Construct new Willow Glen to Conway 230 kV line	EGSL	2014	Proposed & In Target	Design/Scoping	Increase 230 kV thermal capacity in the industrial corridor.
Transmission Reliability - Meeting Planning Criteria	Waterford 4: Blackstart generator interconnection	ELL	Summer 2009	Approved	Complete	
Transmission Reliability - Meeting Planning Criteria	Snakefarm to Kenner 115 kV line: Upgrade to 359 MVA	ELL	Winter 2010	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Bogalusa to Adams Creek 230 kV No. 2 - Upgrade terminal equipment at Bogalusa	ELL	Winter 2010	Proposed & In Target	Design/Scoping	Upgrade terminal equipment to thermal rating of conductor. Accelerated one year
Economic	Delhi 115 kV Substation - Add 10 Ohm series reactor	ELL	Summer 2010	Approved	Design/Scoping	Accelerated one year
Transmission Reliability - Meeting Planning Criteria	Sarepta Project (NW Louisiana/South Arkansas Voltage Support Plan) Construct a new 345-115 kV substation consisting of a 500 MVA auto Cut station into EL Dorado to Longwood 345 kV line. Add 32.4 MVAR capacitor bank at Luckey 115 kV substation 4/10 Add 32.4 MVAR capacitor bank at Vienna 115 kV substation 10/09	ELL	2011	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Southeast LA Coastal Improvement Plan: Phase 2 Build Peters Road-Oakville 230kV Line and Substation	ELL	2012	Proposed & In Target	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Southeast LA Coastal Improvement Plan: Phase 3 Construct Oakville to Alliance 230kV Line Add 230 - 115 kV Autotransformer at Alliance Substation	ELL	2012	Proposed & In Target	Design/Scoping	Provides 230 kV source to the Alliance area.
Transmission Reliability - Meeting Planning Criteria	Bayou Steel to Tezcuco 230 kV line - Construct new line	ELL	2012	Proposed & In Target	Design/Scoping	Provides third path from Gypsy/Waterford area to Tezcuco. Replaces Belle Point to Gypsy 230 kV line upgrade identified in the ICT Base Plan.
Transmission Service	Ouachita Transmission Service Split Sterlington 115 kV bus and replace 500-115 auto #2 with 750 MVA Upgrade Walnut Grove to Swartz 115 kV line Upgrade Frostcraft to Rilla 115 kV line Upgrade Sterlington to Log Cabin 115 kV like Loop Sterlington to North Crossett into North Bastrop Add 43 MVAR, 115 kV capacitor bank at Riser	ELL	2012	Approved	Design/Scoping	Final ISD's to be determined

Page: 5

Number: 1 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:44:30 PM
REV2 Improper input for the proposed size of cap bank at 337054 (see "10CP EMI Grenada-Winona-Greenwood Area Improvement Phase I.idv")

REV1 Improper input for the proposed size of cap bank at 337054 (see "EMI 2011S Tillatoba-SouthGrenada_LineandAuto_newnum-phase I - caps.idv)

Number: 2 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:30 AM
REV2 Issue resolved. Ignore error messages regarding bus 336923 (doesn't exist) and branch 336918-336920 Livingston - Sunnybrook

REV1 Improper command definition bat_bsys; however, bus 336923 is not a valid bus in EES

Number: 3 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:24 AM
REV2 Warren project doesn't have a correspondent IDV

REV1 Warren project doesn't have a correspondent IDV

Number: 4 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:41:21 AM
REV2 Sheco project doesn't have a corresponding IDV

REV1 Sheco project doesn't have a corresponding IDV

Number: 5 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:42:48 AM
REV1 Grand Gulf project doesn't have a corresponding IDV

Number: 6 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:44:50 PM
REV2 One of the two IDV's pertaining Loblolly-Hammond 230KV line to be excluded from the REV2 ZIP file (duplicate data)

Number: 7 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:40:27 AM
REV2 IDV file "09CP ELL-S Snakefarm-Kenner 115kV Upgrade (Rating Pending).idv" to be removed from the ZIP (duplicates "09CP 2010W Proposed ELL-S Snakefarm-Kenner 115kV Upgrade (Rating Pending).idv" file)

Number: 8 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:40:21 AM
REV2 IDV file "09CP 2012 ELL-S BayouSteel-Tezcuco230kV Line.idv" to be removed from the ZIP (duplicates "09CP 2012 Proposed ELL-S BayouSteel-Tezcuco230kV Line.idv" file)

Number: 9 Author: claudiu.cadar Subject: Sticky Note Date: 8/10/2009 8:45:00 PM
REV2 The item should have been highlighted as for projects that have recorded modifications since there are several changes in REV2 versus REV1 (conductor size for a couple of proposed transmission lines, additional cap bank, etc)

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Service	TVA Affected System Upgrades Upgrade switches at Morton Upgrade South Jackson - Florence 115 kV line	EMI	Summer 2011	Approved	Design/Scoping	
Transmission Service	Westar Transmission Service Monette-Paragould 161kV Transmission Line – Upgrade to 170 MVA Upgrade the Russellville South-Dardanelle Dam (SPA) 161kV Transmission Line	EAI	Summer 2012	Approved	Design/Scoping	

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Bogue Chitto 500/230 kV Substation: Option 1: Tap the Daniel - McKnight 500 kV Line Construct a New 500-230 kV Substation Tap the Bogalusa - Ramsey 230 kV Line Terminating Both Sections Into Bogue Chitto Tap the Bogalusa - Tallsheek 230 kV Line Terminating Both Sections Into Bogue Chitto Upgrade New Bogue Chitto to Madisonville 230 KV line Option 2: Loop the Daniel - McKnight 500 kV Line in and out of Bogalusa 500 kV Substation	ELL	2013	Proposed & In Target	Design/Scoping	Requires coordination with neighboring utilities. Replaces Brookhaven to Mallilieu and Mallilieu to Norfield project identified in ICT Base Plan
Transmission Reliability - Meeting Planning Criteria	Liberty-Gloster: Upgrade 115 kV Line For Natchez De-listing	EMI 1	Summer 2009	Approved	Complete	Project required to maintain reliability in the Natchez area after loss of local generation
Transmission Reliability - Meeting Planning Criteria	Indianola-Greenwood 115 kV Line: Upgrade line to 161 MVA Upgrade Terminal Equipment at Morehead, Itta Bena, and Greenwood	EMI	Winter 2010	Approved	Design/Scoping	Improve reliability in the Greenwood area Need Mobile
Transmission Reliability - Meeting Planning Criteria	Magee 115 kV Subtation: Replace Switches	EMI	2010	Approved	Construction	Project to increase tie capability with SMEPA in coordination with SMEPA's upgrade of their autotransformers at Magee (SMEPA would not allow necessary outages thus project delayed)
Transmission Service	TVA Affected System Upgrades Morton 115 kV Substation: Upgrade 600 A Switches to 1200 A South Jackson - Florence 115 kV Line: Upgrade to at least 240 MVA	EMI	Summer 2010	Approved	Design/Scoping	
Transmission Service	Grand Gulf Uprate Project Baxter Wilson - Ray Braswell 500 kV Line: Upgrade Breakers and Switches to 3000 A	EMI	Summer 2010	Approved	Design/Scoping	Project to increase the thermal capacity of the 500 kV line. Accelerated ISD from 2011 to 2010
Transmission Reliability - Meeting Planning Criteria	Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 1 Projects (2010) Winona 115 kV Substation: Install 21.6 MVAR Capacitor Bank Greenwood 115 kV Substation: Upgrade 21.6 MVAR Capacitor Bank to 32.4 MVAR Schlater 115 kV substation: Install 21.6 MVAR Capacitor Bank	EMI	2010	Proposed & In Target	Design/Scoping	Project to improve reliability in the area between Tillatoba, Indianola, and Attalla for various 115 kV and 230 kV contingencies. Previous project was to add 2nd Tillatoba auto - this project provides better value. Accelerated ISD
Transmission Reliability - Meeting Planning Criteria	Florence - Florence SS - Star 115 kV Line: Upgrade to at least 240 MVA	EMI	Summer 2011	Proposed & In Target	Design/Scoping	Project to increase thermal capacity of 115 kV line
Transmission Service	Hornlake - TH Allen (TVA) 161 kV Line: Upgrade Line to 366 MVA	EMI	2011	Proposed & In Target	Design/Scoping	Project to improve the voltage profile in the Southaven area, specifically the 115kV system south of Getwell
Transmission Reliability - Meeting Planning Criteria	Waterways - Vicksburg East 115 kV Line: Upgrade to at least 240 MVA	EMI	2011	Proposed & In Target	Design/Scoping	Project to increase the thermal capacity of the 115 kV line. Accelerated ISD from 2011 to 2010
Transmission Reliability - Meeting Planning Criteria	Ridgeland-Madison Reliability Improvement Build Sunnybrook and Radial 115 kV Transmission Line	EMI	2011	Proposed & In Target	Design/Scoping	Project to serve rapid load growth North of Jackson
Transmission Reliability - Meeting Planning Criteria	McAdams Area Upgrades McAdams Substation: Add 2nd 615 MVA 500 kV / 230 kV Autotransformer McAdams - Pickens 230 KV line: Upgrade to Double-Bundled 954 ACSR (880 MVA)	EMI	2011	Proposed & In Target	Design/Scoping	115 kV upgrades subject to change

Page: 6

Number: 1 Author: claudiu.cadar Subject: Sticky Note Date: 8/20/2009 10:43:00 AM
REV2 Missing IDEV from the REV2 ZIP file. Project completed but the model does not include the changes (see "EMI IDEV Liberty-Gloster_Uprate_Line_To_176MVA_newnum.idv at REV1)

Construction Plan Projects Relating To:

- Block Load Addition
- Load Growth

Entergy 2010-2012 Draft Construction Plan

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Reliability - Meeting Planning Criteria	Ridgeland-Madison Reliability Improvement Rebuild Lakeover - Ridgeland Line Build Lakeover - Sunnybrook - Northpark 115 kV Line	EMI	2012	Proposed & In Target	Design/Scoping	Project to serve rapid load growth North of Jackson. Accelerated ISD from 2014
Transmission Service	Ouachita Transmission Service Move Sterlington 600 MVA auto to Baxter Wilson 500 (Second 500-115 kV auto)	EMI	2012	Approved	Design/Scoping	Final ISD's to be determined
Transmission Reliability - Meeting Planning Criteria	Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 2 Projects (2012) Tillatoba to South Grenada 230 kV Line: Construct New 520 MVA Line South Grenada 115 kV Substation: Install 230 kV Bus and a 400 MVA 230-115 kV Autotransformer	EMI	2012	Proposed & In Target	Design/Scoping	Project to improve reliability in the area between Tillatoba, Indianola, and Attalla for various 115 kV and 230 kV contingencies. Previous project was to add 2nd Tillatoba auto - this project provides better value. Accelerated ISD
Transmission Reliability - Meeting Planning Criteria	Ray Braswell - Wyndale - Byram 115kV Line: Construct New 260 MVA Line (Constructed at 230 kV but Operated at 115 kV)	EMI	2013	Proposed & In Target	Design/Scoping	Project to alleviate overloads flowing south on the 115 kV system between Jackson and south Louisiana. ISD driven by CCN and ROW acquisition.
Transmission Reliability - Meeting Planning Criteria	Getwell Area Improvements Getwell 230/115 kV Substation: Install 2nd 392 MVA 230 kV / 115 kV Autotransformer Getwell - Hernando 115 kV Line: Construct 2nd Parallel 115 kV Line (Constructed at 230 kV but Operated at 115 kV)	EMI	2013	Proposed & In Target	Design/Scoping	Provide additional thermal capacity and allow future conversion to 230 kV. Addresses ICT 100 MW rule. Creates first leg of Getwell to Batesville 230 kV conversion as identified in the ICT Base Plan.
Transmission Reliability - Meeting Planning Criteria	Paterson 115kV: Restore 4 breakers	ENOI	Summer 2009	Approved	Construction	
Transmission Reliability - Meeting Planning Criteria	Newton Bulk: Replace/Re-tap CT to increase rating on Holly Springs line	ETI	Summer 2009	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Beaumont 69 kV Improvement Plan: Option 2	ETI	Summer 2009	Approved	Construction	
Generation Interconnection	Sheco Jacinto - Generator Interconnection	ETI	Summer 2009	Approved	Complete	
Transmission Reliability - Meeting Planning Criteria	Fawil: Upgrade 138/69 kV Auto	ETI	Winter 2009	Approved	Construction	Delayed by customer
Transmission Reliability - Meeting Planning Criteria	Porter - Tamina: Replace Breaker/Switches	ETI	Winter 2009	Approved	Design/Scoping	Increase thermal capacity of 138 kV line
Enhanced Transmission Reliability	Warren Substation - Add two breakers	ETI	Winter 2009	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 1) Relocate Sheco's Caney Creek 138 kV Substation	ETI	Winter 2010	Approved	Design/Scoping	
Transmission Reliability - Meeting Planning Criteria	College Station 138kV Switching Station Close N.O and upgrade protection to create 3 terminal line	ETI	Winter 2010	Approved	Design/Scoping	Project scope being reviewed may require a breaker station in lieu of relay modifications
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 3) Upgrade South Beaumont to Fontenot Corner 138 kV line	ETI	Winter 2010	Approved	Design/Scoping	Accelerated ISD
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim (Part 2) Jacinto-Lewis Creek: Convert to 230 kV operation. Add 450 MVA 230-138 Auto at Lewis Creek	ETI	Summer 2011	Approved	Design/Scoping	Confirmed target ISD

