



TRANSMISSION PROJECTS

COMPANY: SPP

CUSTOMER: PID 227

FACILITIES STUDY

EJO # F4PPTX0040

**PID 227
127MW GENERATION UPRATE**

Revision: 1

Rev	Issue Date	Description of Revision	Prepared By	Approved By
A	8/20/2009	First Draft	MK	MK
B	9/02/2009	Revised with input from JET	MK	MK
0	9/09/2009	Final revision	MK	MK
1	10/9/2009	ICT Review and Classification	BF	JH

** Note: All required JET approvals and other stakeholder concurrences are shown in the voting polls in eRoom.*

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1. PROJECT SUMMARY

1.1. Background and Project Need

The purpose of this Facility Study is to evaluate the impact of uprating the existing generation at the PID 227 site near the Hartburg 500 kV substation by 127 MW, which results in a net output at the PID 227 site of 1327 MW. The additional generation is expected to be placed into service by 11/1/2009.

PID 227 only requested ERIS. No upgrades were identified for ERIS.

A System Impact Study prepared by the SPP ICT on 5/18/2009 indicated that the proposed generator connection will not adversely impact Entergy's system from a stability point of view. The existing generator's electrical characteristics remained unchanged; therefore, no short circuit study is required.

1.2. Scope Summary

This Facility Study only examined the need for any upgrades located at Entergy's Hartburg Substation that would be required for the PID 227 proposed uprate. To ensure conservatism, the ampacity is based on total output of 1327 MW at 0.95 pf operating at a voltage of 0.95 PU.

The following items were deemed sufficient for the additional load:

- 10 breakers and 22 switches that are all rated either 2000 amps, or in most cases 3000 amp.
- The bus and jumpers connected to the PID 227 lines, in almost all cases, is 5" tubing (3222 amp rating) and in some cases 6" tubing (3872 amps).
- The risers which are made up of 2½" tubing (1655 amps) however there are 2 legs to each jumper and therefore the rating would be (3310 amps).
- The jumpers were either bundled 1272 MCM ACSR (2626 amp) or tri-bundled 1024 MCM ACAR (3270 amps).
- The revenue metering CT's are rated 1000/5 single ratio with a factor of 2, (i.e. a rating of 2000A).
- Existing line relaying SEL 321 and Micom-P544.
- Relay settings are based on fault current, which is not changing, so no setting changes will be necessary.
- Metering is at least class 10, which will be adequate for the extra ampacity.

Since no upgrades are required, there are no scope requirements going forward.

1.3. Cost Summary

Following a review of all the equipment identified in the scope summary and consideration of any necessary changes to relay settings, the study team concluded that no upgrades were required.

1.4. Schedule Summary

The customer has proposed an in-service date for the additional generation of 11/1/2009. Since no upgrades are necessary, there are no schedule constraints to prevent PID 227 from meeting this date.

1.5. Long Lead and Major Material/Equipment

No equipment or material requirements.

2. SAFETY REQUIREMENTS

Safety is a priority with Entergy. Safety will be designed into substations and lines. The designs will be done with the utmost safety for personnel in mind for construction, operation, and maintenance of the equipment.

All employees working directly or indirectly for Entergy shall adhere to all rules and regulations outlined within the Entergy Safety manual. Entergy requires safety to be the highest priority for all projects. All Entergy and Contract employees must follow all applicable safe work procedures.

Should the work contained within this Facility Study be approved, a detailed Safety Plan will be formulated and incorporated within the project plan.

3. GENERAL ASSUMPTIONS

No General Assumptions required.

4. SCOPE OF WORK

No Scope Of Work required.

5. COST

No Cost data required.

6. UPGRADE CLASSIFICATION

No Upgrade Classification by the ICT required.

7. SCHEDULE

No Schedule required.

8. RISK ASSESSMENT

No Risk Assessment required.

9. CONFIRMED RESERVATIONS

No scope of work required.

10. ATTACHMENTS

A. Table of Acronyms

ACSR	Aluminum Conductor Steel Reinforced
ACSS	Aluminum Conductor Steel Supported
ADEQ	Arkansas Department of Environmental Quality
AFUDC	Allowance for Funds Used During Construction
ATC	Available Transfer Capability
EES	Entergy Control Area
EHV	Extra-High Voltage
ICT	Independent Coordinator of Transmission
kV	Kilo-Volt
MCM	(M) Thousand Circular Mils
MVA	Mega-Volt Amp
MW	Mega-Watt
NPDES	National Pollution Discharge Elimination System
NOI	Notice of Intent
OASIS	Online Access and Same-time Information System
OATT	Open Access Transmission Tariff
OG&E	Oklahoma Gas & Electric
POD	Point of Delivery
POR	Point of Receipt
SES	Steam Electric Station
SOC	System Operations Center
SHPO	Arkansas State Historic Preservation Office
SHV	Super High Voltage
SW	Switch Station
SWEPCO	Southwest Electric Power Company
TOC	Transmission Operations Center
WMUC	City of West Memphis Control Area