Southwest Power Pool, Inc.

OVERSIGHT COMMITTEE MEETING

June 25, 2008

Hilton Chicago O'Hare Airport

• A G E N D A •

10:00 a.m. – 3:00 p.m. CDT

1. Administrative Items ..... Josh Martin
2. Action Items Report ..... Stacy Duckett
3. Update on Current Activities
   a. Compliance ..... David Hodges
   b. Market Monitoring Unit ..... Richard Dillon
   c. External Market Advisor ..... Craig Roach
4. NERC Enforcement Actions ..... David Hodges
5. SPP NERC Readiness Evaluation Report ..... David Hodges
6. New Action Items ..... Stacy Duckett
7. Future Meetings ..... Josh Martin

   Schedule for 2008:

September 25	Hilton Head, SC
December 8	Dallas

   Schedule for 2009:

March 26	Washington, D. C.
June 10	Little Rock (following the Board of Directors meeting)
September 24	TBD
December 7	Dallas (prior to the Board of Directors meeting)

Executive Session

Southwest Power Pool

OVERSIGHT COMMITTEE MEETING

April 2, 2008

Boston Pacific Offices, Washington, D.C.

• M I N U T E S •

Agenda Item 1 – Administrative Items

SPP Chair Josh Martin called the meeting to order at 9:05 a.m. The following members were in attendance: Josh Martin (Director) and Phyllis Bernard (Director). Staff in attendance included Stacy Duckett. Guests included Richard Dillon and David Hodges (SPP); and Craig Roach, Katie Gottshall and Stuart Rein (Boston Pacific).

Mr. Martin referred to the draft minutes of the December 11, 2007 meeting and asked for corrections or a motion for approval (12/11/07 Minutes – Attachment 1). Phyllis Bernard moved to approve the minutes as presented. Josh Martin seconded the motion, which passed unopposed.

Agenda Item 2 – Review of Past Action Items

Stacy Duckett reviewed the Action Items report (Action Items - Attachment 2). She also provided a brief update on the FERC and GAO audits, a copy of the FERC fines report (FERC Fines Report – Attachment 3), and the Board of Directors search.

Agenda Item 3 – Update on Current Activities

Compliance Department

David Hodges reviewed the Compliance Department activity report (Compliance Report – Attachment 4). SPP has received a draft of the NERC Readiness Evaluation Report. Mr. Hodges shared some highlights including positive comments and one potential Example of Excellence (Training). SPP is now registered as an Interchange Authority, a new function under the NERC model. These are duties SPP has been performing, but now have mandatory compliance standards to meet. Mr. Martin sought clarification regarding the location of and interaction between the Compliance and Regional Entity staffs. Mr. Hodges reviewed the audit schedule for the remainder of 2008.

David Hodges and Richard Dillon then updated the committee on the use of the Network Load Scheduling (NLS) tool by market participants and SPP staff. The Market Monitoring Unit (MMU) has had multiple discussions with the FERC Office of Investigation to clarify use of the NLS tool by market participants; to date, no investigation has been initiated. The Market Working Group (MWG) has been advised that rules changes are necessary to address the issue and that process has begun. Participants have been advised of the situation in the interim. Compliance staff is reviewing SPP staff's use of the tool as well. Mr. Hodges expects to have a report in a few weeks. Mr. Martin asked to receive the report when completed.

Market Monitoring Unit

Richard Dillon reviewed the Market Monitoring Unit activity report (MMU Report – Attachment 5). The committee congratulated Mr. Dillon for being fully staffed. Effective February 1, SPP is no longer required to provide monthly reports to FERC. SPP will continue other reports as required.

External Market Advisor

Craig Roach reviewed the External Market Advisor activity report (EMA Report – Attachment 6). Several items will be covered in more detail later in the agenda. Mr. Roach particularly noted assistance of the

SPP staff, specifically Emily Davis, in compiling the data needed to produce the 2007 State of the Market Report. He also noted Rick Running's assistance with the EIS Market Benefits Analysis.

Mr. Roach and Mr. Dillon discussed a market participant inquiry that has been under review. A detailed report was prepared by the MMU and presented to the participant by the MMU and EMA to explain events. The end result was no violation of market rules, but some rules may warrant review. The MMU and EMA plan to re-visit the market participant for any follow-up, and refer issues to the MWG for further consideration. The committee discussed the issue in terms of overall policy implications. The Oversight Committee concurs with the approach recommended.

Agenda Item 4 – EIS Market Benefits Analysis

Richard Dillon and Craig Roach reviewed the EIS Market Benefits Analysis and its results. The results were also compared to those projected in the pre-market implementation cost/benefit study. Results indicate that benefits exceed those projected by the original study. Calculations were performed using several approaches, all resulting in approximately $100 million in trade benefits to the SPP region. A similar presentation will be made at the Board of Directors/Members Committee meeting in April. Stacy Duckett is to coordinate a public communication approach for distribution following the Board of Directors meeting.

Agenda Item 7 – NERC Communication Plan for Violations

Stacy Duckett reported that NERC has developed a communication plan to address the public communications related to confirmed violations under the Compliance Monitoring and Enforcement Program under the Regional Entity.

Agenda Item 5 – Market Monitoring & Mitigation Plans Report

Craig Roach reviewed the suggestions for the MMU included in the Market Monitoring and Mitigation Plans Report and status of these suggestions (Market Monitoring & Mitigation Plans - Attachment 7). Richard Dillon discussed further consideration/developments, including frequency. Phyllis Bernard had questions regarding the report which were addressed by Mr. Roach and Mr. Dillon.

Agenda Item 6 – 2007 State of the Market Report

Craig Roach presented the current draft of the 2007 State of the Market Report. There was nothing resulting as "controversial" in the report. The final report will be provided at the April Board of Directors meeting, then provided to FERC.

Agenda Item 8 – New Action Items

New action items:

- David Hodges to discuss additional training opportunities with Bill Wylie via the Center of Excellence.
- David Hodges to provide a Compliance report related to the Network Load Scheduling and communicate when completed.
- Stacy Duckett to coordinate a Communication Plan for the Benefits Analysis and 2007 State of the Market Report results.

Agenda Item 9 – Future Meetings

Future Oversight Committee meetings were confirmed. Schedule for 2008:

June 25	Chicago
September 25	Hilton Head, SC
December 8	Dallas

The meeting adjourned to Executive Session at 1:35 p.m.

Executive Session

The Executive Session was called to order at 1:40 p.m. Mr. Hodges and Mr. Dillon provided an update to the committee on a current inquiry/assessment being conducted. Mr. Martin asked that the Oversight Committee be convened to report the final determinations.

Respectfully Submitted,

Stacy Duckett
Secretary

Southwest Power Pool, Inc.

OVERSIGHT COMMITTEE

Pending Action Items Status Report

June 25, 2008

Action Item	Date Originated	Status	Comments
D. Hodges to discuss additional training opportunities with B. Wylie via Center of Excellence	April 2	Completed	Addressing via Training and Compliance workshops
D. Hodges to provide compliance report related to NLS to Committee when completed	April 2	Pending	June 25 agenda item
S. Duckett to coordinate communication plan for benefits analysis and State of the Market Report results	April 2	Completed	Press releases issued; reports posted on website.

Compliance Department

Report to the Oversight Committee

June 25, 2008

Recent Activities

Southwest Power Pool RC Readiness Evaluation

The on-site readiness evaluation of the Southwest Power Pool Reliability Coordinator (SPP RC) was conducted on February 25 - 28, 2008. The NERC Readiness Evaluation Team found that SPP has adequate facilities, processes, and procedures to perform its Reliability Coordinator reliability functions. Operators, management, and support staff are knowledgeable and competent. The final NERC Report has been posted on the NERC website at the following link : ftp://ftp.nerc.com/pub/sys/all_updl/rap/audits/SPP_Evaluation_Report.pdf
The report is also included in the background material.

The report findings are listed below:

- 1 Potential Example of Excellence
- 9 Positive Observations
- 9 Recommendations

The SPP RTO was registered as an Interchange Authority in the NERC Compliance Registry as of March 24, 2008. The ITO was registered as an Interchange Authority in the NERC Compliance Registry as of April 2, 2008. The IA is a new function under the NERC Functional Model.

The compliance department has been working with the MMU in regards to the FERC Office of Investigation inquiring about the NLS tool being used by market participants. The MMU had approximately a dozen different communications with the FERC OI. The compliance department completed an assessment of the NLS Tool and the use of Network Integration Transmission Service (NITS). The assessment showed that NITS is being used correctly by the market participants.

NERC Enforces Compliance with Electric Reliability Standards

The North American Electric Reliability Corporation (NERC) submitted the first set of violation notices in the United States to the Federal Energy Regulatory Commission (FERC) on June 4, 2008 for approval under Section 215 of the Federal Power Act. The initial set included a number of violations, the majority of which were are documentation-related and do not include a financial penalty. The total value of financial penalties assessed is $255,000. The NERC Enforcement Actions spreadsheet is included in the background material.