Project Driver	Project Name	LE	Projected In Service Year	2009 Funding Comments	Project Status	Other Comments
Load Growth	AECC Avilla POD	EAI	2010	Approved		Customer Delayed
Load Growth	Albright (H.S. Hamilton) Substation - buy land	EAI	2012	Proposed & In Target		Deferred Beyond 2011
Block Load Addition	Aguilla - Cross point Sup Project	EAI	2011	Proposed & In Target		
Load Growth	Bayview New Substation	EGSL	2012	Proposed & In Target		Buy land in 2010 - ISD Delayed until 2012
Load Growth	Beauregard to Alcen transformer swap	EGSL	2009	Approved		
Load Growth	Bedico: Build new 230kv substation	ELL	2013	Proposed & In Target		
Load Growth	Benbwater-build sub. using Walden T2 50MVA (already own land)	ETI	2009	Approved		
Load Growth	Blytheville POD - AECC (10-1-08 ISD)	EAI	2009	Approved		
Load Growth	Briarwood Substation add 35/13kV auto - scope 2007	EGSL	2012	Proposed & In Target		
Load Growth	Buhalia: purchase property - buy land	EMI	2008	Approved		Deferred beyond 2011
Load Growth	Calhoun: New substation	ELL	2012	Proposed & In Target		Site purchase in 2008
Load Growth	Carencro Upgrade T2 from 9.4 to 25/33	EGSL	2013	Proposed & In Target		
Load Growth	Church Rd Substation & 11.3 miles 230kV	EMI	2012	Approved		
Load Growth	Cofer Road (Crawford) Substation	EAI	2012	Proposed & In Target		Defered ISD to 2012
Load Growth	Coffeeville POD - AECC (10-1-09 ISD)	EAI	2010	Proposed & In Target		Deferred by customer
Load Growth	Colonel Glenn Rd - add new substation	EAI	2011	Proposed & In Target		Site Purchase in 2008 - Deferred ISD to 2011
Load Growth	Dawson Creek: Add 230 -13.2kV 75 MVA Transformer	EGSL	2009	Approved		ISD Deferred to 2009
Load Growth	Delcambre transformer upgrade	EGSL	TBD			Deferred beyond 2012
Block Load Addition	Denbury	ELL	2009	Approved		Changed in Service Date to late 2008
Load Growth	Denham Springs: Replace T2 with 50 MVA Transformer	EGSL	2012	Proposed & In Target		
Load Growth	Fairground: add T2	EGSL	2012	Proposed & In Target		
Load Growth	Fisher: add 20MVA transformer	EAI	2009	Proposed & In Target		
Load Growth	Geismer: Add transformer	EGSL	2009	Approved		
Load Growth	Hamburg: Split the high and low buss (fall to spring project)	EAI	2014	Proposed & In Target		ISD delayed to 2014
Load Growth	Hampton sub-build, remove temp sub (need land)	ETI	2012	Proposed & In Target		
Load Growth	Jefferson - upgrade T1 scope 2007	EGSL				Project deferred indefinitely
Load Growth	JNEC Dewwyville Add breakers	ETI	2009	Approved		
Load Growth	Johnstown-Porter: New 138 kV POD	ETI	2009	Approved		Accelerated to 2008
Load Growth	Lakeside Super conductor Cable	ELL	2014	Proposed & In Target		
Block Load Addition	Lake Charles - 1 mile 69kv spp new cusps (Revenue)	EGSL	2011	Proposed & In Target		
Load Growth	Little Rock Port - Add Transformer (Metalpun)	EAI	2008	Approved		
Load Growth	Madison Ave Substation and 115kV line from Sunnybrook (Ridgeland-Madison	EMI	2012	Proposed & In Target		Site purchase in 2008
Load Growth	Maurice: Add transformer	EGSL	2010	Approved		Deferred ISD to 2010
Load Growth	Merrin Sub: build new substation (already own land)	ETI	2013	Proposed & In Target		
Load Growth	Metro: Upgrade transformer	ETI	2010	Approved		
Load Growth	Mickens: upgrade transformer	EGSL	2009	Approved		
Block Load Addition	Mohican: New Substation	EGSL	2010	Proposed & In Target		
Block Load Addition	Packenham - Exxon	ELL				Cancelled
Load Growth	Rayville Substation - (buy land only)	ELL	TBD	Approved		Deferred beyond 2012
Load Growth	SHECO Colley Creek POD	ETI	2010	Proposed & In Target		
Load Growth	SHECO Jacinto Facility	ETI	2009	Approved		
Block Load Addition	Shell Garyville	ELL	2009	Approved		
Load Growth	Strong substation: add transformer	EAI	2013	Proposed & In Target		Delayed to 2012
Load Growth	Sunnybrook Substation & Radial 115kV (Ridgeland-Madison Reliability Improv	EMI	2011	Proposed & In Target		
Load Growth	Texas Eastern Kosciusko In and out line tapped on Kosciusko-Winona Line	EMI	2009	Approved		
Load Growth	Thomas Sub: Add transformer (Stupp)	EGSL	2009	Approved		
Load Growth	Total Chemical: Build New Substation	ETI	2009	Approved		
Load Growth	West Orange add 9.4MVA (available McHale xfmr) - scope 2007	ETI	2010	Proposed & In Target		
Load Growth	Wnbi - St. Gabriel: Add new 230/34.5 kV substation	EGSL	2011	Proposed & In Target		Delayed to 2011
Load Growth	Vilonia Sub - construct new sub	EAI	2012	Proposed & In Target		
Load Growth	Aleisdale - Install Transformer	EGL	2008	Approved		
Load Growth	Angus Chemical: Construct New Sub - patially reimbursable	ELL				Cancelled
Load Growth	Kaiser Francis new sub	EGL				Cancelled
Load Growth	Marathon Oil Expansion	ELL	2008	Approved		
Load Growth	Tetra - Calcium Brine Plant	EAI	2009	Approved		

Existing in 2009-2011 Construction Plan						
New Addition						
August 2009 Addition / Modification						
Project Driver	**Project Name**	**LE**	**Current Projected In-Service**	**2009 Funding Comments**	**Project Status**	**Other Comments**
Transmission Service	Grand Gulf Uprate Project Upgrade Hartburg to Inland Orange to McLewis 230 kV line	ETI	2011	Approved	Design/Scoping	Project to increase the thermal capacity of the 230 kV line
Transmission Reliability - Meeting Planning Criteria	Tamina to Cedar Hill 138 kV line: Upgrade	ETI	Winter 2011	Proposed & In Target	Design/Scoping	Increase thermal capacity of 138 kV line
Transmission Reliability - Meeting Planning Criteria	Cedar Hill - Plantation 138 kV line: Upgrade	ETI	2012	Proposed & In Target	Design/Scoping	Increase thermal capacity of 138 kV line
Transmission Reliability - Meeting Planning Criteria	Plantation to Conroe 138 kV line: Upgrade	ETI	2012	Proposed & In Target	Design/Scoping	Increase thermal capacity of 138 kV line
Transmission Reliability - Meeting Planning Criteria	Jasper to Rayburn 138 kV line: Upgrade	ETI	2013	Proposed & In Target	Design/Scoping	Increase thermal capacity of 138 kV line

Addendum

Identified Target Areas [Beyond 2012]

Identified Target Areas are areas with reliability concerns. For some areas, specific potential projects have been identified. However, the construction start dates of the potential projects or possible solution sets are beyond the 3-year Construction Plan horizon. These projects and associated projects are not part of the 2010-2012 Entergy Construction Plan.

Entergy 2010-2012 Draft Construction Plan

Addendum

Identified Target Areas [Beyond 2012]

Identified Target Areas are areas with reliability concerns. For some areas, specific potential projects have been identified. However, the construction start dates of the potential projects or possible solution sets are beyond the 3-year Construction Plan horizon. These projects and associated projects are not part of the 2010-2012 Entergy Construction Plan.

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	Reconductor LR 115 kV system (Detailed Scope TBD)	EAI	Long Range plan to increase LR load serving capability - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	115kV Line from Benton North to Benton South	EAI	Long Range plan to increase LR load serving capability - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Reconductor 161kV line from Bull Shoals to Midway, Southland to Norfork	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Transform Ebony SS into a breaker station to tie Ebony North to Ebony South	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	115kV line from Gumsprings to Amity	EAI	Long range project targeted to alleviate overloads and undervoltages around Mt. Ida - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	115kV line from Holland Bottoms to Ward (make AECC Ward breaker station or have line NO and close for contingency)	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	161kV line from Jim Hill to Datto or convert 115kV line to 161kV line and upgrade stations	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	500/161 kV station at Jonesboro	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2015
Transmission Reliability - Meeting Planning Criteria	Upgrade LV Bagby to Macon to at least 115MVA, line rated at 109 MVA	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2013
Transmission Reliability - Meeting Planning Criteria	115kV reconductor Mayflower to Morgan base case in 2018	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2014
Transmission Reliability - Meeting Planning Criteria	161kV reconductor Norfork to Sage	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2015
Transmission Reliability - Meeting Planning Criteria	161kV reconductor Russellville East to Russellville North	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2017
Transmission Reliability - Meeting Planning Criteria	115kV line from Camden McGuire to Camden North (this project solve very minimal load at risk unless Couch and McClellan is off) (If Couch and McClellan is off Sarepta and Camden line will not solve the issues - will need a 2nd auto at El Dorado)	EAI	Long range project targeted to alleviate overloads and undervoltages in SW Arkansas - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Poyen - Add Capacitor Bank (10.8 MVAR, 115 kV)	EAI	Long range project targeted to alleviate contingency undervoltage - Potential Target Year: 2014
Transmission Reliability - Meeting Planning Criteria	El Dorado Upland - Texas Eastern F: New Line/ Texas Eastern F - TEF SS: Reconductor Line	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms - Hamlet 161 kV	EAI	Long range project targeted to improve reliability in the Conway area and surrounding 161 kV system - includes a 161 kV buildout at Cabot EHV - Potential Target Year: 2016
Transmission Reliability - Meeting Planning Criteria	Gum Springs SS: Build SS	EAI	Long range project targeted to increase reliability between Hot Springs and McNeil area and to reduce relibility dependence on units in southern Arkansas - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Gobel Substation build at crossing point, Dewitt Cap Bank, Wabbaskeka Cap Bank, ULM Cap Bank - scope 2008 (Marvel South)	EAI	Long range project targeted to inmprove reliability between Stuttgart and Helena - Potential Target Year: 2018

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	LR 115 kV System: Upgrade various lines or introduce 161 kV	EAI	Long Range plan to increase LR load serving capability - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Bull Shoals - Midway 161 kV Line: Upgrade	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Gum Springs - Amity 115 kV Line: Construct New Line	EAI	Long range project targeted to alleviate overloads and undervoltages around Mt. Ida - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Holland Bottoms - Ward 115kV Line Install Breakers at AECC Ward or Construct New N.O. Line	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Jim Hill Area Upgrades Option 1: Jim Hill - Datto: Construct New 161 kV Line Option 2: Jim Hill - Datto: Convert to 161 kV Operation	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Jonesboro Area: Construct New 500/161 kV Substation	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2015
Transmission Reliability - Meeting Planning Criteria	Lake Village Bagby - Macon 115 kV Line: Upgrade	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2013
Transmission Reliability - Meeting Planning Criteria	Mayflower - Morgan 115 kV Line: Upgrade	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2014
Transmission Reliability - Meeting Planning Criteria	Norfork to Sage 161 kV Line: Upgrade	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2015
Transmission Reliability - Meeting Planning Criteria	Russellville East - Russellville North 161kV Line: Upgrade	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2017
Transmission Reliability - Meeting Planning Criteria	Camden McGuire - Camden North 115kV Line: Construct New Line	EAI	Long range project targeted to alleviate overloads and undervoltages in SW Arkansas - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Poyen 115 kV Substation: Add 10.8 MVAR Capacitor Bank	EAI	Long range project targeted to alleviate contingency undervoltage - Potential Target Year: 2014
Transmission Reliability - Meeting Planning Criteria	El Dorado Upland - Texas Eastern F: New Line/ Texas Eastern F - TEF SS: Reconductor Line	EAI	Long range project targeted to alleviate overloads - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Gum Springs Area: Construct Switching Station	EAI	Long range project targeted to increase reliability between Hot Springs and McNeil area and to reduce relibility dependence on units in southern Arkansas - Potential Target Year: 2018
Transmission Reliability - Meeting Planning Criteria	Gobel Substation build at crossing point, Wabbaskeka Cap Bank, ULM Cap Bank - scope 2008 (Marvel South)	EAI	Long range project targeted to inmprove reliability between Stuttgart and Helena - Potential Target Year: 2018
Enhanced Transmission Reliability	Port Hudson - 69 kV area improvement	EGSL	Long range project targeted to increase reliability of 69kV system reconfiguring 69kV station and/or bringing in new 138kV source.
Transmission Reliability - Meeting Planning Criteria	Solac - Upgrade 230-69 kV Autos or add 3rd	EGSL	Long range project targeted to increase reliability of 69kV system.

