UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

FEB - 7 2002

Mr. C. L. Terry, Senior Vice President
& Principal Nuclear Officer
TXU Generation Management Company LCC,
Managing General Partner for TXU Generation
Company LP
ATTN: Regulatory Affairs Department
P.O. Box 1002
Glen Rose, Texas 76043

SUBJECT: SUMMARY OF MEETING REGARDING UPDATE ON ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC. (ERCOT) STRUCTURE AND OPERATIONS AND MAINTAINING TEXAS NUCLEAR PLANT DESIGN BASES

Dear Mr. Terry:

This refers to the meeting conducted in the Region IV office on January 24, 2002. This meeting was held to discuss changes to ERCOT's structure and operations to support the Texas nuclear plants' design bases given the current deregulated electrical industry environment in Texas.

The meeting was informative in providing insights into the relationships, including agreements and communications protocols, that exist between the qualified scheduling entities, the power generating companies, the load serving entities, the transmission and distribution service providers, and ERCOT, the grid manager, that exist to ensure that the design bases are maintained for both Comanche Peak Steam Electric Station and South Texas Project.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/ADAMS.html (the Public Electronic Reading Room).

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

David N. Graves, Chief
Project Branch A
Division of Reactor Projects

Enclosures:
1. Attendance List
2. Licensee Presentation

cc:
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Regulatory Affairs Manager
TXU Generation Company LP
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ENCLOSURE 1

MEETING ATTENDANCE

LICENSEE/FACILITY	ERCOT/TXU/STPNOC/RELIANT ENERGY
DATE/TIME	January 24, 2002 1:30 P.M.
SUBJECT	Update on Electric Reliability Council of Texas, Inc. (ERCOT) Structure and Operations, and Maintaining Texas Nuclear Plant Design Bases

NAME (PLEASE PRINT)	ORGANIZATION	TITLE
STEVE ELLIS	TXU COMANCHE PEAK	OPERATIONS MANAGER
DAVID RENCURREL	STPNOC	OPERATIONS MANAGER
W. E. MOOKHOEK	STPNOC	LICENSING
Lee Westbrook	ONCOR	Grid Planning Manager
Ellis Rankin	ONCOR	Grid Operations Manager
TOM PETERSON	TXU ENERGY TRADING QSE	MGR, QSE & Dispatch Operations
JEFF LAMARCA	TXU COMANCHE PEAK	MGR SYSTEM ENGINEERING
EVANS HEACOCK	STPNOC	Design Basis Engineer
IJAZ AHMAD	@ TXU CPSES.	Design Basis Engineer.
Martin Ryan	Reliant Energy	Manager Real Time Generation Control
PAUL ROCHA	RELIANT ENERGY	MANAGER, TRANSMISSION PLANNING
JOHN JONTE	RELIANT ENERGY	MANAGER, REAL TIME OPNS TDSP
SAM JONES	ERCOT	Chief Operating Officer
J J KELLEY JR	CPES NUCLEAR	Vice President
Mike Riggs	CPSES Reg Affairs	TXU

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NAME (PLEASE PRINT)	ORGANIZATION	TITLE
JERRY ZEMANEK	ONCOR	REGION MGR TRANS
Vincent Meiron	TXU	SWITCHYARD Coordinator
STEVE SMITH	TXU	SMARTERM III MAINT MGR
PAUL SUMMERLIN	ONCOR	GLEN ROSE TRANSMISSION AREA
SAM FRANCIS	ONCOR	System Protection
Todd Evans	TXU	Modification Manager
JAMES MELFI	NRC	PROJECT ENGINEER
Linda Smith	NRC	Branch Chief
GREG PICK	NRC	Senior Project Engineer
ROSS OWEN	ONCOR	GRID Operations Supt.
DON WOODLAW	TXU /STARS	Docket Licensing Manager
William Johnson	NRC	Chief, Project Branch B
John Mateychick	NRC	Reactor Inspector

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NAME (PLEASE PRINT)	ORGANIZATION	TITLE
Elmo Collins	NRC	Dep Director, DRP RIV
Ellis Marshoff	NRC	Regional Administrator RIV
Karla Smith	NRC	Regional Counsel
David Graves	NRC	Acting Chief, Proj. Br A
William Maier	NRC	Regional State Liaison Off.