2008 Spring Compliance Workshop
Standards Compliance Survey Results

As part of the Spring 2008 Compliance Workshop Bill Wiley and David Hodges facilitated an open forum for compliance dialog and further provided participants with the opportunity to submit elaborated feedback via a compliance survey. There were 125 participants attending the Spring 2008 Compliance Workshop. The survey focused on the need for entities within Southwest Power Pool's (SPP) footprint to organize for discussion of compliance matters and asked participants to provide feedback as to what possible types of compliance training would be beneficial. The compliance department is currently continuing this effort with our members and registered entities.

The compliance department met with Cap Rock Energy on April 29-30 to discuss their compliance program and make recommendations after reviewing procedures and documentation. This meeting was the result of the presentation and survey at a compliance workshop.

Attached is an insert containing the **Reliability Standards Acronyms.** I hope this is helpful when reviewing the many different standards.

Reliability Standards Acronyms

BAL	Resource and Demand Balancing	**NUC**	Nuclear
CIP	Critical Infrastructure Protection	**ORG**	Organization Certification
COM	Communications	**PER**	Personnel Performance, Training, and Qualifications
EOP	Emergency Preparedness and Operations	**PRC**	Protection and Control
FAC	Facilities Design, Connections and Maintenance	**TOP**	Transmission Operations
INT	Interchange Scheduling and Coordination	**TPL**	Transmission Planning
IRO	Interconnection Reliability Operations and Coordination	**VAR**	Voltage and Reactive
MOD	Modeling, Data, and Analysis		

Compliance

The compliance department continues to work through the gap analysis for Order 890 and Order 890-A. We are waiting on NAESB to develop business standards pertaining to many of the OASIS requirements. The NAESB standards are expected in August 2008.

Audits 2008

Readiness Evaluations vs. Compliance Audits

- **Compliance Audit**
  - Reviews specifically; compliance with the Requirements of the Reliability Standards
  - Scope is not larger than what is required in the standards
  - Looks more at historical data and records and documentation of plans, programs, and procedures.

- **Readiness Evaluations**
  - Reviews current status of entities overall operation
  - Makes an assessment of the entities operating ability and preparedness to address the next contingency
  - More forward looking – sets targets
  - Scope is much larger than Compliance Audit

SPP RC – RRO Compliance Audit scheduled for October 20, 2008 through October 24, 2008. This will include the Interchange Authority function.

The ICT RC has a SERC Compliance Audit scheduled for November 3, 2008 through November 6, 2008.

The ITO IA has a SERC Audit scheduled for the week of November 3rd, 2008.

Future Activities

Provide assistance to members and registered entities regarding compliance.

Participate in national forums

NERC Compliance and Certification Committee

OATI webCompliance Software being implemented for compliance tracking, monitoring, and standards updates.

Work in conjunction with Center of Excellence

Respectfully submitted,

David H. Hodges
Director, Compliance

Southwest Power Pool, Inc.

MARKET MONITOR

Report to the Compliance Committee

25 June 2008

Staffing

The Market Development and Analysis department has an opening in the lead engineering position and a senior analyst. Since the last meeting, CJ Brown became a supervisor in Operations and Rick Running left SPP. Additionally, there is an open position as an Engineer I that is currently being used for a part-time employee from the University of Arkansas – Little Rock power engineering program (sponsored by SPP).

Activity Update

A summary of Market Monitoring contacts are as follow

- **Federal Energy Regulatory Commission (FERC)**
  - Annual presentation to FERC staff on State of the Market Report and an update on key market issues for both EIS market and transmission services
  - Office of Investigation has closed its review of the NLS tool
  - FERC staff continue to inquire at least weekly about EIS prices from an information perspective
  - MKEC Sunflower submitted a "Hotline" request to FERC regarding EIS congestion and resulting curtailments for the period June 3 through June 22, 2007. The Office of Investigation requested SPP educate the FERC team on the issues relevant to this request.
  - FERC requested RTO chief executive officers participate in the July 1 FERC Market Oversight Conference. This is intended to help the Commissioners assess the overall "state of markets" in the country.
  - FERC requested a conference and ongoing dialog between Xcel Energy, Golden Spread, and SPP regarding the Violation Relaxation Limits (VRL). Face-to-face meetings are ongoing with some process modifications discussed.
- **Market Participants**
  - Continue to work with SPS on data request and analysis concerning congestion is the southwest area of the SPP EIS market.
- **Market Design**
  - The team responsible for the Cost Benefit Study for Future Markets is finalizing the initial base case. Requests have been received to consider expanding the study scope to include wind and consolidated BA cases. This could delay projected completion date beyond October 1 target.
- **Regulatory**
  - SPP State of the Market for 2007 as prepared by Boston Pacific was filed with FERC on June 3, 2008.
- **Other Items**
  - SAS 70 audit results show no exception conditions for offer caps.

Infrastructure

- Established new executive metrics: executive scorecard, load forecast vs. actual, and price contour map
- Data Dictionary hardware, software, and data are in test status

Reports

The MMU periodically makes a summary Monthly Metric report to the MWG. This keeps the members abreast of market monitoring concerns and provides SPP members a forum to present questions and suggestions directly to the MMU. The Monthly Metrics Reports continues to be the primary tool for keeping FERC staff informed of EIS and transmission market conditions. The Market Analysis group also develops the Corporate Metrics Report for the Board of Directors and senor SPP management.

Respectfully submitted,

Richard Dillon
Director, Market Development and Analysis

SPP, INC
OVERSIGHT COMMITTEE MEETING
JUNE 25, 2008

SUMMARY OF EMA ACTIVITY
SINCE LAST MEETING ON APRIL 2, 2008

A. 2007 STATE OF THE MARKET REPORT

1. Presented Report at April 22, 2008 Board Meeting
2. Published Final Report on April 24, 2008
3. Joint presentation with MMU to FERC on June 3, 2008

B. TRADE BENEFITS CALCULATION FOR EIS MARKET

1. Provided feedback to MMU on Final Report
2. MMU Presentation at April 22, 2008 Board Meeting
3. Final Report published
4. MMU Presentation to FERC on June 3, 2008

C. MARKET PARTICIPANT INQUIRY

1. Call with Market Participant and the MMU on April 15, 2008
2. Status update

D. FERC AUDIT

1. Interview with FERC Audit team on April 1, 2008
2. Second interview with FERC Audit team on April 24, 2008

E. GOING FORWARD

1. No explicit tasks remaining in the 2008 EMA Contract

2. Monthly Retainer

3. Other areas where we can help

F. UPWARD PRESSURE ON PRICE

1. Texas

2. Worldwide fuel

3. Construction costs

4. Global warming

Compliance Monitoring and Enforcement Program

Enforcement Actions

The focus of NERC's compliance efforts is to ensure the reliability of the bulk power system in North America by fairly and consistently enforcing compliance with our standards. The table below provides information regarding enforcement actions designed to ensure bulk power system reliability through compliance with NERC's reliability standards. The most important takeaway from the notices below is that reliability is being improved across North America as a result of proactive efforts to prevent future system disturbances. All enforcement actions include correction of any issues identified where a mandatory NERC standard is not being fully met by a Registered Entity - efforts are already either complete or underway to address the reliability issues referenced on this page.

United States law requires that NERC's enforcement actions involving entities operating in the continental U.S. be filed publically with the Federal Energy Regulatory Commission (FERC), who has oversight of NERC's activities as the Electric Reliability Organization or ERO. Any penalties or other enforcement actions become effective 30 days after filing unless FERC moves to review the penalty or settlement or a proceeding is initiated. Other provisions may exist within the Canadian provinces.

For more information about the compliance and enforcement program click here.

Regulatory Authority	Regulatory Filing ID	Region	Registered Entity	NCR ID*	Total Penalty ($)	NERC Violation ID	Reliability Standard	Requirement	Violation Risk Factor
FERC	NP08-1-000	RFC	Baltimore Gas and Electric Co. [Statement]	NCR00689	$180,000	RFC200700002	FAC-003-1	2	High
FERC	NP08-3-000	TRE	Bandera Electric Cooperative, Inc	NCR04008	$0	TRE200700003	PRC-005-1	2	Lower/ High
FERC	NP08-4-000	TRE	Denton Municipal Electric (TDSP)	NCR04049	$0	TRE200700001	PRC-008-0	1	Medium