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Maintaining Infrastructure	Harrison East 161 kV upgrade switches and line trap	EAI	Long Range project to increase reliability in the Hilltop, Everton, and St. Joe areas - Potential Target Year: 2010
Enhanced Transmission Reliability	Port Hudson - 69 kV area improvement	EGSL	Long range project targeted to increase reliability of 69kV system reconfiguring 69kV station and/or bringing in new 138kV source.
Transmission Reliability - Meeting Planning Criteria	Solac - Upgrade 230-69 kV Autos or add 3rd	EGSL	Long range project targeted to increase reliability of 69kV system.
Transmission Reliability - Meeting Planning Criteria	Harrelson to Gloria - upgrade 69 kV line	EGSL	Long range project targeted to increase reliability of 69kV system.
Transmission Reliability - Meeting Planning Criteria	McManus to Brady Heights - Upgrade 69 kV Line	EGSL	Long range project targeted to increase reliability of 69kV system.(Potential Target Year 2014)
Enhanced Reliability	Fancy Point 500 kV Switchyard Upgrades	EGSL	
Transmission Reliability - Meeting Planning Criteria	Lake Charles Improvement - 230 kV Loop	EGSL	Long range project targeted to increase reliability of 230 and 138kV system by building a new 230kV line from Nelson towards LC Bulk and 230-138kV station. (Potential Target Year 2016)
Transmission Reliability - Meeting Planning Criteria	LC Bulk: Add 3rd 138-69 kV Autotransformer	EGSL	Long range project targeted to increase reliability of 69 kV system. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	LC Bulk - Chlomal: Reconductor approximately 3 miles	EGSL	Long range project targeted to increase reliability of 69kV system (Potential Target Year 2016).
Transmission Reliability - Meeting Planning Criteria	Chlomal-Lacassine: Upgrade 69kV line and install breaker	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Lawtag-Jennings: Upgrade 69kV line	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2013)
Transmission Reliability - Meeting Planning Criteria	2005 Jackson-Marydale 69kV Line	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Greenwell Springs area reconfiguration (Coly-Polyform-Denham Springs)	EGSL	Long range project targeted to increase reliability of 69kV system by upgrading overloaded 69kV lines or relay upgrade to allow creation of three terminal lines. (Potential Target Year 2015)
	Champagne - Add 115 kV Capacitor Bank	EGSL	Long range project to provide voltage support during contingency outages (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Gypsy to Bellpoint Reconductor	ELL	Long Range project to increase increase reliability on the 230kV system between Gypsy and Belle Point. (Potential Target Year 2013)

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	Harrelson to Gloria - upgrade 69 kV line	EGSL	Long range project targeted to increase reliability of 69kV system.
Transmission Reliability - Meeting Planning Criteria	McManus to Brady Heights - Upgrade 69 kV Line	EGSL	Long range project targeted to increase reliability of 69kV system.(Potential Target Year 2014)
Enhanced Reliability	Fancy Point 500 kV Switchyard Upgrades	EGSL	
Transmission Reliability - Meeting Planning Criteria	Moril - Add 2nd 138 - 69 Auto	EGSL	Eliminates contingency loss of existing auto. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Lake Charles Improvement - 230 kV Loop	EGSL	Long range project targeted to increase reliability of 230 and 138kV system by building a new 230kV line from Nelson towards LC Bulk and 230-138kV station. (Potential Target Year 2016)
Transmission Reliability - Meeting Planning Criteria	LC Bulk: Add 3rd 138-69 kV Autotransformer	EGSL	Long range project targeted to increase reliability of 69 kV system. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	LC Bulk - Chlomal: Reconductor approximately 3 miles	EGSL	Long range project targeted to increase reliability of 69kV system (Potential Target Year 2016).
Transmission Reliability - Meeting Planning Criteria	Upgrade Scott to Carencro 69 kV Line	EGSL	Long range project targeted to increase reliability of 69kV system (Potential Target Year 2015).
Transmission Reliability - Meeting Planning Criteria	Chlomal-Lacassine: Upgrade 69kV line and install breaker	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Lawtag-Jennings: Upgrade 69kV line	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2013)
Transmission Reliability - Meeting Planning Criteria	2005 Jackson-Tejac 69kV Line	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Greenwell Springs area reconfiguration (Coly-Polyform-Denham Springs)	EGSL	Long range project targeted to increase reliability of 69kV system by upgrading overloaded 69kV lines or relay upgrade to allow creation of three terminal lines. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Champagne - Add 115 kV Capacitor Bank	EGSL	Long range project to provide voltage support during contingency outages (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Mossville to Alfol Construct new 69 kV Line	EGSL	Long range project targeted to increase reliability of 69kV system. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Minden Area Improvement: Reconductor Minden to Minden LaGen and Add 32.4 MVAR capacitor bank at Minden.	ELL	Long Range project to increase reliability in the Minden area. (Potential Target Year 2014)

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	Minden Area Improvement: Reconductor Minden to Minden LaGen and Add 32.4 MVAR capacitor bank at Minden.	ELL	Long Range project to increase reliability in the Minden area. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	West Monroe/Monroe Reliability Improvements	ELL	Long range project targeted to increase reliability by energizing 115kV lines built according to 230kV standard to 230kV level and completing 230kV loop around Monroe. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Southeast LA Coastal Improvement Plan: Phase 3 Build Oakville - Alliance 230kV line and Alliance 230kV Sub	ELL	Long range project targeted to increase reliability in the SE Louisiana coastal area. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Red Gum Voltage Improvement	ELL	Long range project targeted to increase reliability by energizing 34kV line built according to 115kV standards to 115kV level and adding a cap bank for voltage support at Winnsboro.
Transmission Reliability - Meeting Planning Criteria	Napoleonville Cap Bank 21MVAR	ELL	Long range project to increase voltage reliability on the 115kV system from Plaquemine to Paincourtville
	Adams Creek to Bogalusa No. 2 - Replace Breaker	ELL	Potential Target year: 2013
Transmission Reliability - Meeting Planning Criteria	DSG Reliability Improvements: Phase 3	ELL/ENOI	Long range project targeted to improve the voltage support and thermal overloads observed in the DSG area during high load conditions. Timing dependent on load growth in N.O.
Transmission Reliability - Meeting Planning Criteria	North Mississippi Improvement (230 kV)	EMI	Long rang project targeted to improve reliability between Batesville and Southaven (230 between Batesville and Getwell) 2018
Transmission Reliability - Meeting Planning Criteria	Paterson: Install 230/115 kV Auto	ENOI	This long range project is a continuation of a breaker project to improve voltage reliability in the New Orleans area where Paterson substation is located. Timing dependent on load growth in N.O.
Transmission Reliability - Meeting Planning Criteria	Breakers at Hollandale and Belzoni (close normally-open point) / Rolling Fork Cap Bank	EMI	Project to increase relibility in central Mississippi on the 115 kV system between Greenville and Vicksburg 2014
Transmission Reliability - Meeting Planning Criteria	Rankin Industrial - Airport: Reconductor	EMI	2014
Transmission Reliability - Meeting Planning Criteria	Church Rd - Getwell: Build new line	EMI	2014
Transmission Reliability - Meeting Planning Criteria	Central MS Improvement (Lakeover-Canton 230kV : Voltage)	EMI	2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Cleveland-Dayton Bulk 138kV	ETI	Long range project to increase reliability in the Dayton area. (Potential Target Year 2013)
Transmission Reliabiltiy - Meeting Planning Criteria	Conroe area switching station - tie lines Longmire to Fish Creek and Conroe to Woodhaven 138 lines together.	ETI	Long range project to increase reliability in the Egypt / Fish Creek area. (Potential Target Year 2013)

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	West Monroe/Monroe Reliability Improvements	ELL	Long range project targeted to increase reliability by energizing 115kV lines built according to 230kV standard to 230kV level and completing 230kV loop around Monroe. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Red Gum Voltage Improvement	ELL	Long range project targeted to increase reliability by energizing 34kV line built according to 115kV standards to 115kV level and adding a cap bank for voltage support at Winnsboro.
Transmission Reliability - Meeting Planning Criteria	Napoleonville Cap Bank 21MVAR	ELL	Long range project to increase voltage reliability on the 115kV system from Plaquemine to Paincourtville
Transmission Reliability - Meeting Planning Criteria	Clovelly to Golden Meadow 115 kV upgrade	ELL	Provide thermal capacity to Golden Meadow area
Transmission Reliability - Meeting Planning Criteria	DSG Reliability Improvements: Phase 3	ELL/ENOI	Long range project targeted to improve the voltage support and thermal overloads observed in the DSG area during high load conditions. Timing dependent on load growth in N.O.
Transmission Reliability - Meeting Planning Criteria	North Mississippi Improvement (230 kV)	EMI	Long rang project targeted to improve reliability between Batesville and Southaven (230 between Batesville and Getwell) 2018
Transmission Reliability - Meeting Planning Criteria	Paterson: Install 230/115 kV Auto	ENOI	This long range project is a continuation of a breaker project to improve voltage reliability in the New Orleans area where Paterson substation is located. Timing dependent on load growth in N.O.
Transmission Reliability - Meeting Planning Criteria	Breakers at Hollandale and Belzoni (close normally-open point) / Rolling Fork Cap Bank	EMI	Project to increase relibility in central Mississippi on the 115 kV system between Greenville and Vicksburg 2014
Transmission Reliability - Meeting Planning Criteria	Rankin Industrial - Airport: Reconductor	EMI	2014
Transmission Reliability - Meeting Planning Criteria	Church Rd - Getwell: Build new line	EMI	2014
Transmission Reliability - Meeting Planning Criteria	Central MS Improvement (Lakeover-Canton 230kV : Voltage)	EMI	2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Cleveland-Dayton Bulk 138kV	ETI	Long range project to increase reliability in the Dayton area. (Potential Target Year 2013)
Transmission Reliabiltiy - Meeting Planning Criteria	Conroe area switching station - tie lines Longmire to Fish Creek and Conroe to Woodhaven 138 lines together.	ETI	Long range project to increase reliability in the Egypt / Fish Creek area. (Potential Target Year 2013)
Transmission Reliability - Meeting Planning Criteria	Reconductor Sabine to Port Neches Bulk (Line 515) and Sabine to Port Neches Bulk (via Linde Line 516)	ETI	Long range project to increase reliability in the Sabine area. (Potential Target Year 2013)

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	Reconductor Sabine to Port Neches Bulk (Line 515) and Sabine to Port Neches Bulk (via Linde Line 516)	ETI	Long range project to increase reliability in the Sabine area. (Potential Target Year 2013)
Transmission Reliability - Meeting Planning Criteria	Upgrade Doucette-Rayburn 138kV	ETI	Long range project to increase reliability in the Sabine area. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Jasper - Rayburn: Reconductor	ETI	Long range project to increase reliability in the Rayburn area. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Cedar Hill to Conroe reconductor	ETI	Long range project to increase reliability in the Conroe area. (Potential Target Year 2013)
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at New Caney 138kV	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	New Sabine-Gulfway 230kV Line	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Upgrade Jacinto to Porter 138kV	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Orange County 230kV Project	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Final Construct new Cypress to Jacinto 230 kV Line	ETI	Long range Western Region Project. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Cleveland 138kV	ETI	Potential Target Year of 2015
Transmission Reliability - Meeting Planning Criteria	New China-Amelia 230kV line	ETI	Potential Target Year of 2015
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Mill Creek (JNEC) 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Call (JNEC) 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Pelican Road-Shepherd 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade South Beaumont-Pansy 69kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Kountze Bulk-Warren 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Rivtrin 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Huntsville 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Corrigan Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Shepherd (SHECO) 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Banks at Dayton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Banks at Doucette Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Eastgate-Dayton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Cypress-Lumberton	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add 2nd Cypress Auto (500/230kV or 500/138kV)	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Amelia-Helbig 230kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Jacinto-Cleveland 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Toledo Bend-Newton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Cypress-Amelia 230kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Honey (SHECO) 138kV	ETI	Potential Target Year of 2018
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim Add Alden SVC	ETI	Potential Target Year of 2014

Entergy 2010-2012 Draft Construction Plan

Project Driver	Project Name	LE	Comments
Transmission Reliability - Meeting Planning Criteria	Upgrade Doucette-Rayburn 138kV	ETI	Long range project to increase reliability in the Sabine area. (Potential Target Year 2014)
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at New Caney 138kV	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	New Sabine-Gulfway 230kV Line	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Upgrade Jacinto to Porter 138kV	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Orange County 230kV Project	ETI	Potential Target Year of 2014
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Final Construct new Cypress to Jacinto 230 kV Line	ETI	Long range Western Region Project. (Potential Target Year 2015)
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Cleveland 138kV	ETI	Potential Target Year of 2015
Transmission Reliability - Meeting Planning Criteria	New China-Amelia 230kV line	ETI	Potential Target Year of 2015
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Mill Creek (JNEC) 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Call (JNEC) 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Pelican Road-Shepherd 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade South Beaumont-Pansy 69kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Upgrade Kountze Bulk-Warren 138kV	ETI	Potential Target Year of 2016
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Rivtrin 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Huntsville 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Bank at Corrigan Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Shepherd (SHECO) 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Banks at Dayton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Expand Cap Banks at Doucette Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Eastgate-Dayton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Cypress-Lumberton	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add 2nd Cypress Auto (500/230kV or 500/138kV)	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Amelia-Helbig 230kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Jacinto-Cleveland 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Toledo Bend-Newton Bulk 138kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Upgrade Cypress-Amelia 230kV	ETI	Potential Target Year of 2017
Transmission Reliability - Meeting Planning Criteria	Add Cap Bank at Honey (SHECO) 138kV	ETI	Potential Target Year of 2018
Transmission Reliability - Meeting Planning Criteria	Western Region Reliability Improvement Plan Phase 3 Interim Add Alden SVC	ETI	Potential Target Year of 2014

ICT Responses to ETEC's Comments:

Page 2

Number 1: Comment noted.

Page 3

Number 1: Emerson cap bank will be 10.2 MVar and the description of the idev will be revised.

Number 2: As mentioned, this is resolved.

Number 3: An idev exist and it will be added to the list. This was included in updated 2, but the line is limited by the CT ratio.