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NAME (PLEASE PRINT)	ORGANIZATION	TITLE
STEVE MYERS	ERCOT	Manager of System Operations
Roger D. Walker	TXU	Regulatory Affairs Manager
WAYNE KEMPER	Reliant Energy HLP	Supervising Engineer Real Time Operation - TDSP
Wayne Morter	Austin Energy	Manager - Electric Operations
MO SHING CHEN	UNIV. OF TEXAS at ARLINGTON	PROFESSOR
Jim Byrd	ONCOR	VP Grid Management

ENCLOSURE 2

INTRODUCTION

J.J. Kelley, Jr.

Vice President Nuclear Engineering & Support

TXU Generation Company LP

and

Member of the STP Nuclear Safety Review Board

Update on ERCOT Structure and Operations, and Maintaining Texas Nuclear Plant Design Bases

INTRODUCTION

Presentations By ERCOT,
CPSES and STP,
with Support from their TDSP and QSE

January 24, 2002

INTRODUCTION

- Purpose of Meeting
  - Overview of the deregulated Texas electric market structure
  - How the design basis of Texas nuclear generating plants are maintained in a deregulated market
  - How voltage conditions are monitored
  - Actions on degraded voltage conditions
  - Continuing communications

INTRODUCTION

- Nuclear Plant Design Requirements
  - Evans Heacock, STP Design Engineering
  - Ijaz Ahmad, CPSES Design Engineering

- Texas Grid Reliability
  - Sam Jones, ERCOT Chief Operating Officer/Executive VP

INTRODUCTION

- Transmission Control and Planning
  - John Jonte, Reliant Energy - Division Manager of Real Time Operations

- Licensee Perspective
  - Dave Rencurrel, STP Plant Operations Manager
  - Steve Ellis, CPSES Plant Operations Manager

Offsite Power Requirements

Evans Heacock

STP Electrical Design Bases Engineer

Ijaz Ahmad

CPSES Electrical Design Bases Engineer

Offsite Power System

Bases

- 10CFR50 Appendix A, GDC-17
  - Capacity
  - Capability
  - Reliability

Offsite Power System

- ERCOT and TDSP Obligation
  - To support plant licensing requirements
  - To maintain plant voltage requirements
- TDSP Procedures Incorporate
  - Plant Acceptable Voltage Limits
  - Plant Voltage Planning Contingencies

TXU CPSES Offsite Power System

- Two Independent Sources
  - 345 kV and 138 kV Switchyards
- Acceptable Voltages
  - 345 kV System 340 to 361 kV
  - 138 kV System 135 to 144 kV
- System Normal Frequency 60 ± 0.1 Hz

STP Offsite Power System

- Two Independent Sources
- Acceptable Voltages
  - 345 kV System 347 to 369 kV
- System Normal Frequency 60 ± 0.1 Hz

Offsite Power System

- Offsite Power Reliability
  - Preferred source available normally
  - Automatic transfer to other source
  - Offsite sources highly Reliable
  - Deregulation does not reduce reliability