						TRE200700002	PRC-008-0	2	Medium
FERC	NP08-5-000	**TRE**	**Exelon Generation Company, LLC**	**NCR04057**	**$0**	TRE200700004	PRC-005-1	2	Lower/ High
FERC	NP08-6-000	**MRO**	**Tri-State G&T - Merchant**	**NCR10103**	**$0**	MRO200700008	INT-004-1	2	Lower
FERC	NP08-7-000	**MRO**	**American Transmission Co., LLC**	**NCR00685**	**$0**	MRO200700009	PRC-005-1	2	Lower/ High
FERC	NP08-8-000	**NPCC**	**Peabody Municipal Light Plant**	**NCR07191**	**$0**	NPCC200700015	CIP-001-1	1	Medium
						NPCC200700016	CIP-001-1	2	Medium
						NPCC200700017	CIP-001-1	3	Medium
						NPCC200700018	CIP-001-1	4	Medium
FERC	NP08-9-000	**SPP**	**Southwestern Public Service Co. (SPS-XCEL)**	**NCR01145**	**$0**	SPP200700002	EOP-001-0	3.4	Medium
						SPP200700003	EOP-001-0	4.4	Medium
						SPP200700004	EOP-001-0	5	Medium
						SPP200700005	EOP-005-0	1	Medium
						SPP200700006	CIP-001-1	2	Medium
FERC	NP08-10-000	**SERC**	**Reliant Energy Wholesale Generation, LLC** [Statement]	**NCR00396**	**$0**	SERC200700049	PRC-005-1	1	High
FERC	NP08-11-000	**NPCC**	**The City of Holyoke Gas and Electric Dept.**	**NCR07217**	**$0**	NPCC200700011	CIP-001-1	1	Medium
						NPCC200700012	CIP-001-1	2	Medium
						NPCC200700013	CIP-001-1	3	Medium
						NPCC200700014	CIP-001-1	4	Medium
FERC	NP08-12-000	**TRE**	**Suez Energy Marketing NA Inc**	**NCR04129**	**$0**	TRE200700011	CIP-001-1	1	Medium
						TRE200700012	CIP-001-1	2	Medium
						TRE200700013	CIP-001-1	3	Medium
						TRE200700014	CIP-001-1	4	Medium
						TRE200700015	IRO-004-1	4	High
						NPCC200700019	CIP-001-1	1	Medium

FERC	NP08-13-000	**NPCC**	**Norwich Public Utilities**	**NCR07038**	**$0**	NPCC200700020	CIP-001-1	2	Medium
						NPCC200700021	CIP-001-1	3	Medium
						NPCC200700022	CIP-001-1	4	Medium
FERC	NP08-14-000	**SERC**	**Cottonwood Energy, LP** [Statement]	**NCR01210**	**$0**	SERC200700047	PRC-005-1	1	High
FERC	NP08-15-000	**SERC**	**Illinois Municipal Electric Agency** [Statement]	**NCR00795**	**$0**	SERC200700058	CIP-001-1	1	Medium
						SERC200700059	CIP-001-1	2	Medium
						SERC200700060	CIP-001-1	3	Medium
						SERC200700061	CIP-001-1	4	Medium
FERC	NP08-16-000	**MRO**	**Northern States Power**	**NCR01020**	**$0**	MRO200700004	CIP-001-1	2	Medium
FERC	NP08-17-000	**SERC**	**East Texas Electric Cooperative, Inc.**	**NCR01227**	**$0**	SERC200700017	PRC-005-1	1	High
						SERC200700025	FAC-008-1	1	Lower/ Medium
						SERC200700031	CIP-001-1	1	Medium
						SERC200700032	CIP-001-1	2	Medium
						SERC200700033	CIP-001-1	3	Medium
						SERC200700034	CIP-001-1	4	Medium
FERC	NP08-18-000	**TRE**	**Topaz Power Management LP (QSE)**	**NCR04147**	**$0**	TRE200800028	CIP-001-1	1	Medium
FERC	NP08-19-000	**SERC**	**West Georgia Generating Company, LLC**	**NCR01368**	**$0**	SERC200700048	PRC-005-1	2	Lower/ High
						SERC200700064	PRC-005-1	1	High
						SERC200700065	PRC-005-1	4	Medium
FERC	NP08-20-000	**SERC**	**Doyle I, LLC**	**NCR01216**	**$0**	SERC200700012	CIP-001-1	4	Medium
FERC	NP08-21-000	**SERC**	**City of Orangeburg Dept. of Public Utilities**	**NCR01202**	**$0**	SERC200700016	PRC-005-1	1	High
			Sam Rayburn			SERC200700018	PRC-005-1	1	High
						SERC200700024	FAC-008-1	1	Lower/ Medium

FERC	NP08-22-000	**SERC**	**G&T Electric Cooperative, Inc.**	**NCR01307**	**$0**	SERC200700027	CIP-001-1	1	Medium
						SERC200700028	CIP-001-1	2	Medium
						SERC200700029	CIP-001-1	3	Medium
						SERC200700030	CIP-001-1	4	Medium
FERC	NP08-23-000	**SERC**	**Caledonia Generating, LLC**	**NCR01187**	**$0**	SERC200700052	FAC-008-1	1	Lower/ Medium
FERC	NP08-24-000	**SERC**	**Mt. Carmel Public Utility Co.** [Statement]	**NCR01277**	**$0**	SERC200700062	CIP-001-1	4	Medium
FERC	NP08-25-000	**SERC**	**Tex-LA Electric Coop of Texas, Inc.**	**NCR01342**	**$0**	SERC200700020	PRC-005-1	1	High
						SERC200700026	FAC-008-1	1	Lower/ Medium
						SERC200700035	CIP-001-1	1	Medium
						SERC200700036	CIP-001-1	2	Medium
						SERC200700037	CIP-001-1	3	Medium
						SERC200700038	CIP-001-1	4	Medium
FERC	NP08-26-000	**SERC**	**Prairie Power, Inc.**	**NCR09035**	**$0**	SERC200700050	FAC-008-1	1.2.2	Lower/ Medium
FERC	NP08-27-000	**SERC**	**Craven County Wood Energy, LP**	**NCR01212**	**$0**	SERC200700063	PRC-005-1	1	High
FERC	NP08-28-000	**SERC**	**N.C. Power Holdings, Inc. - Elizabethtown Power**	**NCR08084**	**$0**	SERC200700067	IRO-004-1	4	High
						SERC200700074	CIP-001-1	1	Medium
						SERC200700075	CIP-001-1	2	Medium
						SERC200700076	CIP-001-1	3	Medium
						SERC200700077	CIP-001-1	4	Medium
						SERC200700078	PRC-005-1	1	High
						SERC200700084	FAC-008-1	1	Lower/ Medium
						SERC200700085	FAC-009-1	1	Medium
						SERC200700002	PER-002-0	3.1	Medium
						SERC200700003	TPL-001-0	1	High/ Medium

FERC	NP08-29-000	**SERC**	**City of Columbia, MO** [Statement]	**NCR01196**	**$0**	SERC200700004	TPL-002-0	1	High/ Medium
						SERC200700005	TPL-003-0	1	High/ Medium
						SERC200700006	TPL-004-0	1	Medium
FERC	NP08-30-000	**SERC**	**City of Orangeburg Dept. of Public Utilities**	**NCR01202**	**$0**	SERC200700054	CIP-001-1	1	Medium
						SERC200700055	CIP-001-1	2	Medium
						SERC200700056	CIP-001-1	3	Medium
						SERC200700057	CIP-001-1	4	Medium
FERC	NP08-31-000	**SERC**	**N.C. Power Holdings, Inc. - Lumberton Power**	**NCR08085**	**$0**	SERC200700068	IRO-004-1	4	High
						SERC200700079	CIP-001-1	1	Medium
						SERC200700080	CIP-001-1	2	Medium
						SERC200700081	CIP-001-1	3	Medium
						SERC200700082	CIP-001-1	4	Medium
						SERC200700083	PRC-005-1	1	High
						SERC200700086	FAC-008-1	1	Lower/ Medium
						SERC200700087	FAC-009-1	1	Medium
FERC	NP08-32-000	**SERC**	**Old Dominion Electric Cooperative**	**NCR00859**	**$0**	SERC200700010	FAC-008-1	1	Lower/ Medium
						SERC200700011	PRC-005-1	1	High
FERC	NP08-33-000	**SERC**	**Associated Electric Cooperative, Inc.**	**NCR01177**	**$0**	SERC200700001	FAC-003-1	2	High
FERC	NP08-34-000	**SERC**	**The Dow Chemical Company**	**NCR09037**	**$0**	SERC200700022	IRO-004-1	4	High
						SERC200700023	TOP-003-0	1	Medium
						SERC200700053	PRC-005-1	2	Lower/ High
						SERC200700069	FAC-009-1	1	Medium
						SERC200700070	FAC-009-1	2	Medium
						SERC200700071	PRC-004-1	1	High
						SERC200700072	PRC-004-1	2	High
						SERC200700073	PRC-004-1	3	Lower

FERC	NP08-35-000	**MRO**	**Rochester Public Utilities**	**NCR01027**	**$0**	MRO200700005	PER-002-0	3	High/ Medium
						MRO200700006	PRC-004-1	2	High
						MRO200700007	VAR-001-1	9	High
FERC	NP08-36-000	**SERC**	**City of Benton**	**NCR01193**	**$0**	SERC200700066	PER-002-0	3.1	Medium
FERC	NP08-37-000	**SERC**	**City of North Little Rock, AR (DENL)**	**NCR01201**	**$0**	SERC200700041	PER-002-0	3.1	Medium
Settlement									
FERC	NP08-2-000	**MRO**	**MidAmerican Energy Company**	**NCR00824**	**$75,000**	MRO200700010	FAC-003-1	2	High

*NERC Compliance Registry Identifier

NERC
NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Press Release

FOR IMMEDIATE RELEASE
CONTACT: Kelly Ziegler
609.452.8060
kelly.ziegler@nerc.net

NERC Enforces Compliance with Electric Reliability Standards, Reliability Improvements Underway

PRINCETON, N.J., June 4, 2008 — The North American Electric Reliability Corporation (NERC) will submit the first set of violation notices in the United States to the Federal Energy Regulatory Commission (FERC) today for approval under Section 215 of the Federal Power Act. These notices document which reliability standards were violated and the actions taken by the companies involved to assure future compliance and improve reliability. NERC reliability standards are designed to ensure that the right practices are in place so the likelihood and severity of future bulk power system disturbances are substantially reduced.