Number 4: Comment noted. It has been reviewed and the cap bank will be moved from Ward to Beebe.

Page 4

Number 1: Acadia cap bank will be 37.7 MVar and the description of idev will be revised.

Number 2: The Waterford4 Generator was already modeled. No topology change. No idev is needed.

Number 3: As mentioned, this is resolved.

Number 4: This was a redundant item and there are no errors associated with this issue.

Number 5: Comment noted.

Number 6: Corresponding idev exist under 10CP EMI Grand Gulf Uprated Project.

Number 7: The Russellville South to Dardanelle upgrade was incorporated into the EAI 2012S Westar TSR Upgrades idev.

Number 8: Comment noted.

Number 9: Comment noted.

Page 5

Number 1: Comment noted

Number 2: As mentioned, this is resolved.

Number 3: This does not affect topology.

Number 4: This does not affect topology.

Number 5: Corresponding idev exist under 10CP 2011S ETI Grand Gulf Project idev.

Number 6: Comment noted.

Number 7: Comment noted

Number 8: Comment noted.

Number 9: Comment noted.

Page 6

Number 1: Comment noted.

ETEC’s comments received 09/03/09

ETEC's QUESTONS FOR ICT ON THE 2010 RELIABILITY ASSESSMENT

ETEC-1.

334238 2BLUWATR 69.000 – This bus had low voltage violations in the 2012 Summer Peak model under n-0 conditions but was not identified in the Reliability Assessment. Please verify if this facility should have been identified.

The cap at Himex 334236 was locked because it would switch on and off when trying to solve the model. It was locked in the off position. Change the Binit value to 12.6 then solve and the voltage at Blue Water increases to just over 1 per unit.

ETEC-2.

Please explain why the following facilities were not identified as having thermal overloads under n-1 conditions in the 2012 Summer and 2012 Winter Peak models.

303302 3MNDENLG 115 337361 3MINDEN 115
334000 2CALVERT 69.0 334001 2SINHERN 69.0
334001 2SINHERN 69.0 334002 2HEARNE 69.0
336800 3B.WLSN 115 336960 3SE-VKS 115
336804 3VKSBRG 115 336962 3VKSB-W 115
336925 3JX-HIC 115 336926 3JAX-N 115
336925 3JX-HIC 115 336940 3RX BRN 115
336967 3ONWARD 115 336968 3R.FORK 115
338228 3CORNIN 115 338229 3T.E.#8 115
338228 3CORNIN 115 338691 3CORN N# 115

The Trus – Vienna 115kV contingency and Minden overload are part of the same breaker to breaker section "Minden – Vienna". The consequential load is 88.5MW, so the 100MW rule doesn't apply.

The overload from Calvert to Hearne isn't showing up in the U2 12S-W models. To solve the models for the loss of either transformer at Bryan, ICT had to lock the caps at Calvert, Hearn, and Bryan A and B.

BW – SE Vicksburg overload FTLO of Vicksbrg – Wvicksbrg. Opening the breaker – breaker section "Vicksbrg – Nvicksbrg" relieves the overload while dropping 42.9MW of consequential load. The 100MW rule doesn't apply.

Vicksbrg – Wvicksbrg overloads FTLO BW – SE Vicksburg. Opening the breaker – breaker section "BW to Yazoo Municipal" relieves the overload while dropping 28.5 MW of consequential load. The 100MW rule doesn't apply.

RB – Hic – Jax N overloads FTLO Lakeover – Livingston. Opening the breaker – breaker section from "Lakeover – Jax NE" relieves the overload while dropping 88.5 MW of consequential load. The 100MW rule doesn't apply.

Onward – Rolling Fork overloads FTLO Greenvle – SE Greenvle. Opening the breaker – breaker section "Greenvle – Rolling Fork" relieves the overload while dropping 63.5 MW of consequential load. The 100MW rule doesn't apply.

Corn N - TE overloads FTLO Watervalley - Poca. Opening the breaker – breaker section "Watervalley – Jim Hill" relieves the overload while dropping 68.9 MW of consequential load. The 100MW rule doesn't apply.

ETEC-3.

Please explain why the following facilities were not identified as having thermal overloads under n-1 conditions in the 2012 Summer and 2012 Winter Peak models.

335438	2OPEL 6	69.0
335439	2L658TP	69.0
335440	2BOMILL	69.0
335441	2L637TP	69.0
335671	TP.NESSR	69.0
335672	2NESSER	69.0
335710	2T340/37	69.0
335711	2JONESCR	69.0
336967	3ONWARD	115.0
336968	3R.FORK	115.0
336969	3MAYRSV	115.0
336970	3N.YUM*	115.0
336992	3EPA-MUR	115.0
337045	3SE-GRN	115.0
337046	3GR-TC*	115.0
337048	3HOLNDL	115.0
337049	3ARCOLA*	115.0
337071	3EPA-SGV	115.0
337328	3METRPLS	115.0
337329	3WISNER	115.0
337330	3WNSBRO	115.0

337742	3MALV-N*	115.0
337743	3MALV-N	115.0
337744	3GIFORD	115.0
337745	3POYEN	115.0

The voltage on busses 335438-39-40-41 drops below .92 FTLO various segments of the Sunset – Champagne breaker to breaker section. 335438-39-40-41 are part of the Sunset – Champagne breaker to breaker section and there is 9.8MW of consequential load. So the 100MW rule doesn't apply.

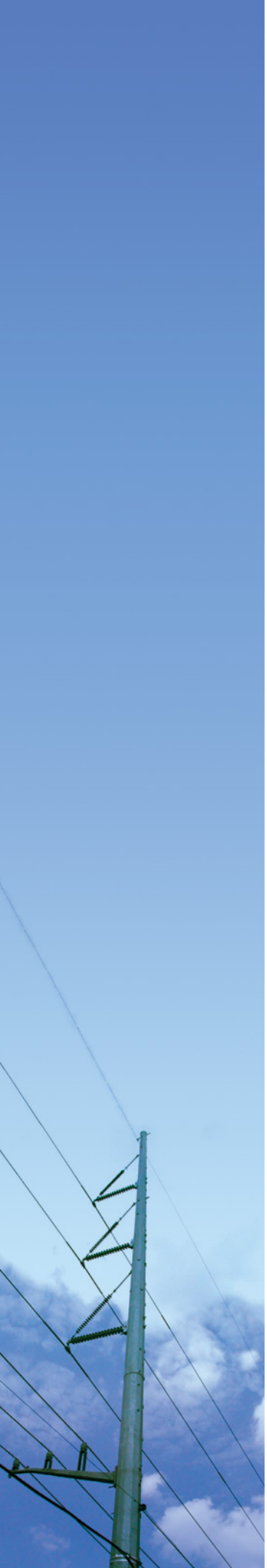
The voltage on busses 335671-72-710-711 drops below .92 FTLO Harelson – Tap 340/37. 335671-72-710-711 and Harelson – Tap 340/37 are part of the Harelson – Jones Creek breaker to breaker that has 28.4MW of consequential load. So the 100MW rule doesn't apply.

The low voltage from Onward to SE Greenvle occurs FTLO various sections of the Greenvle – Rolling Fork breaker – breaker section. Opening the breaker – breaker section "Greenvle – Rolling Fork" relieves the voltage problems while dropping 63.5 MW of consequential load. The 100MW rule doesn't apply.

In 12S the voltage drops below .92 at busses 337328-29-30 FTLO various sections of the Redgum – Winnsboro breaker – breaker section. Opening Redgum – Winnsboro relieves the low voltage while dropping 19MW of load. So the 100MW rule doesn't apply.

In 12W the voltage drops below .92 at busses 337328-29-30 FTLO Alto - Swartz. The caps at Redgum, Wisner, and Winnsboro had to be locked in the "on" position to solve the model. The voltage was within limits after locking the caps.

The voltage at Malvern North, Giford, and Poyen drop below .92 FTLO Malvern North – Hot Springs EHV. Opening the Hot Springs – Woodward breaker – breaker section relieves the low voltage while dropping 73.9MW of consequential load. So the 100MW rule doesn't apply.



ICT Reliability Assessment

August 2009

SPP Southwest Power Pool

Table of Contents

ICT Reliability Assessment

1. Introduction

Southwest Power Pool (SPP) acts as the Independent Coordinator of Transmission (ICT) for Entergy. The ICT performs a number of functions under the provisions of Entergy's Open Access Transmission Tariff (OATT). Among these functions is an annual reliability assessment of Entergy's transmission system, which includes an evaluation of Entergy's draft construction plan for the next three years. The ICT's reliability assessment and construction plan evaluation are the first part of an overall planning process which culminates in the development of Entergy's Construction Plan and the ICT's Base Plan. The ICT's Base Plan includes all projects that the ICT believes are necessary to comply with Entergy's Planning Criteria and thus is focused on reliability needs. The Base Plan forms the basis for cost allocation under Attachment T of Entergy's OATT. The results of this reliability assessment will be a significant factor in determining what is ultimately included in the ICT's 2010 Base Plan.

2. ICT Reliability Assessment Scope

The objective of the Reliability Assessment is to assess the ability of the Entergy transmission system to perform according to Entergy's Planning Criteria in both near-term and long-term horizons. Entergy's Planning Criteria are set out in the OATT and are posted on Entergy's OASIS.

Entergy's Planning Criteria

- NERC TPL Standards
- SERC Supplements to NERC Standards
- Entergy Transmission Local Criteria
- Entergy Transmission Planning Guidelines (Business Practices)

Entergy's compliance with NERC Reliability Standards is facilitated through the SERC Reliability Corporation (SERC) which is not affiliated with SPP. The ICT's reliability assessment is not a substitute for the compliance processes required by NERC and SERC. Where the ICT reliability assessment shows possible overloads or voltage problems, this does not indicate non-compliance with NERC or SERC standards, but rather provides the ICT's view of overall reliability with respect to Entergy's Planning Criteria.

The ICT has certain discretion under Entergy's OATT regarding the application of Entergy's Planning Criteria. Using this discretion, the ICT has applied interpretations or enhancements with respect to the Planning Criteria. These enhancements provide that (1) "non-consequential load" shed will not be used as a mitigation plan, and (2) the amount of "consequential load" exposed to possible load shedding for contingency situations is limited to 100 MW. Consequential load is the load removed from service as a direct result of the automatic operation of protective devices responding to a fault condition. Consequential load includes load served "radially" from a single transmission feed. The shedding of non-consequential load generally requires operator intervention.

The reliability assessment included an evaluation of the transmission system under multiple scenarios:

- System Intact – with all elements in their normal configuration
- N-1 Contingency – outage of every single transmission segment individually
- Transmission Circuit Contingency – outage of a single transmission circuit by operation of protective devices (breaker-to-breaker contingency)

These scenarios were evaluated (1) with the "Approved" projects in the current 2009-2011 Construction Plan and (2) with both "Approved" and "Proposed and In-Target" projects in the draft 2010-2012 Construction Plan. The amount of consequential load associated with a particular transmission circuit contingency was determined for that scenario.

Two additional analyses were performed:

- A Low Hydro scenario evaluating the effect of the reduced availability of hydro generation in north Arkansas during dry summer months.
- Specific contingencies defined in the Planning Criteria for Load Pockets.

The full reliability assessment scope was discussed with and commented on by stakeholders at the March 17, 2009 LTTIWG meeting and can be found in Attachment A to this report.

3. Entergy's Draft Construction Plan

The draft Construction Plan developed by Entergy includes all transmission projects that Entergy expects to construct or initiate construction of during the 2010-2012 time period. The Construction Plan includes projects that Entergy believes are necessary to satisfy Entergy's Planning Criteria as well as other economic upgrade projects.

Projects shown in Entergy's draft Construction Plan with funding comment "Approved" are those expected to have funds budgeted in 2010 towards their construction. "Proposed and In Target" projects are expected to be budgeted for construction in 2011 and/or 2012 based on current projections. Some projects may have in-service dates beyond the 2010-2012 period, depending on development lead times.

The ICT posted Entergy's draft Construction Plan on Entergy's OASIS on May 13, 2009. Entergy reviewed the draft Construction Plan with stakeholders at the June 9, 2009 LTTIWG meeting. The presentation can be found in the meeting background materials. Stakeholders were invited to comment on the plan. Entergy subsequently provided a modified draft Construction Plan to the ICT—Revision 1—which was posted on July 16, 2009. Revision 1 included two additional projects to support a newly-confirmed transmission service reservation.

The ICT posted a draft reliability assessment report on July 17, 2009. Subsequent to that posting, Entergy provided a second revised draft Construction Plan—Revision 2—to the ICT which was posted on August 3, 2009. This revision greatly expanded the number of proposed construction projects, containing some twenty-five (25) additional projects and accelerating the in-service dates of some eleven (11) others.

In the 2008 “Differences Report” identifying the differences between the 2008 ICT Base Plan and Entergy’s 2009-11 Construction Plan, twenty (20) projects were identified that were contained in the ICT’s Base Plan that were not included in Entergy’s Construction Plan. Of those twenty, twelve (12) have now been included in the draft 2010-2012 Construction Plan. Entergy also added alternative projects which are intended to displace another seven (7) Base Plan projects. And for one difference, Entergy added a part of the Base Plan project and indicated that the full project is expected to be completed in a later Construction Plan. Therefore, all twenty differences reported in the 2008 Differences Report have been addressed in some way in the draft 2010-12 Construction Plan.