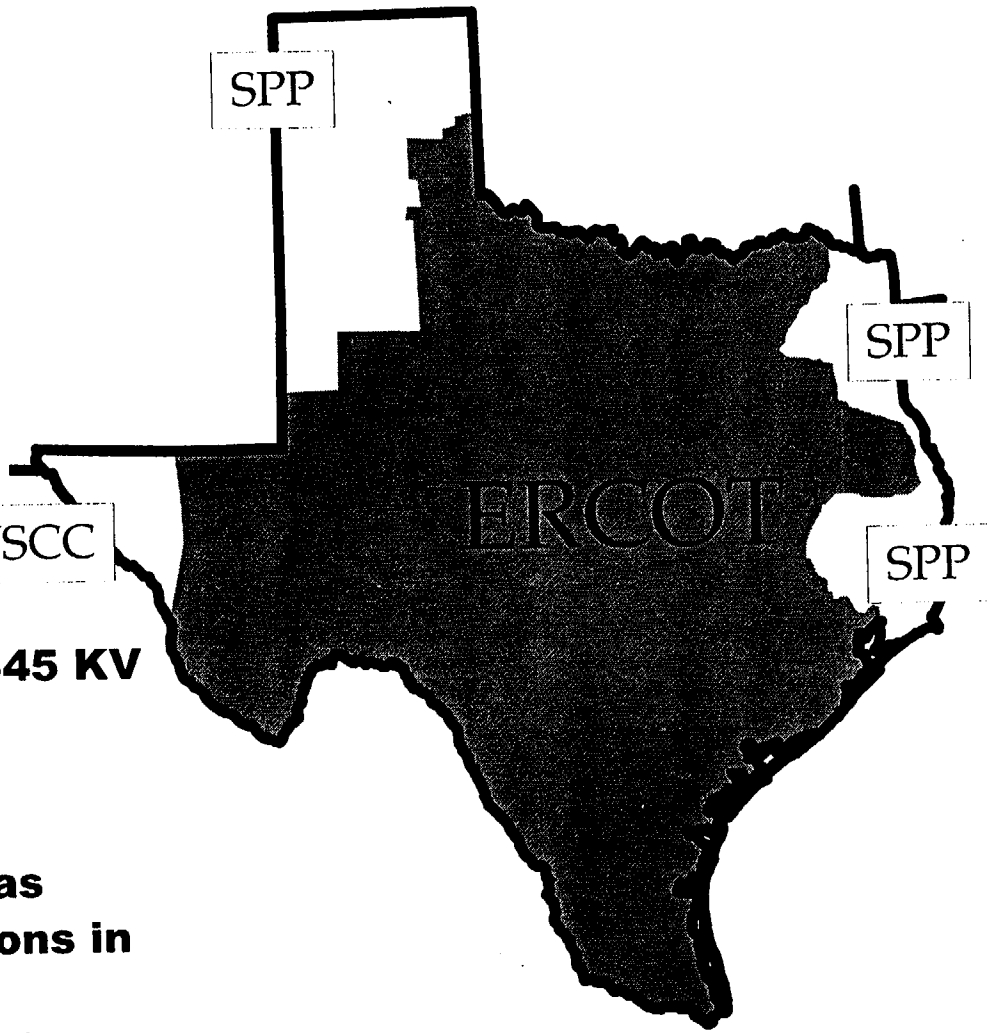
Wholesale Market Operations

Sam Jones

ERCOT Chief Operating Officer/Executive VP

ERCOT
THE TEXAS CONNECTION

The ERCOT Interconnection



- **75,479 MW of Generation**
- **55,285 MW Peak in 2001**
- **57,644 MW Peak in 2000**
- **37,000 miles transmission, 7,500 345 KV**
- **Intrastate Interconnection**
- **2 HVDC Ties (820 MW) to Eastern Interconnect (SPP)**
- **Provides Electricity to 85% of Texas**
- **One of Four Electric Interconnections in North America**
- **Texas PUC has Primary Jurisdiction**

ERCOT
THE TEXAS CONNECTION

ERCOT Control Center

- Two duplicate control centers
- Each control center with redundant systems
- 40 miles apart
- Staffed 24x7
- Capable of operating without off site power
- One will be hardened facility (Summer 2002)
- Redundant communication paths