This initial set will include a number of violations, the majority of which are documentation-related and do not include a financial penalty. The total value of financial penalties assessed equals $255,000. Today's violations are already being addressed by the companies involved, who are required to take immediate corrective action in addition to any financial penalties.

"The most important result from these notices is that reliability is being improved across North America due to proactive efforts to prevent future system disturbances," commented Rick Sergel, NERC president and CEO. "It's often said that the first step to fixing a problem is admitting that a problem exists, and that's what these companies have done – they have stepped up to the plate and put the measures in place to improve grid reliability."

Today's financial penalties are related to violations of NERC's FAC-003-1 standard titled "Vegetation Management." Improper vegetation clearance on transmission lines was a causal factor of the August 14, 2003 blackout, where 50 million people across the Northeast U.S. and Southeast Canada lost power. Proper vegetation management within transmission rights-of-way continues to be one of NERC's primary reliability concerns. The companies involved in today's notices are taking important steps to resolve vegetation management violations and improve reliability of the bulk power system.

"Generally we are seeing a very positive response to the 'new era' of mandatory compliance enforcement," continued Sergel. "In fact, more than half of the 1400 violations reported to

NERC after June 18th were self-reported, meaning that bulk power system users, owners, and operators voluntarily disclosed an issue and proposed a way to address it. This is a strong indication that the mandatory enforcement program put in place through the formation of the international Electric Reliability Organization, NERC, is driving a culture of compliance, but more importantly reinforcing reliability standards, throughout the electricity industry."

More information and details on today's and future notices can be found on NERC's website at: http://www.nerc.com/~filez/enforcement/index.html. This page will be updated throughout the afternoon as the notices are formally filed.

The North American Electric Reliability Corporation's (NERC) mission is to ensure the reliability of the bulk power system in North America. To achieve that, NERC develops and enforces reliability standards; assesses adequacy annually via a 10-year forecast and winter and summer forecasts; monitors the bulk power system; audits owners, operators, and users for preparedness; and educates, trains, and certifies industry personnel. NERC is a self-regulatory organization, subject to oversight by the U.S. Federal Energy Regulatory Commission (FERC) and governmental authorities in Canada. Learn more at www.nerc.com.

NERC is given the responsibility and authority to develop and enforce reliability standards in the United States through its designation by FERC as the Electric Reliability Organization (ERO) as authorized in Section 215 of the Federal Power Act. NERC is actively working with authorities in Canada and Mexico to ensure that mandatory reliability standards are enforced throughout North America.

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	$400,000	Civil penalty resulting from self-reported violations of the shipper-must-have-title requirement.
In re BP Energy Company, 121 FERC ¶ 61,088 (October 25, 2007)	$7,000,000	Civil penalty and compliance monitoring plan resulting from self-reported violations of competitive bidding regulations, shipper-must-have-title requirement, and prohibition on buy/sell arrangements.
In re MGTC, Inc., 121 FERC ¶ 61,087 (October 25, 2007)	$300,000	Civil penalty and compliance report resulting from self-reported violations of the shipper-must-have-title requirement.

Source: FERC website
Updated: May 29, 2008

In re Gexa Energy, L.L.C., 120 FERC ¶ 61,175 (August 21, 2007)	$500,000 $12,481.41	Civil penalty and disgorgement resulting from a self-report of violations of the FPA.
In re Cleco Power, LLC, et al., 119 FERC ¶ 61,274 (June 12, 2007)	$2,000,000	Civil penalty and a 1-2 year compliance plan resulting from a self-report for a violation of a 2003 Settlement agreement by sharing 9 employees and sharing prohibited market info between different Cleco companies.
In re Columbia Gulf Transmission Company, 119 FERC ¶ 61,174 (May 21, 2007)	$2,000,000	Civil penalty resulting from a Commission referral for a violation of a Commission order to allow installation of a receipt interconnection.
In re Calpine Energy Services, L.P., 119 FERC ¶ 61,125 (May 9, 2007)	$4,500,000	Civil penalty and a 1-2 year compliance plan resulting from a self-report for violations of shipper-must-have-title requirements.
In re Bangor Gas Company, 118 FERC ¶ 61,186 (March 7, 2007)	$1,000,000	Civil penalty and a 1 year compliance plan resulting from a self-report for violations of shipper-must-have-title requirements.
In re PacifiCorp, 118 FERC ¶ 61,026 (January 18, 2007)	$10,000,000	Civil penalty and a 1 year compliance plan resulting from a self-report for violations of OATT and Standards of Conduct.
In re SCANA Corporation, 118 FERC ¶ 61,028 (January 18, 2007)	$9,000,000 $1,800,000	Civil penalty, disgorgement, and a 1 year compliance plan resulting from a self-report for violations of OATT.
In re Entergy Services, Inc., 118 FERC ¶ 61,027 (January 18, 2007)	$2,000,000	Civil penalty and a 1-2 year compliance plan resulting from a self-report for violations of OATT and Standards of Conduct OASIS posting requirements.
In re NorthWestern Corporation, 118 FERC ¶ 61,029 (January 18, 2007)	$1,000,000	Civil penalty and a 2 year compliance plan resulting from a hotline call for violations of Business Practice Standards for OASIS Transactions.

Source: FERC website
Updated: May 29, 2008

In re NRG Energy, Inc., 118 FERC ¶ 61,025 (January 18, 2007)	$500,000	Civil penalty and a 1 year compliance plan resulting from a self-report for violations of ISO-NE Market Rule 1 and the Commission's Market Behavior Rules 1 and 3.

Source: FERC website
Updated: May 29, 2008

NERC

NORTH AMERICAN ELECTRIC RELIABILITY CORPORATION

Reliability Readiness Evaluation Report

Reliability Coordinator

Southwest Power Pool

Maumelle, Arkansas

to ensure the reliability of the bulk power system

February 25–28, 2008

116-390 Village Blvd., Princeton, NJ 08540
609.452.8060 | 609.452.9550 fax
www.nerc.com

Table of Contents

Introduction and Evaluation Process

The North American Electric Reliability Corporation (NERC) Reliability Readiness Evaluation and Improvement Program is one of the commitments of NERC and the industry to strengthen the reliability of the North American bulk power system. The program conducts independent evaluations of balancing authorities, transmission operators, reliability coordinators, and other key entities that support the reliable operation of the bulk power system to assess their preparedness to meet their assigned reliability responsibilities. The evaluations identify strengths and areas for improvement in an effort to promote excellence in operations among these organizations.

Since its inception, NERC and the industry have been working collaboratively to enhance the program. The evaluation process is based on fundamental aspects of reliability: culture, operations, maintenance, planning, training, and infrastructure. Documents related to the program are available at http://www.nerc.com.

The reliability readiness evaluation teams, each led by a NERC staff member and a senior regional representative, include industry volunteers with considerable expertise selected to provide representation from other interconnections, other regions, and neighboring operating entities. The teams also typically include representatives from the Federal Energy Regulatory Commission (FERC) staff.

The public version of the reliability readiness evaluation report contains the majority of the evaluation team's findings. Any discussion of findings pertaining to critical infrastructure will be contained in Appendix 1, a confidential appendix to the report that is sent privately to the evaluated entity and is not included in the public version of the report.

Evaluation Team

An evaluation team met on-site with Southwest Power Pool (SPP) representatives on February 25–28, 2008. This report reflects the views and recommendations of the evaluation team regarding the readiness of SPP to meet its responsibilities as a reliability coordinator.

Team Members

Paul Reber*	NERC
Ron Ciesiel**	SPP
Peter Kubeck	Oklahoma Gas & Electric
Harold Wyble	Kansas City Power & Light
Christopher Hoffman	Midwest ISO
Lauri Jones	Pacific Gas and Electric Company
Paul Bleuss	California Mexico Reliability Coordinator
Syed Ahmad	FERC
Loye Hull	FERC
Kevin Conway***	NERC

*Team leader
**Senior Regional Representative
***Observer

Organization Profile

SPP is a Regional Entity, electric energy imbalance market operator, reserve sharing group operator, transmission service provider, and reliability coordinator. SPP operates two NERC reliability coordinator areas: 1) SPP for SPP entities and others and 2) ITC for the Entergy area. This evaluation covers SPP reliability coordination, but some of the other functions' procedures are coordinated with reliability coordination procedures.