3.1. New Projects in the Draft 2010-2012 Construction Plan Revision 1

Projects that are new in the draft 2010-2012 Construction Plan

3.1.1. New in Revision 1 Draft Construction Plan

Project Name	Projected In-service Date	Funding Comments
Delhi 115 kV Substation – Add 10 Ohm series reactor	2012	Proposed & In Target
Grand Gulf Uprate Project - Baxter Wilson to Ray Braswell 500 kV line uprate breakers and switches	2011	Proposed & In Target
Grand Gulf Uprate Project - Upgrade Hartburg to Inland Orange to McLewis 230 kV Line	2011	Proposed & In Target

3.1.2. New in Revision 2 Draft Construction Plan

Project Name	Projected In-service Date	Funding Comments
Beebe 115 kV Substation: Add capacitor bank	2010	Proposed & In Target
Mt. Ida 115 kV Substation: Add capacitor bank	2010	Proposed & In Target
Melbourne to Sage 161 kV: Upgrade line	Winter 2010	Proposed & In Target
Harrison East to Everton Road: Replace 600 A switches and line trap at Harrison East with 1200 A equipment	2011	Proposed & In Target
Holland Bottoms (Cabot EHV): Construct new 500/161/115 kV substation Phase 1) 500 -115 kV in 2011 Phase 2) 500 -161 kV in 2012	2012	Proposed & In Target
Construct new Ebony 161 kV Switching Station	2012	Proposed & In Target
Holland Bottoms to Hamlet: Construct new 161 kV Line	2012	Proposed & In Target
Jonesboro to Hergett: Upgrade 161 kV line	2012	Proposed & In Target
Benton North to Benton South: Upgrade 115 kV Line	2012	Proposed & In Target
Addis to Cajun 230 kV line - Upgrade	2011	Approved
Construct 2nd Dynegy to Pecan Grove 230 kV line	2012	Proposed & In Target
Tejac to Marydale: Upgrade 69 kV transmission line	2012	Approved
Nelson to Mossville - Upgrade 138 kV Line	2013	Proposed & In Target
Snakefarm to Kenner 115 kV line: Upgrade thermal capacity	Winter 2010	Proposed & In Target
Southeast LA Coastal Improvement Plan: Phase 3 Construct Oakville to Alliance 230kV Line and add 230 - 115 kV Autotransformer at Alliance Substation	2012	Proposed & In Target
Bogue Chitto - Construct new 500-230 kV substation on the Daniel to McKnight 500 kV line. Tie into Bogalusa to Ramsay and Bogalusa to Talisheek 230 kV Lines. Upgrade Bogue Chitto to Madisonville 230 kV line	2013	Proposed & In Target
Bayou Steel to Tezcuco 230 kV line - Construct new line	2012	Proposed & In Target
Construct new Willow Glen to Conway 230 kV line	2014	Proposed & In Target
Upgrade Florence to Star 115 kV line (continuation of TVA Affected System Upgrades)	Summer 2011	Proposed & In Target
Reconductor Waterways to Vicksburg East 115 kV line	2011	Proposed & In Target
McAdams Area Upgrades McAdams Substation: Add 2nd 615 MVA 500 kV / 230 kV Autotransformer McAdams - Pickens 230 kV line: Upgrade to Double-Bundled 954 ACSR (880 MVA)	2011	Proposed & In Target
Getwell 230/115 kV 2nd Auto Getwell to Hernando - Construct 230 kV line. Operate at 115 kV	2013	Proposed & In Target
Cedar Hill - Plantation 138 kV line: Upgrade	2012	Proposed & In Target
Plantation to Conroe 138 kV line: Upgrade	2012	Proposed & In Target
Jasper to Rayburn 138 kV line: Upgrade	2013	Proposed & In Target

3.2. Completed Projects From the Prior 2009-2011 Construction Plan

Projects that were in the 2009-11 Construction Plan that have been completed.

Project Name	Notes
Natchez DVARS and Cap Bank (Natchez Delisting)	Completed
Dewitt: Install 10.8 MVAr Capacitor Bank	Completed
Little Rock 8th and Woodrow - Upgrade capacitor bank to 33.3 MVAR	Completed
Little Rock Boyle Park - Upgrade capacitor bank to 33.3 MVAR	Completed
Little Rock Rock Creek - Install new 30.5 MVAR capacitor bank	Completed
Little Rock W Markham - Install new 30.5 MVAR capacitor bank	Completed
Maumelle East Substation - Install Second Transmission Tie	Completed
Rison: Upgrade switch risers	Completed
Conway West - Donaghey: Reconductor with 666 ACSS	Completed
Winn: Install 69kV Cap Bank	Completed
Capitol Substation: Property Improvements	Completed
Amite South Import Improvement: Phase 3	Completed
Southeast LA Coastal Improvement Plan: Phase 1 - Peters Road 230 kV Transfer Bus	Completed
Destrehan: Install Line Breaker	Completed
Install 40MVAR Cap Bank at Houma	Completed
Amite South Import Improvement: Phase 2	Completed
Liberty-Gillsburg 115 kV upgrade	Completed
Hamlet 161 kV Substation: Install 161 kV Breaker on Conway Industrial Line	Completed
Acadia 138 kV Substation: Install 36 MVAR Capacitor Bank	Completed
Waterford 4: Blackstart generator interconnection	Completed
Liberty-Gloster: Upgrade 115 kV Line For Natchez De-listing	Completed
Sheco Jacinto - Generator Interconnection	Completed

3.3. Other Changes Between the Current (2009-11) and Draft (2010-12) Rev 1 Construction Plans

Projects that have had modifications made to the expected in-service dates (ISD) and other changes:

Project Name	Type of Change	Changed From	Changed To
Western Region Reliability Improvement Plan Phase 3 Interim	Scope	Add Alden SVC [removed]	Relocate Sheco's Caney Creek 138 kV Substation [added]
Church Rd Substation & 11.3 miles 230kV	ISD	2010	2012
Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 1	ISD	2011	2013
Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 2	ISD	2013	2014
Indianola-Greenwood: Upgrade jumpers and buswork (Morehead, Itta Bena, Greenwood)	ISD	2009	Winter 2009
Tamina - Cedar Hill Reconductor	ISD	2011	Winter 2011

3.4. Projects that Have Been Accelerated from Revision 1 to Revision 2 Draft Construction Plan

Project Name	Type of Change	Changed From	Changed To
Transmission Service (OG&E) Upgrade ANO - Russelville North OGE Upgrade Russelville East - Russelville South OGE	ISD	Winter 2011	Winter 2010
Loblolly-Hammond Build 230 kV Line	ISD	2013	2012
Bogalusa to Adams Creek 230 kV No. 2 - Upgrade terminal equipment at Bogalusa	ISD	2011	Winter 2010
Delhi 115 kV Substation - Add 10 Ohm series reactor	ISD	2012	Summer 2010
TVA Affected System Upgrades Upgrade switches at Morton Upgrade South Jackson - Florence 115 kV line	ISD	Summer 2011	Winter 2010
Grand Gulf Uprate Project Baxter Wilson to Ray Braswell 500 kV line uprate breakers and switches	ISD	2011	2010
Ridgeland-Madison Reliability Improvement Rebuild Lakeover - Ridgeland Line	ISD	2014	2012
Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 1 Add 2nd Cap Bank at Winona Upgrade Cap Bank at Greenwood Install Cap Bank at Schlater	ISD	2013	2010
Grenada/Winona/Greenwood Area Improvement (Tillatoba auto alternative): Phase 2 Build 230 kV line from Tillatoba to South Grenada Install Auto at South Grenada	ISD	2014	2012
Western Region Reliability Improvement Plan Phase 3 Interim (Part 3) Upgrade South Beaumont to Fontenot Corner 138 kV line	ISD	Summer 2011	Winter 2010

3.5. Projects that Have Been Delayed from Revision 1 to Revision 2 Draft Construction Plan

Project Name	Type of Change	Changed From	Changed To
Ray Braswell - Wyndale-Byram (S. Jackson) 115kV Line	ISD	2012	2013
College Station 138kV Switching Station Close N.O and upgrade protection to create 3 terminal line	ISD	Summer 2009	Winter 2010
Fawil: Upgrade 138/69 kV Auto	ISD	Summer 2009	Winter 2009
Porter - Tamina: Replace Breaker/Switches	ISD	Fall 2009	Winter 2009

The full draft 2010-2012 Construction Plan is available on the ICT Planning Page on Entergy's OASIS.

4. Reliability Assessment and Construction Plan Evaluation Results

Entergy's Revision 2 to its draft Construction Plan included several new projects, accelerated the in-service dates of several others, and delayed a handful. These modifications have significantly changed the results that were reported in the draft version of this report. The format of these results have therefore changed somewhat to better summarize the results.

4.1. Near-Term Period – 2010 and 2014

4.1.1. System Intact

An analysis of system intact conditions revealed few problems. Melbourne-Sage 161 kV is projected to be overloaded in the winter seasons. Entergy has added a new project to upgrade this element by winter 2010 which would eliminate this condition. Emerging thermal problems are Mossville-Canal La 69 kV, and Zachary REA-Port Hudson 69 kV. Mount Ida 115 kV voltage is projected to be slightly low in 2010 summer, but Entergy's addition of a capacitor bank upgrade by 2010 would eliminate this condition. High voltages are noted on the secondary sides of a few transformers.

4.1.2. Single Contingency

Summary results of single contingency scans—with Entergy's draft Construction Plan projects included—are provided in Attachment B to this report showing thermal overloads, low and high voltages. The full contingency scan results are available on the ICT Planning Page on Entergy's OASIS. The attachments reflect the results of both bus-to-bus and breaker-to-breaker analyses and the application of the 100 MW Rule discussed above. There are a number of overloads and low voltages in 2010 that do not appear in later years. This is primarily because Construction Plan projects that have in-service dates between 2010 and 2014 were included in the 2014 models, but not the 2010 models. There are draft Construction Plan projects which will address all of these problems, though in some cases not before 2010 summer. Entergy has indicated that it may not be feasible to accelerate these projects further. These projected problem areas are shown in Table1 along with the draft Construction Plan project that is expected to eliminate the condition.

Table 1 - 2010 Problem Areas with Identified Construction Plan Projects to Mitigate Them

Projected Problem Area	Draft CP Project and Est. In-Service Date
Fish Creek-Longmire 138 kV (Western)	College Station 138 kV Switch Station (2010)
Chlomal-Jennings 69 kV corridor (SW La.)	Carter & Elton (2010)
Acadiana Area (S La.)	Acadiana Area Improvement Project Phase 1 (2011) and Phase 2 (2012)
Holiday-Lafayette 69 kV (S La.)	Youngsville 138 kV Substation (2011)
Willow Glen-Monochem & Sorrento-Vignes (SE La.)	Willow Glen-Conway 230 kV (2014)
Liberty-Amite & Brookhaven-Norfield (S Miss.)	Bogue Chitto 500/230 kV (2013)
South Jackson-Brookhaven 115 kV corridor (S Miss.)	Ray Braswell-Wyndham-Byram (2013)
Tillatoba-Winona 115 kV corridor (Central Miss.)	Grenada Area Improvement Phase 2 Project (2012)
Hot Springs-Amity Tap 115 kV (Central Ark.)	Aquila TSA (2011)
Lynch-McAlmont 115 kV (Central Ark.)	Holland Bottoms (2012)
Harrison-Everton 161 kV (N Ark)	Harrison East Switches (2011)
Harrison-Eureka 161 kV corridor (N Ark.)	Grandview (2011)

Entergy has added or accelerated a number of projects in its draft Construction Plan which will address several potential problem areas which are projected in 2014. These areas were identified in the ICT's draft report and are shown in Table 2 along with the CP project which is expected to provide relief by 2014.

Table 2 - 2014 Problem Areas with Identified Construction Plan Projects

Projected Problem Area	Draft CP Project and Est. In-Service Date
115 kV system south of Valentine-Barataria-Port Nickels (SE La.)	SE LA Coastal Improvement Phase 3 (2012)
Waterford-Tezcuco 230 kV Belle Point-Gypsy 230 kV (SE La.)	Bayou Steel-Tezcuco (2012)
Kenner-Snakefarm 115 kV (SE La.)	Kenner-Snakefarm (2010 Winter)
Waterways-Vicksburg East 115 kV (SW Miss.)	Waterways-Vicksburg East (2011)
Baxter Wilson-Ray Braswell 500 kV (SW Miss.)	Baxter Willson-Ray Braswell 500 kV (2010)
Benton-Bauxite-Mabelvale 115 kV Corridor (Central Ark.)	Benton S-Benton N (2012)
Cabot Area 115 kV Voltage (Central Ark.)	Ward Capacitor (2010)
Morrilton East-Gleason-Tyler 161 kV (Central Ark.)	Holland Bottoms-Hamlet (2012)

This leaves a small number of projected problem areas for which there has been no Construction Plan project identified, although there may be a mitigation plan that doesn't involve an upgrade project. These are areas that will be evaluated further to determine what the appropriate mitigation plan should be for the ICT Base Plan. If Entergy later adds a project to its final Construction Plan, the ICT will evaluate it for possible inclusion in the Base Plan. Table 3 shows these areas.

Table 3 - 2014 Problem Areas Needing Mitigation Plan

Projected Problem Area	Comment
Calvert 69 kV (Low Voltage) (Western)	
New Caney 138 kV (Low Voltage) (Western)	
Port Neches Bulk-Sabine 138 kV Port Neches Bulk-Linde 138 kV (SE Tex.)	Possible mitigation: Operating Guide
Kolbs-Lakeview 69 kV (SE Tex.)	
Mossville-Line 253A Tap 69 kV (SW La.)	
Cecelia-Semere 138 kV (S La.)	
Fivepoints-Tigre 69 kV (S La.)	Possible mitigation: Existing spare transformer
Carlisle (La.) 115 kV (Low Voltage) (SE La.)	Possible mitigation: Automatic load transfer
Horn Lake-Hernando 115 kV Corridor (N Miss.)	Getwell-Batesville 230 kV Project will alleviate these problems in the long term. Entergy included the first leg in the draft CP. Transformer tap adjustments are also being investigated for possible short-term mitigation.
Parkin-Twist 161 kV (NE Ark.)	Alternatives under consideration.
Bull Shoals SPA-Bull Shoals Entergy 161 kV (N Ark.)	SPA has a planned upgrade for 2011.
Norfork-Calico Rock-Melbourne 161 kV (N Ark.)	Alternatives under consideration.