The SPP reliability coordination area covers all of Kansas and Oklahoma, most of the Texas panhandle, part of eastern Texas, the southeastern corner of New Mexico, western Missouri, western Arkansas, and central Louisiana. SPP is the reliability coordinator for all 16 balancing authorities and 16 transmission operators in the SPP region as well as 7 balancing authorities in the Entergy subregion of the SERC Region (SERC Reliability Corporation). All but one of the companies participating in the transmission service provider area are in the SPP reliability coordination footprint. All but one of the transmission operators in SPP are within the SPP reliability coordination area. This includes transmission operators in the SPP energy imbalance service market. SPP is also the reliability coordinator for several companies not participating in the regional transmission organization or the energy imbalance service market. The reliability coordination area and balancing areas covered by the SPP reliability coordinator are shown in figure 1. The reliability coordination offices are located in Maumelle, Arkansas.

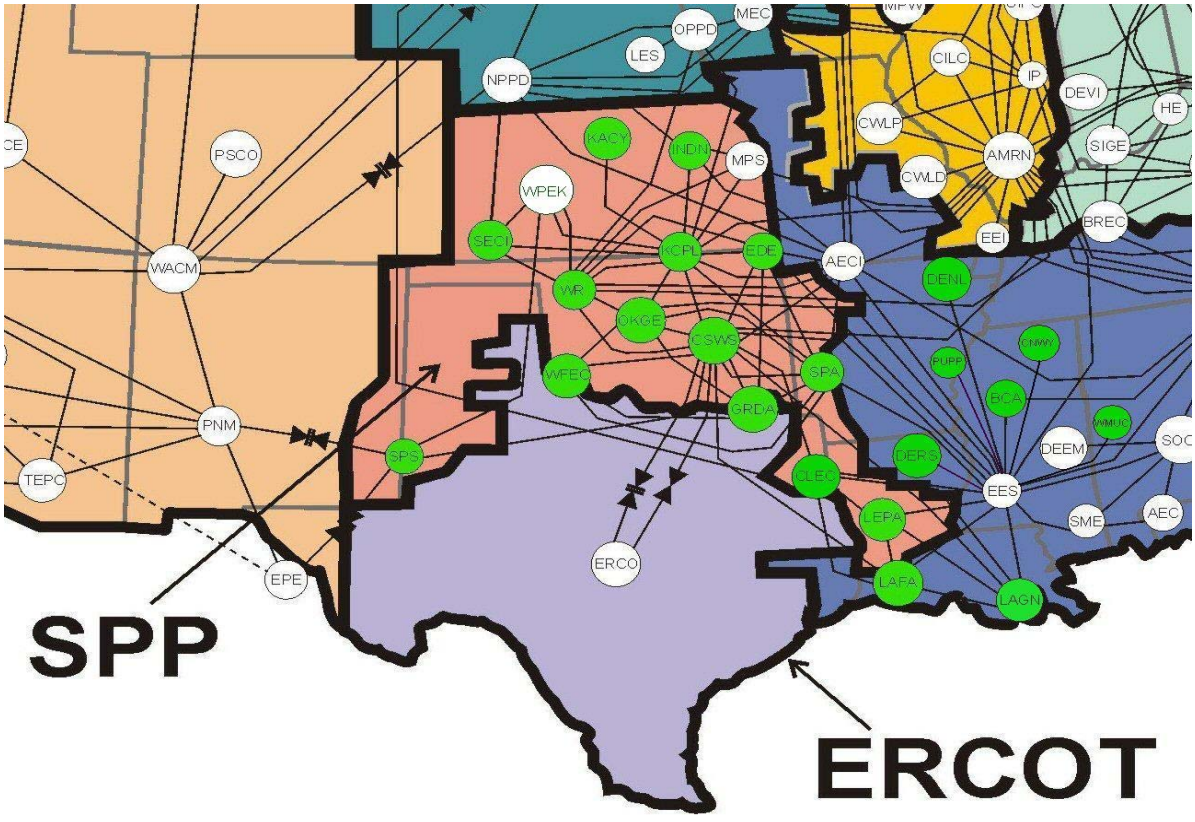

Figure 1 – Balancing Authority Areas (shown in green) in the SPP Reliability Coordination Area

The SPP footprint has 5,026 substations at voltages ranging from 69 to 500 kV and 451 generators with a capacity of 45,168 MW. The generation mix is approximately 36% coal, 36% gas, and 28% other. The footprint's peak demand reached 42, 227 MW.

The SPP business model states that "reliability and economics are inseparable." To that end, SPP operates an electric balancing market, reserve sharing group, and reliability coordinator area in a coordinated effort to maintain reliability. For example, SPP uses a combination of reliability coordination procedures and market procedures to relieve line loading.

SPP reliability coordination includes conducting current- and next-day analysis, monitoring system conditions, managing congestion, ensuring adequate generation and reserves, coordination outages, and coordinating emergency operations.

As mentioned, SPP operates an area in the Entergy subregion, known as the ICT reliability coordinator area. ICT operates on a separate energy management system (EMS) platform and is independent of the SPP reliability coordinator. The two groups operate in the same control room and share some support services. This readiness evaluation did not include the ICT reliability coordinator.

Executive Summary

A team of NERC, Regional Entity, and industry representatives reviewed documents, toured control facilities, and conducted on-site interviews with entity representatives to evaluate SPP's readiness to perform the reliability coordinator functions necessary to maintain the reliable operation of the bulk power system. The evaluation team focused on fundamental aspects of reliability: culture, operations, maintenance, operational planning, training, and infrastructure.

The team offers the following positive observations, recommendations, and potential example of excellence (critical infrastructure findings are contained in Appendix 1, sent privately to the evaluated entity):

Potential Examples of Excellence

Examples of excellence are electric industry practices determined to be exceptionally effective in ensuring and protecting the reliability of the interconnected bulk power system. The evaluation team will submit the following potential example of excellence found during SPP's reliability readiness evaluation for further review by NERC and industry representatives:

1. SPP facilitates regional restoration drills with member companies participating on the SPP dispatcher training simulator through a virtual private network; participants use their own restoration plans and coordinate with the other participants using the current model of the electrical system (Section 5.1).

Positive Observations

The evaluation team cites the following positive observations found during the reliability readiness evaluation process:

1. SPP has a well-organized control room layout with ample display area in a modern support facility (Section 1.2).
2. SPP upper management provides high level of support for reliability coordination and reliable operations (Section 1.1).
3. SPP has a robust backup control center with all the functions of the primary site. See further discussion in Appendix 1.
4. SPP has good coordination between the operation analysis group and transmission planning group (Section 4).
5. SPP has implemented a hiring and training program to develop personnel to fill future staffing needs (Section 1.3).
6. SPP hired a nationwide communications contractor with extensive capabilities and expertise to monitor critical facilities provided to SPP by public providers (Section 3.3).
7. SPP is developing a power-industry curriculum in cooperation with a local university to help provide a source of personnel with industry training (Section 1.3).
8. SPP encourages and requires extensive NERC certification of personnel beyond the reliability coordinator desk (Section 2.1).

9. SPP's training program not only utilizes an ADDIE (analyze, develop, design, implement, and evaluate) process to learning, it also incorporates a 360-degree approach (Section 5.1)

Recommendations

The evaluation team offers the following recommendations that, if implemented, will enhance SPP's readiness to operate reliably and maintain the reliability of the bulk power system. The recommendations are listed in order of importance. Listings marked with an asterisk have been identified by SPP as key recommendations in improving the reliability of its operations.

1. Establish and monitor system voltages criteria to reduce the possibility of a voltage or reactive power system incident (Section 2.3).
2. Reduce time from the initial recognition of an overloaded line to the implementation of temporary flowgate to provide quicker line-loading relief using the established SPP processes (Section 2.3).
3. Use breaker-to-breaker detail for contingency modeling in the real-time contingency model to increase the accuracy of certain events affected by the opening of specific breakers (Section 4).*
4. Modify the OPS1 outage reporting system to include breaker outages to support the information needs of a breaker-to-breaker system modeling (Section 4).*
5. Develop and implement ways to reduce the state estimator flow mismatches to improve the accuracy of the real-time contingency analysis (Section 2.3).
6. Develop and implement a lessons-learned process to make the reliability coordinators aware of the effect of selected operating and safety situations (Section 2.2).*
7. Require NERC reliability certification of the on-shift engineer prior to allowing the individual to issue real-time operating directions to help ensure reliable operations (Section 2.1).
8. Confidential information on physical security redacted from public report. See discussion in Appendix 1.
9. Implement a central document control process, including links to external documents, to help ensure that operators are aware of and have access to document updates (Section 1.2).

Discussion

The sections that follow provide the foundation for the recommendations, positive observations, and the potential example of excellence the team identified. The report uses the generic term "system operator" to refer to all on-shift operating personnel responsible for executing the functions necessary to operate reliably and maintain the reliable operation of the bulk power system. This term will be used for the discussions unless additional specificity is required, such as *balancing* system operator or *transmission* system operator.

1. Culture

1.1 General

The corporate organization provides the necessary leadership and management for system operations to sustain high levels of safe, reliable operation.

SPP has a knowledgeable staff, with most of the operating staff coming to SPP with extensive operating experience gained from previous balancing authority and transmission operations. SPP's well-developed corporate goals include reliability. Individual goals include financial incentives based on the company achieving the corporate reliability goals and the individual's contribution to those goals. While the goals were well defined, some employees were not fully aware of how the individual financial bonus was related to corporate goals.

The SPP Board of Directors has established metrics for the company, including one for reliability and another for comparing the amount of congestion relief provided by the market compared to the amount of relief provided by other means. The board has also measured performance through a customer satisfaction survey that shows customers believe SPP is appropriately focused on reliability. The metrics are reviewed at the board meetings. Additional metrics are being developed to measure reliability.

As changes in operations are made — such as starting the market, moving to the new control center, or creating an SPP balancing authority — the impacts on the continued reliability of the system are evaluated and addressed. The evaluation team commends the SPP upper management for the support it gives to reliability coordination and reliable operations. The new control center — with a well-organized control room layout, ample display area, and fully functional backup center — and aggressive training goals are examples of support that management gives to reliability.

1.2 Foundation for System Reliability

The organization's values, objectives, and behaviors—established and modeled by its leaders and practiced by its members—serve to make system reliability a top priority. Managers align the organization to achieve safe, reliable system operation and reinforce high standards of performance through self-assessments, performance indicators, and periodic management meetings.

SPP developed a unique 360-degree circular presentation of its business model that shows how people, the organization, its functions, and culture meet to accomplish its mission. Corporate goals relate to this business model, and individual goals are derived from corporate goals. The corporate model is used throughout the organizations to reinforce corporate values. It is posted at company locations, explained in newspaper articles, and included on company mouse pads.

The corporate model includes the SPP mission statement and value proposition. The mission statement is focused on reliability by stating that SPP helps its members keep the lights on. Its value proposition also states that SPP chooses to be evolutionary rather than revolutionary and that economics and reliability are inseparable. The evaluation team found that SPP follows its business model and implements evolutionary changes. Major projects, such as implementation of the market, are done in steps in an evolutionary manner. At the current time, the SPP market is an energy imbalance market that does not include firm power, and while SPP calculates interchange for the market participants it is not a balancing authority. SPP and its members are considering expanding the market functions and forming a balancing authority in evolutionary steps.

From the first-line supervisor to the president, SPP management is focused on reliability, and an open-door policy encourages communication between the operating staff and management. The corporate managers visit the control room to gain an awareness of operations issues and keep communication paths open with the operations staff. The operators interviewed believe that SPP has good communications among operators and between operators and management.

SPP management has provided modern facilities for the reliability coordination and energy imbalance market operations. The control room is laid out for efficient operation and coordination among functions, such as the reliability coordinator, the operations engineers, and the market operator. SPP has provided the operators with adequate monitoring equipment for viewing and understanding system conditions. The evaluation team commends SPP for providing the operators with a well-organized control room layout with ample display area in a modern support facility.

The SPP documentation is generally complete and has been recently reviewed and updated. E-mail is often used to inform operators of changes in policy or procedure. SPP does not have a system to verify and document that the operators have actually reviewed or understand the information provided. The evaluation team did find a few documents that were outdated, including the disturbance monitoring equipment list and the flowgate building process (did not include market system). A document control system will help SPP keep its documents updated and ensure updates are reviewed by the operators. The evaluation team recommends that SPP implement a central document control process, including links to external documents, to help ensure that operators are aware of and have access to document updates.

1.3 Human Resources

Personnel resource needs are anticipated and individuals are systematically recruited, developed, and assigned positions in the system operations organization.

SPP has a corporate succession plan covering management levels from the president through supervisory management. It does not include the reliability coordinator operators.

SPP is actively developing reliability coordinators to fill future positions by hiring and training operators. The operators begin training in non-operating positions, which allows significant time for training prior to the need to fill vacancies. SPP started with 5 training positions, has expanded to 7 positions, and has plans to have 10 this year. The evaluation team commends SPP for evaluating the need for future operating positions and developing a training program to develop staff to meet these needs.

SPP is also developing a power-industry curriculum in cooperation with a local university to help provide a source of personnel with industry training. The program is available to college students and SPP employees wanting to expand and increase their education and skills. The evaluation team commends SPP for this effort.

1.4 Corporate Communications

System operations communications inform and engage both corporate and system operations employees so they can contribute to the strategic priorities of the organization.

SPP holds quarterly meetings for its entire staff to review corporate issues. In the past, SPP held regular operator staff meetings, but they have become irregular and infrequent. The operations managers have bi-weekly meetings to review current issues and progress on ongoing projects. The manager of training meets weekly with other operations managers to discuss training needs.

SPP distributes an attractive and informative monthly company newsletter titled *Illuminate Us*. The newsletter includes articles on reliability. The team reviewed two issues that included articles of the performance on company goals, the customer satisfaction survey, and the company business model. The articles were interesting and brought reliability issues to the attention of its readers.

SPP issues a well-written daily operations report that is provided to the operators and FERC.

2. Fundamentals of Operations

2.1 General

Operations personnel monitor and control the system in a manner that ensures safe, reliable operation.

The SPP reliability coordinator is using the release prior to the most recent version of the EMS software. SPP is the process of installing the most recent release and the hardware updates required by the new release of the software.

The EMS model covers appropriate transmission lines in SPP and neighboring areas. It models all 100 kV and above lines with some electrically significant 69 kV in the SPP reliability coordination footprint. SPP models all 200 kV and above in neighboring systems with some 100

kV and above that significantly affect the SPP system. The evaluation team found that the system was appropriately modeled for the SPP reliability coordination operation.

The SPP EMS alarms on voltages and line flows outside of a predetermined acceptable range. Alarms on voltages around the nuclear plant are set in accordance with the nuclear plant requirements.

The wide-area view is displayed on a large projection monitor with choices that include voltage profile, frequency, and market price. The voltage and frequency geographical displays depict monitored data using various colors and shading to give a clear indication of the profiles. The reliability coordinator also has two large monitors and many smaller monitors to view system conditions.

SPP's reliability plan was recently approved by the NERC Operating Committee. SPP has also signed the *NERC Reliability Coordinator Standards of Conduct* agreement. Each reliability coordinator has signed the *SPP Standards of Conduct* that reinforces the requirement to act impartially. The team found that the reliability coordinators act in the interest of the security of the interconnection and do not favor any participant over any other. The evaluation team did find outdated comments concerning the SPP merger with MISO (Midwest Independent Transmission System Operator) posted on the standard of conduct area of the NERC Web site.

2.2 Operational Focus

Organizational structure is aligned to achieve safe, reliable system operation. Operational decisions are reached using a systematic approach.

The evaluation team reviewed the SPP reliability coordinator shift schedule and certification records. All shift reliability coordinator positions are appropriately NERC certified at the reliability level.

The reliability coordinators understand their authority to take necessary actions to maintain the electrical system in a secure state. The reliability coordinator authority is documented in the job description and in a memorandum posted in the control room and sent to the balancing authorities and transmission providers within the SPP reliability coordination area. The questionnaires returned from the balancing authorities and transmission operators indicate that they recognize the authority of the SPP reliability coordinator. Neighboring reliability coordinators also stated that SPP takes actions needed to maintain the security of the electrical system.

SPP has worked to get most of the personnel associated with the reliability coordination and market functions NERC-certified. SPP is moving toward certification of all operations' desk personnel. The team commends SPP for its move toward certifying all operating positions. SPP requires certification of the on-shift engineer within two years of starting the position. The shift engineer is in a position to offer real-time operating advice to the balancing authority and transmission operator personnel. The evaluation team recommends that SPP require NERC reliability certification of the on-shift engineer prior to allowing the individual to issue real-time operating directions to help ensure reliable operations.

The operators do not regularly review lessons learned from situations to which the operators have been exposed. In the past, the operating staff held bi-weekly meetings to discuss operating issues, but these meeting have not been held recently. The evaluation team recommends that SPP develop and implement a lessons-learned process to make the reliability coordinators aware of the effect of selected operating and safety situations.

The evaluation team reviewed the documentation in the control room and found that the operators have necessary operating procedures available. The operators had hard copies of the documentation, and documents were available electronically. The backup control center had the same documentation as at the primary center. SPP has a shift-turn over process, but it does not include a system condition summary or sign-off requirement to ensure the oncoming shift reliability coordinator is aware of the most important ongoing system conditions.

The responsibilities of the reliability coordinator are understood by the other SPP operations staff and between SPP and the other entities in the SPP reliability coordination footprint. SPP has not designated a position or individual to be the lead on the shift. While each operator knows his or her responsibilities and may perform them satisfactorily under normal operations, it is sometimes necessary for the shift to make coordinated actions, such as the consideration to evacuate the control center. SPP is in the process of designating a lead position for each shift. The team supports this action and encourages SPP to make the designation as soon as possible.