Other Thermal and Voltage Conditions Noted:

- Minden-Minden Lagen 115 kV (NW La.) was identified in the draft report, but was moved to the longer-term section after additional analysis.
- Bull Shoals SPA-Bull Shoals Entergy 161 kV (N Ark.) will be mitigated by a planned project included in the SPP Transmission Expansion Plan.

4.1.3. Bogue Chitto Project

The proposed Bogue Chitto project in southeast Louisiana, added in draft CP Revision 2, is envisioned to provide support to the underlying system and provide an additional source into the area, in particular the New Orleans metro area. The project as currently proposed includes a 500/230 kV station near the intersection of the Daniel-McKight 500 kV line, the Bogalusa-North Slidell 230 kV line and Bogalusa-Ramsay 230 kV line. The ICT's analysis shows that the underlying 230 kV system would require additional reinforcements. Entergy has indicated that the project scope is still preliminary and that alternatives are being considered.

4.1.4. Operating Guides

Some of the problems identified in this report may be manageable through the use of manual Operating Guides. A manual Operating Guide is a set of instructions for making system adjustments which operators can manually implement in real-time to manage thermal and voltage problems. Use of Operating Guides as a mitigation plan is permitted under the Planning Criteria. The ICT Planning Department's policy is to use only those Operating Guides that have been documented and made available to the ICT Reliability Coordinator and Planning Department and that have been tested to verify effectiveness.

Because the reliability assessment is intended to identify problem areas, the impact of manual Operating Guides has not yet been evaluated for the current-year assessment. Operating Guides will be considered along with

other mitigation plans, including transmission upgrades, during the development of the Base Plan later in the planning cycle.

4.1.5. A Word About Webre-Wells

In response to questions about the Webre-Wells constraints, the ICT notes that with Entergy's draft Construction Plan projects in service, these constraints are not projected to occur under the conditions tested for in this reliability analysis. The ICT's analysis suggests that these constraints are affected both by the planned Acadiana Improvement Projects, and by the confirmation of new long-term firm service reservations which altered the generation dispatch pattern in the long-term models. It should be understood that the conditions that give rise to the Webre-Wells constraints may still occur under real-time dispatch patterns when short-term and non-firm economy transactions are taking place.

4.1.6. High Voltages

There are a few high voltages associated with contingencies. These appear primarily at transformer secondaries and most are not of concern, particularly during peak periods. Especially high voltages at Mt. Olive 500 kV and Walnut Ridge-Paragould 115 kV should be examined more closely, especially under light-load conditions.

4.1.7. Low Hydro

In addition to the base case conditions, an analysis was performed to simulate limited availability of hydro resources during summer peak periods. The three summer models (2010, 2014, and 2018) were tested for the unavailability of two large units individually, and with multiple units at 50% of their base case dispatch. A single contingency scan was then performed for each case.

This scenario revealed several potential problems that either manifested only under these conditions or were made more severe. In some cases, this may indicate a need to accelerate planned upgrades or mitigation plans or develop new ones. Areas in which these conditions appeared include the system around Conway, Harrison-Eureka 161 kV, and Norfork-Sage 161 kV. A list of these conditions is included in the attachments.

4.1.8. Load Pockets

Load Pocket sensitivities were performed according to the contingencies defined in the Planning Criteria for the Western Region, Amite South, and Downstream of Gypsy (DSG) load pockets. In general, the Planning Criteria calls for load pockets to be planned to withstand simultaneous loss of both a large generator and a transmission line. In Western Region, the criteria calls for the system to withstand the loss of one Lewis Creek unit and a transmission line. In Amite South, the criteria calls for the loss of the largest unit (currently Waterford 3) and the most critical transmission element (Waterford-Willow Glen 500 kV). In DSG, the criteria calls for the system to withstand the loss of one large unit and a transmission line. The system was tested (1) for loss of Ninemile 5 and a 230 kV line into the load pocket, and (2) for loss of Michoud 3 and a 230 kV line into the load pocket. The sensitivities were performed on the 2014 summer model.

The results were that although some voltage and loading conditions were more severe under these conditions, there were no problems identified that were not also identified as problems under single contingency conditions.

4.2. Longer-Term Period – 2018

Analysis of the 2018 model indicated a number of overloads and voltage problems that do not appear in the earlier seasons. These indicate potential emerging problems that may manifest with increasing load levels. Because they are beyond the near-term period, it is not expected that these conditions will require upgrades in the next Base Plan, but may indicate areas that should be monitored and considered in the development of long-term plans.

In contrast to these new problems, other loading and voltage problems in the 2018 model can be characterized as extensions of problems occurring in earlier seasons. These should be taken into consideration in the development of the Construction Plan in order to optimize the economic benefit of currently-planned construction projects.

Table 4 shows these areas for the longer-term.

Table 4 - Longer-Term Problem Areas

Projected Problem Area	Comment
Tubular-Dobbin 138 kV Area (Western)	
Dayton 138 kV Area (Western)	
Kolbs/Hanks Area (SE Tex.)	
Tigre-L247 Tap 69 kV (S La.)	Possible mitigation: Existing spare transformer
Lake Arthur, Klondike 69 kV (S La.)	
Sorrento-Gonzales (SE La.)	
Gypsy-Claytonia 115 kV Area (SE La.)	
Minden-Minden LaGen 115 kV (N La.)	
S Jackson-E Jackson 115 kV (Central Miss.)	
Andrus 230/115 kV transformer (Central Miss.)	
Horn Lake Area (N Miss.)	Possible mitigation: Getwell-Batesville 230 kV
Marked Tree-Twist 161 kV (NE Ark.)	
Trumann-Trumann West 161 kV (NE Ark.)	
NLR Dixie-Lakewood 115 kV (Central Ark.)	
Bull Shoals-Norfork 161 kV (N Ark.)	
Helena Area (E Ark.)	Possible mitigation: Operating Guide
Cabot Area (Central Ark.)	

5. Stakeholder Participation

Attachment K of Entergy's OATT describes the planning process which includes stakeholder involvement through the Long-Term Transmission Issues Working Group (LTTIWG). Stakeholder participation and review is a key function of the LTTIWG, which incorporates vital input from stakeholders throughout the planning process. LTTIWG meetings are open, and the agendas are posted on SPP.org. Entergy stakeholders are encouraged to actively participate in the LTTIWG to ensure that all points of view are represented in the transmission planning process. Stakeholders are invited to comment on this reliability assessment and the subsequent development of the final Construction Plan and Base Plan. Formal avenues for stakeholder involvement that have been completed and that are planned in this planning cycle include:

- Review of and input to the ICT's Reliability Assessment Scope at LTTIWG March 17, 2009
- Review of and input to Entergy's draft Construction Plan at LTTIWG on June 9, 2009
- Review of and input to the ICT's draft Reliability Assessment at LTTIWG on July 22, 2009
- Review of and input to the ICT's final Reliability Assessment at Transmission Summit August 11, 2009
- Stakeholder formal comment period August 11-September 4, 2009
- Review of stakeholder comments at September 15, 2009 LTTIWG
- Review of the ICT's draft Base Plan at October/November LTTIWG
- Review of the ICT's final Base Plan at January LTTIWG

Attachments

Attachment A - Reliability Assessment Scope

Attachment B - Contingency Scan Results
- Thermal Overloads
- Low Voltages
- High Voltages
- Low Hydro Thermal
- Low Hydro Voltages

2010 ICT Reliability Assessment Scope

Objective

The objective of the Reliability Assessment is to assess the ability of the Entergy transmission system to perform according to the Planning Criteria in both near-term and long-term horizons.

Models

- Base Case 2008-Series Update1.
- Summer and Winter Peak 2010 and 2014 for near-term.
- Summer Peak 2018 for longer-term.

Model Preparation

The Base Case Model will be updated to reflect:

1. The latest confirmed transmission service reservations.
2. Updated topology: equipment which has been newly placed in-service.
3. Committed and Proposed Construction Plan Projects in the season in which the facilities are expected to be complete and for all seasons thereafter.

Software

- PSSE v31
- MUST 8

Contingency Scan

Category A

1. The Base Case Model will be evaluated under normal, system-intact conditions.
2. Monitored elements must remain within the thermal and voltage limits specified in Entergy's Transmission Local Planning Criteria for Category A, currently flows less than 100% of RATEA; voltages between 0.95 and 1.05 per unit.
3. Identify all elements that do not meet the Category A limits.

Category B

1. An N-1 contingency scan will be run on the Base Case Models.
2. Monitored elements must remain within the thermal and voltage limits specified in Entergy's Transmission Local Planning Criteria for Category B, currently flows less than 100% of RATEA; voltages between 0.92 and 1.05 per unit.
3. For each monitored element that does not remain within these limits, the breaker-to-breaker circuit for the contingency will be identified and an analysis will be done with the entire circuit out of service, if the breaker-to-breaker outage differs from the simulated outage.
4. The amount of load shed by breaker operation, Consequential Load, will be recorded and reported for constrained elements.

Monitored Elements

- Entergy Internal:
  - Transmission elements within Entergy's footprint (including embedded Areas) with nominal voltage 69 kV and higher.
  - Ties to outside Areas at 69 kV and higher.

- CLECO & LUS: Transmission elements with nominal voltage 69 kV and higher.
- All other first-tier Areas (AECI, SOCO, TVA, SMEPA, SWPA, AEPW, OKGE, EMDE): Transmission elements with nominal voltage 345 kV and higher.

Contingencies

- Same as Monitored Elements

THERMAL OVERLOADS

Entergy Draft 2010-2012 Construction Plan Included in Model

CP-Rev 1 = Draft Construction Plan Revision 1 Posted July 17, 2009

CP-Rev 2 = Draft Construction Plan Revision 2 Posted August 3, 2009

System Intact

System Intact Overload (% RateA)

MONITORED ELEMENT	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
335094 2MOSSVL 69 - 335102 2CANAL-LA 69 1							101.9	101.9	102.0	101.9
335346 2SCOTT 69 - 503304 RAYNE 2 69 1									105.5	
335781 2ZAC REA 69 - 335782 2PTHUDSONA 69 1					101.3	101.2			114.0	113.9
335844 8BOGCHTA 500 - 335845 6BOGCHTA 230 1						126.3		131.5		130.0
338131 5MELBRN 161 - 338132 5SAGE * 161 1			103.3				104.6			

Single Contingency

Highest Contingency Overload (% of RateA)

MONITORED ELEMENT	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
303221 6TALISK 230.00 - 335845 6BOGCHTA 230.00 1								121.9%		
303221 6TALISK 230.00 - 500640 NSLID 6 230.00 1								102.2%		
334043 4TUBULAR 138 - 334044 4DOBBIN 138 1									124.0%	123.6%
334045 4FISHCRK 138.00 - 334075 4LONGMIR 138.00 1		104.2%								
334120 4NU LJON 138 - 334211 4BDAYTON 138 1									106.6%	106.4%
334282 4RAYBURN 138 - 334330 4JASPER 138 1									101.1%	
334413 4PNEC BK 138 - 334430 4SABINE 138 1					102.0%	102.1%			106.0%	105.7%
334414 4LINDE 138 - 334430 4SABINE 138 1					100.9%	101.0%			104.6%	104.8%
334600 2KOLBS 69 - 334620 2LAKEVEW 69 1					100.7%	100.7%	101.6%	101.5%	102.1%	102.1%
335094 2MOSSVL 69 - 335107*2ALFOL 69 1	104.9%				106.8%				106.1%	
335094 2MOSSVL 69 - 335108*2L253ATP 69 1	102.9%	102.9%			104.8%	104.8%			104.1%	104.1%
335125 4MOSSVL 138 - 335200 4NELSON 138 1									103.4%	
335190 6NLSON 230 - 303101 6MOSBLF 230 1					106.4%				110.7%	
335217 2CHLOMAL 69 - 335250*2IOWA 6 69 1	108.9%									
335217 2CHLOMAL 69 - 335253 2LACASNE 69 1	109.1%									100.4%
335258 2COMPTON 69 - 335259*2L13ATP 69 1	110.3%									
335259 2L13ATP 69 - 335266*2JENNGS 69 1	111.6%									
335346 2SCOTT 69 - 335435 2CARNCRO 69 1									122.0%	
335346 2SCOTT 69.000 - 503304 RAYNE 2 69.000 1										105.8%
335378*4SCOTT2 138 - 303152 4SEMERE 138 1	107.2%	108.3%								
335379*4SCOTT1 138 - 303130 4NCROWL 138 1	104.2%	104.7%								
335379*4SCOTT1 138 - 303132*4JUDICE 138 1	109.3%	109.3%	108.8%	108.8%						
335379 4SCOTT1 138.00 - 502404 BONIN 4 138.00 1		100.8%								
335380*4MEAUX 138 - 303132*4JUDICE 138 1	101.4%	101.5%								
335387*4DELCAMB 138 - 335388 4MORIL 138 1	103.1%	101.2%								
335389*4DUBOIN 138 - 335390 4BUWHSE 138 1	126.9%	126.4%								
335390*4BUWHSE 138 - 500440 IVANHOE4 138 1	101.9%	101.5%								
335391 4CECELIA 138 - 303152 4SEMERE 138 1							103.7%	103.7%		
335400 2FIVEPTS 69 - 335401 2TIGRE 69 1					105.6%	105.6%			113.2%	113.8%
335401 2TIGRE 69 - 335403 2L-247TP 69 1									103.7%	104.2%
335411*2HOLIDAY 69 - 335412 2LAFAYET 69 1	116.3%	117.3%							101.7%	102.0%
335439 2L658TP 69 - 335441 2L637TP 69 1									100.0%	
335536 6ADDIS 230 - 303000 6CAJUN1 230 1							103.1%			
335593 4MONOCM1 138 - 335595*4ALCHEM 138 1			102.1%	100.9%						
335595*4ALCHEM 138 - 335601 4WGLEN-2 138 1			101.0%	101.0%					101.1%	
335610 4WGLEN 138 - 335628 T300/331 138 1									102.3%	
335625 4GONZL 138 - 336050 4SORXFM 138 1									141.1%	139.6%
335845 6BOGCHTA 230.00 - 500750 RAMSAY 6 230.00 1								136.4%		106.4%
335627 4OAKGROV 138 - 335628 T300/331 138 1									102.3%	
335782 2PTHUDSONA 69 - 335805 4PT HUD 138 1									100.1%	
335787 2MCMANUS 69 - 335788 2BRADYH 69 1									101.0%	
335791 2TEJAC 69 - 335792 2MRYDALE 69 1					104.8%		104.9%		111.0%	
335796 2PTHUDSONB 69 - 335805 4PT HUD 138 2									100.1%	
336037 3VLNTIN 115 - 336080 3CLOVEL 115 1					125.1%				123.7%	
336050 4SORXFM 138 - 336051 3SORNTO 115 1									132.4%	132.3%
336060*6SORR 2 230 - 303200 6VIGNES 230 1			102.7%	102.8%						
336068 6BLPNT 230 - 336190 6GYPSY 230 1					113.7%				113.7%	
336069 6TEZCUCO 230 - 336154 6WATFRD 230 1					101.7%				101.6%	
336080 3CLOVEL 115 - 336081 3GMEADW 115 1					103.5%				102.4%	
336092*3CARLSL 115 - 336293 3PTNICK 115 1	124.4%	124.4%	122.0%	122.0%	126.9%		123.8%		126.3%	
336111 3AMITE 115 - 336517*3GILBR* 115 1			105.0%	104.9%						
336131 6ADMSCRK 230 - 336136*6BOGALUS 230 2			126.3%							
336220 3GYPSY 115 - 336230 3CLAYTN 115 1									101.6%	100.9%

MONITORED ELEMENT	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
336232*3KENNER 115 - 336233 3SNFARM 115 1	100.3%	100.3%			109.4%		108.6%		118.9%	100.4%
336515*3LIBRTY 115 - 336517*3GILBR* 115 1			102.3%	102.2%						
336552 3NORFLD 115 - 336553*3MALIL* 115 1			104.1%	104.0%						
336553*3MALIL* 115 - 336554 3BROKHV 115 1			108.4%	108.3%						
336554 3BROKHV 115 - 336770*3WESSON 115 1	103.1%	103.1%								
336765 3FLRNCE 115 - 336890*3JAX-S 115 1			106.2%							
336771 3JAM RD* 115 - 336772*3HZLHST 115 1	125.2%	125.2%								
336772 3HZLHST 115 - 336773*3COPHSW* 115 1	109.1%	109.1%								
336805 3WATERWY 115 - 336806 3VKB-E* 115 1					107.9%				107.7%	
336830 8B.WLSN 500 - 336839 8R.BRAS 500 1							102.2%			
336871*3JAX-FH 115 - 336880 3R.BRAS 115 1	108.1%	108.0%								
336890 3JAX-S 115 - 336911 3JAX-E 115 1									103.6%	103.2%
336897*3PELAHE 115 - 336898 3MORTON 115 1			104.9%							
337040 6ANDRUS 230 - 337042 3ANDRUS 115 1									103.1%	103.0%
337060 3WINONA 115 - 337061*3SAWYR* 115 1	106.6%	100.0%								
337098 3CLARKD 115 - 337100*6MEPSCLK 230 1	120.6%	120.5%	120.7%	120.6%	120.5%	120.5%	120.1%	120.1%	120.5%	120.7%
337126 3BATESV 115 - 337135 3SARDIS 115 1									124.4%	
337135 3SARDIS 115 - 337136 3SNTOBI 115 1									106.4%	
337136 3SNTOBI 115 - 337137 3CLDWTR 115 1									134.4%	
337137 3CLDWTR 115 - 337138 3HRNADO 115 1									112.7%	
337139 3GETWEL 115 - 337141 3NESBT* 115 1									104.2%	102.1%
337143 3PLUM PT 115 - 337144 3GRNBRK 115 1									120.2%	119.6%
337144 3GRNBRK 115 - 337150 3HN LAK 230 1					120.5%	120.1%			159.5%	158.9%
337150 3HN LAK 115 - 337150 3HN LAK 230 1									100.4%	
337361 3MINDEN 115 - 303302 3MNDENLG 115 1					127.2%		121.0%		142.6%	142.7%
337415 3STERL 115.00 - 337420 8STERL 500.00 2				100.6%						
337674 3AMITY * 115 - 338850*3ALPINE# 115 1			100.5%	102.3%						
337678*3BISMRK 115 - 337685*3HSEHVW 115 1	100.7%	101.9%	111.6%	113.0%						
337678*3BISMRK 115 - 338850*3ALPINE# 115 1			104.8%	106.4%						
337800 3HASKEL 115 - 337801 3BENT-S* 115 1									105.0%	
337803 3BRYANT 115 - 337804 3MABEL 115 1					100.2%				112.6%	
337905 5RUSL-E 161 - 337906 5RUSL-N 161 1									100.6%	
337921 5MOR-E 161 - 337927 5GLEASN 161 1					105.7%				119.0%	
337927 5GLEASN 161 - 338424 5TYLER 161 1					101.5%				115.0%	
337928 3CONW-W 115 - 338422 5CONW-W 161 1									102.7%	
337929 3LK CON 115 - 337930 3MAYFL 115 1									111.0%	
337936 3SYLVN 115 - 337938 5SYLVN 161 1									110.8%	
337938 5SYLVN 161 - 338748 5GRAVEL# 161 1									114.6%	
337939 5GOLDCR* 161 - 337940 5HAMLET* 161 1					100.6%				117.4%	
337952 3LYNCH 115 - 338481*3MCALMT 115 1	111.9%	109.9%								
338033 5PARKIN 161 - 338041 5TWIST 161 1					103.4%	101.9%			121.0%	118.6%
338041 5TWIST 161 - 338165 5MTREE 161 1					101.2%				118.0%	113.0%
338104 5HARR-E 161.00 - 338107 5EVRTON 161.00 1				107.1%						
338104*5HARR-E 161 - 338681 5HARR-S 161 1	101.1%	100.9%								
338108 5ST_JOE 161 - 338110*5HILLTOP 161 1			102.9%				101.3%			
338123 5BULLSH* 161 - 505460 BULL SH5 161 1					101.1%	102.3%			106.0%	107.4%
338130 5CALCR 161 - 338131*5MELBRN 161 1			115.3%	115.9%			114.1%	113.1%	100.6%	
338130*5CALCR 161 - 505448 NORFORK5 161 1			108.2%	109.1%			107.1%	106.4%		
338131 5MELBRN 161 - 338132*5SAGE * 161 1	101.7%	101.3%			102.4%				108.0%	
338169 5TRUMAN 161 - 338707 5TRUM-W# 161 1									111.0%	108.5%
338422 5CONW-W 161 - 338424 5TYLER 161 1									100.2%	
338483 3NLR-DX 115 - 338487 3LAKEWD 115 1									108.8%	106.3%
338682 5OSAGE # 161 - 506932*EUREKA 5 161 1	100.2%	100.1%								
338813 5MIDWAY# 161 - 505460 BULL SH5 161 1									102.9%	102.7%
338814 5SOLAND# 161 - 505448 NORFORK5 161 1									105.9%	105.6%
500510 MADISON6 230.00 - 500520 MANDEV 6 230.00 1								122.3%		106.1%
500510 MADISON6 230.00 - 500750 RAMSAY 6 230.00 1								117.5%		

LOW VOLTAGES

Entergy Draft 2010-2012 Construction Plan Included in Model

CP-Rev 1 = Draft Construction Plan Revision 1 Posted July 17, 2009

CP-Rev 2 = Draft Construction Plan Revision 2 Posted August 3, 2009

System Intact

System Intact Violation (P.U.)

	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
MONITORED ELEMENT	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
303132 4JUDICE 138	0.9255		0.9255		0.9255		0.9255		0.9255	
303150 4LEBLAN 138	0.9390		0.9390		0.9390		0.9390		0.9390	
334000 2CALVERT 69					0.9488	0.9442			0.9455	0.9338
334001 2SINHERN 69	0.9384		0.9384		0.9384		0.9384		0.9384	
334681 3NECHESO 69	0.9445	0.9446	0.9438	0.9427	0.9398	0.9399	0.9371	0.9371	0.9363	0.9363
335275 2LKARTHR 69									0.9420	0.9446
335276 2KLONDKE 69									0.9451	0.9477
337676 3GLENWD 115	0.9492									
337677 3MT IDA 115	0.9407									

Single Contingency

Lowest Contingency Voltage (per unit)

	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
MONITORED ELEMENT	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
334045 4FISHCRK 138										0.9133
334084 4CLVELND 138									0.9197	0.9197
334111 4NEWCANY 138					0.9105	0.9106			0.8573	0.8572
334112 4HICKORY 138					0.9195	0.9196			0.8732	0.8731
334113 4EASTGAT 138									0.8898	0.8897
334114 4HUFFMAN 138									0.8860	0.8859
334115 6L533TP8 138									0.9133	0.9132
334116 4KLMP-EX 138									0.9133	0.9132
334209 4ROLKERD 138									0.9164	0.9163
334210 4ADAYTON 138									0.9174	0.9173
334211 4BDAYTON 138									0.9174	0.9173
334216 4GORDON 138									0.9162	0.9161
334283 4MILLCR 138							0.9068		0.9172	0.9173
334284 4PINELND 138							0.9100			
334285 4BROADUS 138							0.9113			
334286 4ETOIL 138							0.9117			
334300 4PEACH 138							0.9153			
334437 6KOLBS 230									0.9186	0.9186
334438 6HANKS 230									0.9184	0.9184
334439 6VFWPK 230									0.9177	0.9177
335137 2PPC NO 69	0.8998	0.8998	0.8756	0.8756	0.8877	0.8876	0.8717	0.8717	0.8922	0.8921
335379 4SCOTT1 138	0.9091	0.9189								
335380 4MEAUX 138	0.8849	0.8848	0.9017	0.9017						
335385 4LEROY 138	0.8767	0.8767	0.8919	0.8919						
335386 4ABBVIL 138	0.8707	0.8707	0.8886	0.8886						
335387 4DELCAMB 138	0.8994	0.9022								
335388 4MORIL 138	0.9099	0.9119								
335391 4CECELIA 138	0.9067	0.9137								
335435 2CARNCRO 69		0.9161							0.9183	
335788 2BRADYH 69									0.9133	
335789 2CLINTON 69									0.9125	
335790 2CLNTREA 69									0.9133	
336085 3ALLIA 115	0.4661	0.4661	0.5015	0.5015	0.4331		0.4893		0.4564	
336092 3CARLSL 115	0.8046	0.8046	0.8156	0.8156	0.7954	0.9048	0.8109	0.9005	0.7995	0.9000
336230 3CLAYTN 115									0.9120	0.9119
336231 3NORCO 115									0.9146	0.9144
336772 3HZLHST 115	0.9169	0.9171								