2.3 Managing System Configuration

Power system configuration is carefully designed, analyzed, maintained, and controlled throughout the life of the infrastructure, ensuring that system and equipment margins are understood, considered in decision-making, and managed consistent with design and system requirements.

SPP receives electrical system status and data through intercontrol center communications protocol (ICCP) links with the balancing authorities and transmission operators within its area and neighboring reliability coordinators for areas outside of the SPP reliability coordination area. SPP receives adequate real and reactive line flows, voltage readings, frequency measurements, and equipment status to effectively monitor its part of the system. SPP has the necessary tools to perform the requirements of the reliability coordinator, including a state estimator, real-time contingency analysis, the NERC Interchange Distribution Calculator (IDC), the Reliability Coordinator Information System, and a weather-forecasting system. The contingency analysis program is also used for evaluating expected system conditions, such as proposed outages. SPP has a trending package and can use it to trend any data point collected on the EMS.

The state estimator runs every two minutes and the real-time contingency analysis every six minutes. The state estimator has about 12,500 buses modeled. The real-time contingency analysis runs about 5,000 predefined contingencies individually taking out every 100 kV and above branch.

SPP monitors the predefined flowgates on its system. SPP also monitors all transmission facilities 100 kV and above within its reliability coordination area. SPP developed a list of critical electrical facilities that the reliability coordinators closely monitor. This list has also been

provided to each transmission operator since those elements have a significant impact on the electrical system. The transmission operators are required to report outages on these facilities on the SPP outage reporting system. SPP uses a combination of NERC transmission loading relief (TLR) and constrained economic dispatch (market elements) to resolve congestion. The reliability coordinator has defined actions to resolve line loading quickly (within 30 minutes) when loading exceeds first-contingency limits. The procedures for relieving identified potential interconnection reliability operating limits (IROLs) are listed in a binder in the control room.

SPP receives transaction information through the NERC tagging system and monitors and controls interchange through the SPP energy imbalance market. The reliability coordinator monitors and trends the area control error (ACE) of each of its area balancing authorities. The EMS alarms if the ACE exceeds the balancing area L_{10} value, and the reliability coordinator will take action if the large ACE is not reduced in a short time. Reliability coordinator responses range from inquiring about the ACE to calling an energy emergency alert (EEA) and requiring the actions associated with the EEA.

SPP does not have a policy to establish locational guidelines for adequate reactive reserves. The SPP reliability coordinator does not monitor reactive reserves. While the real-time contingency analysis provides post-contingency voltages, the program does not use generator governor response to establish post-contingency voltages. The operators do not have confidence in the post-contingency voltage analysis. The evaluation team recommends that SPP establish system voltages criteria and monitor the system against those criteria to reduce the possibility of a voltage or reactive power system incident.

The SPP area has four special protections systems. Each is properly documented, and the reliability coordinators are familiar with their action. The status is monitored either through telemetry or by verbal communications.

SPP monitors the system conditions around the single nuclear plant within its area. The EMS is programmed to alarm on specific requirements of the nuclear plant. The contingency analysis is also programmed to meet the nuclear plant limits.

SPP monitors 23 frequency points throughout its footprint. The frequencies are displayed in a wide-area view with changing color intensity to indicate area frequencies. The evaluation team found this to be an effective display to show system separations.

During the control room tools interview, a line on one of the transmission operator systems exceeded first-contingency loading limits. While SPP developed contingency plans prior to providing the relief, it took over two hours to provide TLR and market action relief on the line. The time was primarily spent on identifying the proper contingent line for the flowgate. The evaluation team believes this amount of time is extensive and should be shortened. A similar incident with a similar length of time was discussed with SPP staff from a different day. The evaluation team recommends that SPP find methods to reduce the time from the initial recognition of an overloaded line to the implementation of temporary flowgate for line loading relief using the established SPP processes rather than emergency contingency plans.

SPP provides an outage coordination system called OPS1 to disseminate needed outage schedules to the reliability coordinator and other regional entities needing the information. The reliability coordinator has final transmission outage approval authority on critical facilities. From the readiness questionnaires received by the team, it is apparent that the OPS1 system and approval process meets the needs of the reliability coordinator, balancing authorities, and transmission providers.

The evaluation team believes bus mismatches between the actual line flows and those calculated by the EMS state estimator are too large. SPP allows differences up to 25 MW for buses within the SPP footprint and 50 MW for external buses, but will allow larger mismatches when necessary to achieve a state estimator solution. The evaluation team finds these differences large and recommends that SPP develop and implement ways to reduce the state estimator flow mismatches to improve the accuracy of the real-time contingency analysis.

2.4 Emergency Preparedness

The organization is prepared to manage and mitigate the impact of system emergencies in order to preserve the reliability of the system and to protect the interests of the public.

SPP has the expected procedures for handling emergency conditions, such as load shedding, line loading relief, system restoration, capacity and energy emergencies, emergency response, transmission operation directives, and sabotage (including reporting requirements). The procedures are available in binders in the control room and the operators are familiar with them. The special procedures for the nuclear plant are included in the transmission operation directives binder.

The SPP system restoration plan includes a section for SPP procedures and the individual plans of each of the balancing authorities. SPP and the balancing authorities participate in regional drills. (See Section 5.1 for additional discussion on the regional restoration drills.)

The SPP emergency procedures include the balancing authority and transmission operator actions. The reliability coordinator will coordinate and direct, as necessary, the actions of the balancing authorities and transmission operators during an emergency.

3. Fundamentals of Maintenance
Computer and Communications Systems

3.1 General

Maintenance is conducted by skilled personnel to achieve safe, reliable control center equipment and system performance.

SPP has a qualified staff to monitor and update its communications and computer systems.

SPP information technology operations oncall staff provides around-the-clock support of the voice and data communications at SPP through automated monitoring processes. These processes include software-based monitoring and third-party circuit and intrusion detection monitoring. When a problem is detected, oncall staff members are automatically notified, and

electronic mail messages sent through portable communications devices. These notifications are viewed by on-call staff and either resolved or escalated to additional support personnel.

SPP hired a nationwide communications contractor with extensive capabilities and expertise to monitor critical facilities provided to the primary and backup control centers by public communication providers. The contractor monitors the data flow and often takes corrective action before the problem is evident to SPP. The evaluation team commends SPP for taking this action to protect its communications.

SPP uses the standard vendor alarming system. Alarm priorities are not set by SPP. The alarm system health is verified by sending a test alarm every 10 minutes and verifying that the alarm was received. An e-mail is sent to the EMS support if the alarm does not properly track through the system.

3.2 Equipment Performance & Work Management

The organization achieves high levels of equipment reliability through corrective, elective, and preventive maintenance; surveillance testing; and equipment or design modifications. Work activities are carefully managed to support safe, reliable operation during both outage and routine periods, and equipment problems impacting reliability are resolved in a thorough and timely manner.

The EMS had an availability of 99.94% for 2007. It was down for a total of six hours during five events.

SPP quality assurance guidelines for computer and software changes require implementation in a test environment prior to installation on the production system. The change process begins on the development system. After the development process is completed, the software is moved to the test system before final implementation on the production server. The process owner approves each step before continuing. The reliability coordinator is notified prior to installation on the production servers. While the operators confirmed that EMS staff may notify the operators prior to making changes in the system, sometimes a follow-up notification is not made immediately prior to the change and the operators are caught off guard.

The computer model of the electrical system is updated at the end of each month, at a minimum, to correspond to the timing of market updates. Additional updates are made for significant electrical system changes. SPP collects changes from the transmission owners in its area and requests changes from neighboring reliability coordinators.

3.3 Computer and Communication Systems Support

System operators must be provided with effective and timely computer and communication systems support at both the primary and the backup control facilities. (Infrastructure discussion is redacted from public report - see Appendix 1.)

SPP has on-site staff during business hours and around-the-clock on-call support for the computer equipment, the applications, and communication systems. SPP uses a staff of six qualified maintenance personnel to provide EMS and communications support to the reliability

coordinators with three on call at all times. The on call staff carries mobile communications equipment so that the operators call the same phone numbers anytime assistance is needed. The on-call staff is assisted by additional staff with specific application expertise.

The operators interviewed were satisfied with the support. Some telecommunications issues remain unresolved, such as a telephone that does not roll over to the next phone number at the same desk. It rolls over to a phone at a different desk, which makes it difficult for the reliability coordinator to answer. This issue has remained unresolved for an extended period.

4. Fundamentals of Operational Planning

Operational planning provides the technical information and support necessary for safe, reliable system operation.

SPP operational planning starts with the regional seasonal planning process, which utilizes transmission modeling data provided by SPP member transmission planner and resource planner entities. SPP supplies these data to the NERC Multiregional Modeling Working Group (MMWG) model, which is used for the seasonal studies. Outage data are collected on the SPP OPS1 outage reporting system. SPP applies the outage data and seasonal load forecasts to the MMWG model to develop the seasonal plan. The solution is run through a sensitivity analysis.