MONITORED ELEMENT	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
336773 3COPHSW* 115	0.9151	0.9153								
336774 3GALLMAN 115	0.9081	0.9082								
336775 3CRYSPG 115	0.9017	0.9018								
336776 3TERRY 115	0.8853	0.8854								
336777 3BYRAM 115	0.8802	0.8804								
336898 3MORTON 115									0.9188	0.9191
337061 3SAWYR* 115	0.9140									
337062 3ELLIOT 115	0.8878									
337063 3S GREN 115	0.8841									
337064 3GRNADA 115	0.8781									
337065 3TILTOB 115	0.8701									
337066 3TVA-SHE 115	0.8692									
337067 3CHRSTN 115	0.8593									
337136 3SNTOBI 115									0.8529	0.9012
337137 3CLDWTR 115									0.8253	0.8840
337138 3HRNADO 115	0.9167	0.9168			0.9144	0.9156			0.7952	0.8669
337139 3GETWEL 115	0.9139	0.9140			0.9142	0.9155			0.8655	0.8679
337140 6GETWELL 230	0.9114	0.9114			0.9163	0.9166			0.8713	0.8711
337141 3NESBT* 115	0.9131	0.9131			0.9119	0.9130			0.8620	0.8639
337142 3NESBIT 115	0.9111	0.9112			0.9094	0.9105			0.8588	0.8607
337143 3PLUM PT 115	0.9135	0.9136			0.9112	0.9121			0.8607	0.8621
337144 3GRNBRK 115	0.9177	0.9178			0.9159	0.9166			0.8675	0.8685
337150 3HN LAK 115									0.8838	0.8843
337151 3DESOTO-MS 115									0.8875	0.8879
337152 3WALLS 115									0.9039	0.9039
337180 6HN LAK 230	0.9121	0.9121							0.8790	0.8791
337367 3ARCADIA 115									0.9000	0.8997
337555 3T.E. F 115									0.9145	0.9179
337800 3HASKEL 115									0.9191	
337801 3BENT-S* 115					0.9135				0.8974	
337802 3BAUXIT 115	0.9098	0.9101			0.8948				0.8757	
337803 3BRYANT 115	0.9069	0.9072			0.8914				0.8716	
337981 3MARVEL 115									0.9155	0.9162
337982 3BARTON 115									0.9119	0.9127
337983 3HELN-W* 115									0.9089	0.9096
337984 3HELN-C 115									0.9073	0.9080
338006 3CABOT 115					0.9086				0.8577	0.9176
338007 3BEEBE 115					0.9155				0.8713	0.9185
338008 3GARNER* 115									0.8909	
338009 3T.E.MC 115									0.8907	
338017 3HOLBT-C 115					0.9091				0.8582	
338050 3T.E.#6 115									0.9191	
338112 5HEBR-S 161									0.9108	
338113 5HEBR-I 161									0.9087	
338160 5EBON S* 161									0.9185	
338410 5WM-DOV 161									0.9170	
338411 5WM-GAT 161									0.9172	
338413 5WM-LH2 161									0.9163	
338414 5WM-POK 161									0.9125	
338420 5DONAGHE 161									0.9009	
338421 5CONW-S 161									0.9019	
338423 5CONIND 161									0.9032	
338583 WARD1 69									0.8777	
338756 3WARD # 115					0.9022		0.9180		0.8558	0.9151
338757 3BRYNTS# 115	0.9077	0.9079			0.8922				0.8726	
338758 5HEBR-N# 161									0.9069	
338880 3HELN-I 115									0.9069	0.9077

HIGH VOLTAGES

Entergy Draft 2010-2012 Construction Plan Included in Model

CP-Rev 1 = Draft Construction Plan Revision 1 Posted July 17, 2009

CP-Rev 2 = Draft Construction Plan Revision 2 Posted August 3, 2009

System Intact

System Intact Violation (P.U.)

	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
MONITORED ELEMENT	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
303152 4SEMERE 138	1.0555		1.0555		1.0555		1.0555		1.0555	
334020 4BRYAN 138		1.0604								
334021 4COLSTTA 138		1.0536								
337084 DELTA U2 69							1.0748	1.0752		
337181 5HN LAK 161	1.0605	1.0605	1.0562	1.0562						
338205 3PARAG 115			1.0533	1.0535			1.0542	1.0548		
338552 HARRISON-S1 69			1.0554	1.0551						
338581 DELUCE1 69	1.0512	1.0513	1.0578	1.0582			1.0518	1.0523		
338583 WARD1 69				1.0510				1.0524		
338585 HEBERSP1 69			1.0545	1.0545						

Single Contingency

Highest Contingency Violation (P.U.)

	2010 Summer		2010 Winter		2014 Summer		2014 Winter		2018 Summer	
MONITORED ELEMENT	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**	CP-Rev 1	**CP-Rev 2**
334020 4BRYAN 138	1.0544			1.0599		1.0578				
337010 8WOLFCRK 500	1.0504	1.0504	1.0504	1.0504	1.0504	1.0504	1.0504	1.0504	1.0504	1.0504
337011 6ATTALA 230			1.0573							
337084 DELTA U2 69	1.0589	1.0598			1.0637	1.0640			1.0600	1.0604
337368 8MTOLIV 500	1.0685	1.0686	1.0666	1.0668	1.0697	1.0697	1.0723	1.0725	1.0718	1.0722
337967 3RICUS 115	1.0567	1.0569	1.0608	1.0614	1.0543	1.0547	1.0571	1.0576		1.0520
337969 3STUTT-I 115			1.0549	1.0555				1.0515		
337970 3ULM 11 115			1.0512	1.0519						
337972 3ALMYRA 115				1.0511						
338205 3PARAG 115	1.0589	1.0590			1.0598	1.0603			1.0515	1.0523
338206 3SEDGWK* 115	1.0586	1.0587	1.0649	1.0650	1.0592	1.0598	1.0679	1.0683	1.0502	1.0510
338207 3T.E.#7 115	1.0571	1.0571	1.0633	1.0634	1.0576	1.0582	1.0663	1.0668		
338208 3WALNUT 115	1.0589	1.0589	1.0651	1.0652	1.0595	1.0600	1.0682	1.0686	1.0505	1.0513
338552 HARRISON-S1 69	1.0528	1.0524					1.0543	1.0533		
338570 BLACKROCK1 69			1.0508	1.0523			1.0519	1.0524	1.0675	1.0693
338578 OPPELO 69			1.0535	1.0540				1.0506		
338581 DELUCE1 69					1.0603	1.0607			1.0551	1.0554
338583 WARD1 69						1.0502				
338585 HEBERSP1 69	1.0547	1.0547			1.0546	1.0546	1.0547	1.0547		
338704 3LIGHT # 115	1.0583	1.0583	1.0645	1.0646	1.0589	1.0594	1.0675	1.0680		1.0507
338710 3CRO-RG# 115	1.0584	1.0584	1.0644	1.0646	1.0590	1.0596	1.0676	1.0680	1.0501	1.0509

SINGLE CONTINGENCY THERMAL OVERLOADS FOR LOW-HYDRO CONDITIONS
Overloads that are more severe (5%+) or appear only for a low-hydro scenario.

% RateA

MONITORED ELEMENT	2010 Summer	2014 Summer	2018 Summer
337705 3CHEETA* 115.00 - 337707 3HS-VIL 115.00 1			100.5%
337921 5MOR-E 161.00 - 337927 5GLEASN 161.00 1	103.6%	118.4%	138.0%
337925 5GREENB 161.00 - 337926 5QUITMN 161.00 1		108.0%	116.1%
337927 5GLEASN 161.00 - 338424 5TYLER 161.00 1		114.1%	133.7%
337928 3CONW-W 115.00 - 337929 3LK CON 115.00 1			113.3%
337928 3CONW-W 115.00 - 338422 5CONW-W 161.00 1			114.6%
337929 3LK CON 115.00 - 337930 3MAYFL 115.00 1		110.8%	120.3%
337930 3MAYFL 115.00 - 337931 3MORGAN 115.00 1			100.2%
337936 3SYLVN 115.00 - 337938 5SYLVN 161.00 1			112.3%
337938 5SYLVN 161.00 - 338748 5GRAVEL# 161.00 1			117.8%
337939 5GOLDCR* 161.00 - 337940 5HAMLET* 161.00 1			101.4%
338100 5BERRYV 161.00 - 338101 5GR FOR 161.00 1			101.9%
338101 5GR FOR 161.00 - 338103 5GRFORS 161.00 1			105.0%
338102 5HARR-W 161.00 - 338103 5GRFORS 161.00 1			112.4%
338102 5HARR-W 161.00 - 338681 5HARR-S 161.00 1		115.5%	143.6%
338104 5HARR-E 161.00 - 338107 5EVRTON 161.00 1			108.9%
338104 5HARR-E 161.00 - 338681 5HARR-S 161.00 1	107.3%	124.1%	154.1%
338108 5ST_JOE 161.00 - 338110 5HILLTOP 161.00 1		102.4%	115.2%
338125 5MT HOM 161.00 - 338814 5SOLAND# 161.00 1			105.3%
338130 5CALCR 161.00 - 338131 5MELBRN 161.00 1	114.8%	113.9%	
338130 5CALCR 161.00 - 505448 NORFORK5 161.00 1	109.9%	112.2%	115.2%
338131 5MELBRN 161.00 - 338132 5SAGE * 161.00 1	115.1%		
338138 5MORFLD 161.00 - 338142 5ISES 1 161.00 1		100.4%	106.5%
338186 5MONETE 161.00 - 338204 5PARAG 161.00 1	101.1%		
338422 5CONW-W 161.00 - 338424 5TYLER 161.00 1		101.1%	113.6%
338814 5SOLAND# 161.00 - 505448 NORFORK5 161.00 1			111.7%

SINGLE CONTINGENCY LOW VOLTAGES FOR LOW-HYDRO CONDITIONS

Lowest Contingency Voltage (per unit)

MONITORED BUS	2010 Summer	2014 Summer	2018 Summer
337939 5GOLDCR* 161.00			0.9139
337940 5HAMLET* 161.00			0.9132
337941 5HAMLT 161.00			0.9132
338100 5BERRYV 161.00	0.9070	0.8470	
338101 5GR FOR 161.00	0.9153	0.8570	
338102 5HARR-W 161.00		0.8843	
338103 5GRFORS 161.00	0.9161	0.8587	
338104 5HARR-E 161.00		0.9036	0.8309
338105 5OMAHA * 161.00			0.8701
338106 5OMAHA 161.00			0.8701
338107 5EVRTON 161.00		0.9084	0.8420
338108 5ST_JOE 161.00		0.9159	0.8567
338109 5MARSHL 161.00			0.8819
338110 5HILLTOP 161.00			0.8765
338112 5HEBR-S 161.00		0.7716	0.9131
338113 5HEBR-I 161.00		0.8022	0.9122
338120 5LEAD HL 161.00			0.9070
338121 5SUMMIT 161.00			0.8657
338122 5FLIPN 161.00			0.8786
338123 5BULLSH* 161.00			0.8864
338124 5BULLSH 161.00			0.8864
338125 5MT HOM 161.00			0.9099
338161 5WM-EHV 161.00	0.9198		
338410 5WM-DOV 161.00	0.9191		0.9196
338411 5WM-GAT 161.00	0.9191		0.9198
338413 5WM-LH2 161.00	0.9195		
338414 5WM-POK 161.00	0.9187		0.9194
338420 5DONAGHE 161.00		0.9052	
338421 5CONW-S 161.00		0.9060	
338423 5CONIND 161.00		0.9073	
338552 HARRISON-S1 69.000		0.9136	0.8277
338554 OSAGE-CR1 69.000		0.8646	
338556 OSAGE-CR2 69.000		0.8646	
338585 HEBERSP1 69.000	0.8757	0.8676	0.7818
338606 MIDWAY-JD1 69.000			0.9196
338608 MIDWAY-JD2 69.000			0.9196
338618 CLINTON-W1 69.000			0.9058
338681 5HARR-S 161.00		0.8908	
338682 5OSAGE # 161.00	0.9037	0.8429	
338758 5HEBR-N# 161.00		0.8459	0.9115
338813 5MIDWAY# 161.00			0.9196
338814 5SOLAND# 161.00			0.9143
338832 5CLIN-W# 161.00			0.9058
338833 5CLINTON 161.00			0.9163
338834 5BOTKIN# 161.00			0.8991

ICT responses to ETEC's comments and questions.
(Questions from ETEC are in Red and Answers from ICT are in Blue)

Section 3.2 Completed Projects form the prior 2009 – 2011 Construction Plan

Conway West to Donaghey:
Corresponding IDV not included in CP-REV2 and posted model 06/19/2009 (S08_Final_U2) not updated with the project
Incorporated in the posted model (update 2).

Waterford 4:
Is this project already integrated in the posted EES models, since there was no IDV included in any of the proposed REV1 and REV2?
Incorporated in the posted model (update 2).

Liberty to Gloster:
Corresponding IDV not included in CP-REV2 and posted model 06/19/2009 (S08_Final_U2) not updated with the project
Incorporated in the posted model (update 2).

Section 4.1

4.1.1. System Intact

An analysis of system intact conditions revealed few problems. Melbourne-Sage 161 kV is projected to be overloaded in the winter seasons. Entergy has added a new project to upgrade this element by winter 2010 which would eliminate this condition. Emerging thermal problems are Mossville-Canal La 69 kV, and Zachary REA-Port Hudson 69 kV. Mount Ida 115 kV voltage is projected to be slightly low in 2010 summer, but Entergy's addition of a capacitor bank upgrade by 2010 would eliminate this condition. High voltages are noted on the secondary sides of a few transformers.
Similar overload in the winter season is projected for Melbourne - Calico Rock 161KV also. Is this project meant to alleviate the thermal overload at Melbourne - Calico Rock too?
ICT does not see overload from Melbourne – Calico Rock 161 kV with the SYSTEM INTACT.

4.1.4. Operating Guides

Some of the problems identified in this report may be manageable through the use of manual Operating Guides. A manual Operating Guide is a set of instructions for making system adjustments which operators can manually implement in real-time to manage thermal and voltage problems. Use of Operating Guides as a mitigation plan is permitted under the Planning Criteria. The ICT Planning Department's policy is to use only those Operating Guides that have been documented and made available to the ICT Reliability Coordinator and Planning Department and that have been tested to verify effectiveness.
In that case then, there will be TO responsibility to mitigate violations even if there are no projects proposed and therefore no mandatory cost will be allocated to customer for accessing transmission?
Transmission Service is subject to Entergy's tariff provision.

4.1.6. High Voltages

There are a few high voltages associated with contingencies. These appear primarily at transformer secondaries and most are not of concern, particularly during peak periods. Especially high voltages at Mt. Olive 500 kV and Walnut Ridge-Paragould 115 kV should be examined more closely, especially under light-load conditions.
High voltage schedule for winter season switched shunts at Jonesboro 161KV and Herbert 161KV, as well as the loads in the area may not be correctly modeled
Comment noted and will be passed on to the Modeling Department.

ICT Reliability Assessment 2009

CLECO & LUS: Transmission elements with nominal voltage 69 kV and higher.
Should monitor the ties in CLECO and LUS area as well
We will take it under advisement. ICT does monitor all ties under the Entergy systems.