The results of the seasonal studies are posted on the secure area of SPP Web site for members to review and use and are made available to the reliability coordinators. Study results are not directly presented to the reliability coordinators by the planners, but any operating problem areas found in the seasonal studies are reviewed with the reliability coordinators. In cooperation with member transmission operators, SPP develops a set of special operating procedures or post-contingency procedures as necessary to maintain system security.

As part of the planning process, SPP developed a set of procedures for bringing the identified IROLs back within limits if those limits are exceeded. The procedures include options and generator shift factors for relieving the IROL. These procedures are in a binder available to the reliability coordinators. According to the planning engineers, SPP did not have any areas where meeting scheduled voltages was a problem. The operators mentioned that SPP has low voltage in northwest Arkansas.

SPP collects the outage schedule, generation forecast, weather forecast, and load forecast for the current day, next day, and next seven days. Each day, the operational engineers run studies for the peak conditions for the next seven days using the expected load and system configuration. SPP evaluates the outages and confirms whether or not they may proceed as scheduled. Requests for transmission outages must be made seven days in advance. Transmission outages can be denied but generation outages cannot. SPP runs first contingency studies for all requested outages as close to the requested outage time as possible. The planning engineers normally run the planning studies on off-line models but can capture current, past (saved), or projected conditions on the EMS for use on the on-line contingency analysis.

The daily operations planning report developed from the studies identifies any potential problem areas. The operators are notified and remedial actions procedures are developed as necessary.

Active TLRs and any emergency energy actions are noted with the plans. The report includes all transmission and generator outages, expected load, and the weather forecast.

SPP issues a daily report evaluating its reliability coordination area based on the above study. The report includes projected load by balancing area, generation and transmission outages, and current system conditions affecting reliability.

Each shift has a shift engineer to perform the studies and assist the reliability coordinator with special studies as needed. The operational engineer also helps in special tasks, such as setting up flowgates in the IDC. The evaluation team commends SPP, the operational engineers, and the reliability coordinators for developing this close relationship to aid in the coordination of the resolution of operating issues.

The planning engineers compare the results of the EMS and off-line planning models to uncover and resolve any issues between the two. The models are updated monthly with input from the transmission owners and neighboring reliability coordinators. SPP shares the model of its system with other reliability coordinators and others needing it.

SPP has developed planning criteria for applicable voltage limits for contingency (n-1) conditions, which are used to measure reliability performance in planning studies. The evaluation team is concerned that these same criteria are used to evaluate system voltage in the real-time environment. The planning criteria are used because the system model is limited in its evaluation of post-contingency voltage analysis. The governor response of the units is not accurately modeled. The evaluation team believes SPP needs to develop reactive reserve criteria for real-time operations that could be used in the EMS real-time contingency analysis.

The evaluation team expressed concern over the length of time to develop a flowgate (See Section 2.3.) The SPP real-time contingency analysis did not recognize the limit in part because it was the result of a split substation bus. This is a limit of the line and branch model SPP uses in the EMS contingency analysis application. The evaluation team recommends modeling the system using breaker-to-breaker detail for contingency modeling in the real-time contingency model to increase the accuracy of certain events affected by the opening of specific breakers. SPP does not collect all the outage information to implement changing to a breaker-to-breaker model. The evaluation team also recommends that SPP modify the OPS1 outage reporting system to include breaker outages to support the information needs of breaker-to-breaker system modeling.

The limits associated with the nuclear plant are included in the operational planning studies.

System events are studied by retrieving data from the historical tools available to the planning staff. Significant frequency excursions are reviewed to determine the effect on the SPP system. The planners have a lessons-learned discussion of the event reviews.

The planning model is verified by comparing the summer-peak results to the conditions predicted by the seasonal studies. The EMS model is compared to the planning model monthly to verify its accuracy.

5. Fundamentals of Training

5.1 General

Training in both specific job-related skills and broader technical fundamentals is used to provide highly skilled, knowledgeable personnel for safe, reliable operations, and to achieve performance improvement.

SPP has a comprehensive training program and is a NERC-approved continuing education provider. SPP training includes both initial training for newly acquired staff and ongoing training for existing staff. SPP's training program utilizes the formalized ADDIE (analyze, develop, design, implement, and evaluate) approach. It also incorporates a 360-degree approach in the needs assessment process using problem-centered learning interviews, analysis of key decision-making approaches during simulations, and critical decision-making debriefings.

SPP's 360 training includes a needs assessment and job task analysis to determine future training. Training includes classroom instruction along with assessments of its effectiveness, extensive use of simulator training to apply the classroom material, and follow-up with managers to confirm that the training event met the stated objectives.

SPP has been increasing its emphasis on training in the past few years with a continued focus on improvement in the program. It has added a dispatcher training simulator and increased the number of both courses offered and training hours required for each operator.

SPP uses a combination of a four-week classroom curriculum, job shadowing with an experienced operator, and completion of a job task checklist. The trainee has no set time to complete the training program. SPP does not rotate positions but has a training progression where the trainees work all the desks before they become qualified as reliability coordinators.

The SPP schedule is a six-shift rotation that includes one shift for relief and one for training. SPP reduced the rotation to five shifts in 2007 due to being without two reliability coordinators. SPP is now up to a full reliability staff and has returned to the six-shift rotation. Both the training staff and operators interviewed indicated that obtaining the SPP-required training was difficult during the reduced-shift period. The evaluation team finds that the current six-shift schedule allows adequate time for training.

SPP requires a minimum of 90 NERC-approved continuing education hours for each reliability coordinator each year, which is more than the minimum number of hours required for recertification. SPP tracks the required and completed training for each of its staff. The evaluation team reviewed training records for several individuals and found the SPP tracking to be adequate for ensuring training requirements are being met. The records indicate the total hours of training, total NERC-approved continuing education hours, emergency training hours, hours required and achieved for recertification, the recertification date, and additional regional training requirements. A review of the training records verified that the certified staff is exceeding the required 32 hours of emergency training. Other ongoing training includes classroom instruction, individual training using computer resources or a training simulator, and various drills, such as evacuation to the backup control center.

SPP uses the dispatcher training simulator extensively in its training program and is increasing its use as it develops more scenarios of operating situations. While the operators were pleased with simulator training, they stated that additional training, especially on potential operating situations, would be beneficial. The evaluation team supports expanding the training to include more lifelike situations in the continuing education for current qualified operators. The simulator exercises include training for making key decisions and problem-centered learning where the operators are exposed to operating scenarios and allowed to respond. After each training session, the SPP 360 training includes debriefing on the use and effectiveness of critical decision making tools. This provides lessons learned for future training and actual use in real-time system operation.

SPP conducts regional and subregional restoration drills for its member transmission operators and balancing authorities using the dispatcher training simulator. The drills are unique in that they are conducted from the members own control room locations through a virtual private network and teleconference with the reliability coordinator utilizing the SPP dispatcher training simulator. This allows the operators to train on their restoration plans and coordination with other entities in a training environment. This unique training not only offers the opportunity to all regional members to interact with the reliability coordinator and interconnected companies participating in the drill, but it also offers the use of a simulator to those companies who do not have access to one.

During the restoration training, the individual restoration plans are tested on the simulator. Problems with individual plans or coordination issues between plans are uncovered and resolved.

This process also allows individual transmission operators to confirm the modeling for their systems on the SPP dispatcher training simulator and the SPP energy management system since both the simulator and EMS use the same model. The team believes the remote access to the SPP dispatcher simulator in a wide-area, comprehensive drill makes this a potential example of excellence.

The SPP trainers are required to have a minimum of three years of operational experience with training experience preferred. The trainers participate in train-the-trainer workshops and attend a professional development program every three years. SPP is also involved in NERC training initiatives.

5.2 Human Performance

Personnel select and apply appropriate human error prevention techniques commensurate with the importance of assigned tasks to minimize the frequency and consequences of events.

SPP does not have any specific human error prevention training. The dispatcher training simulator is reducing human error by providing the operators an opportunity to respond and evaluate those responses to lifelike scenarios. Lessons learned could be reviewed and added to the simulator training scenarios. The SPP 360-degree (full cycle) approach to training assessment facilitates reviews of operator actions and supervisor input to various operating issues. This process helps reduce human errors by evaluating training objectives and company procedures from individual viewpoints.

APPENDIX 1: Critical Infrastructure

The following discussion will be presented under private letter to the evaluated entity only and will not be included within the public version of the report.

APPENDIX 2: Entity Participants

The following will be presented under private letter to the evaluated entity only and will not be included within the public version of the report.

APPENDIX 3: Documents Reviewed

The following will be presented under private letter to the evaluated entity only and will not be included within the public version of the report.

Southwest Power Pool

Oversight Committee

Future Meeting Dates & Locations

2008

April 2	Washington D.C.
June 25	Chicago
September 25	Hilton Head, SC
December 8	Dallas