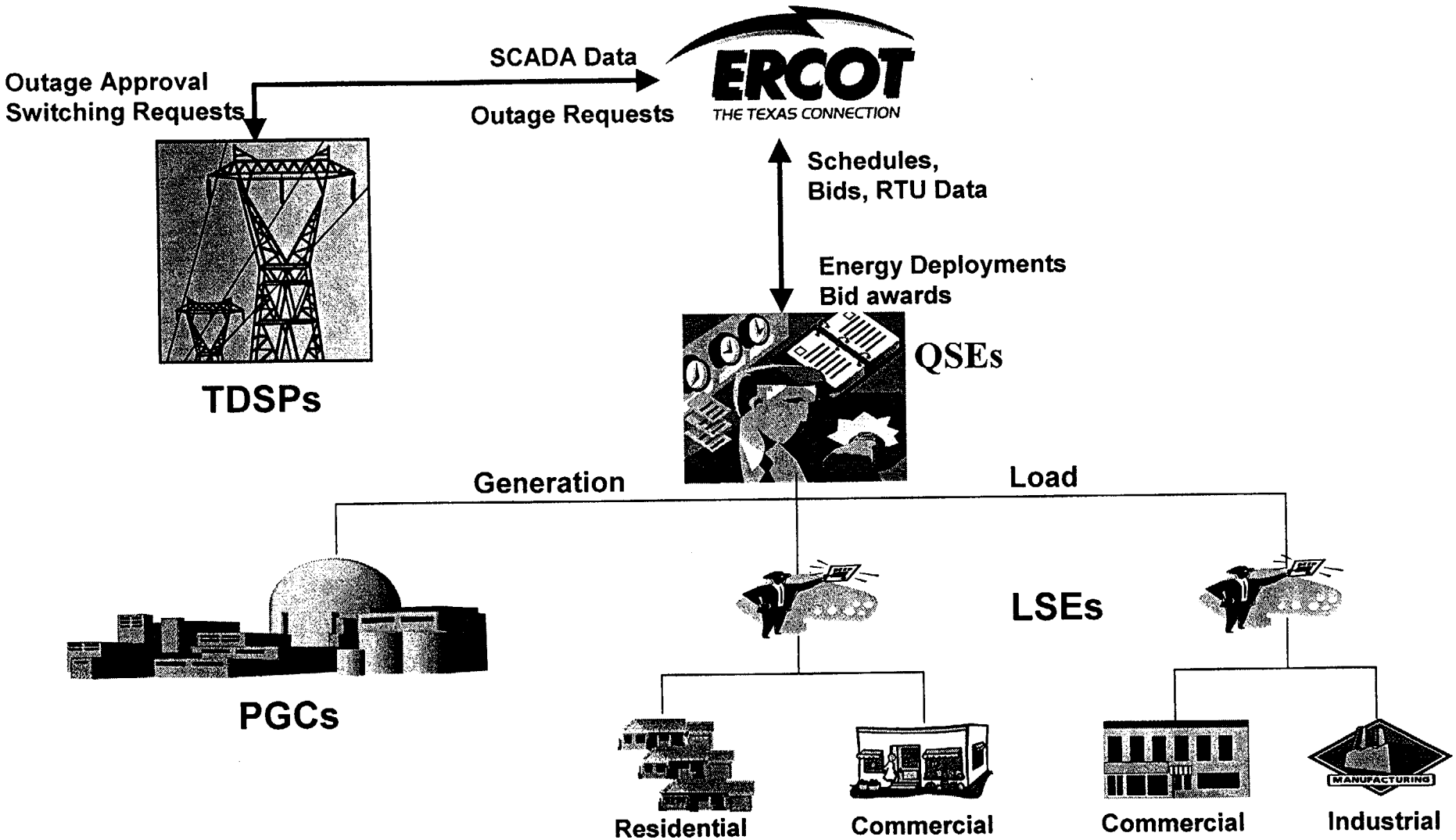
ERCOT
THE TEXAS CONNECTION

ERCOT Entities

- Qualified Scheduling Entities (QSEs) – represent PGCs and LSEs to ERCOT; similar to former Control Areas
- Power Generating Companies (PGCs) – entities that own generation assets
- Load Serving Entities (LSE) – Entities that serve retail load. Include Competitive Retailers (CRs) and Non-Opt In Entities (NOIEs)
- Transmission and Distribution Service Providers (TDSPs) – Own and operate transmission and/or distribution systems; essentially same regulated companies as before

- **All the above have signed agreements with ERCOT to comply with applicable Protocols and Operating Guides**

ERCOT Market



ERCOT
THE TEXAS CONNECTION

Elements of Meeting Electricity Requirements

- Base (bilateral) Energy Schedules
- Balancing Energy
- Ancillary Services (capacity that can provide energy)

ERCOT Operations
Communication with QSEs

- **Electronic**
  - Balancing deployment instructions (portfolio and unit specific) every 15 minutes – From ERCOT
  - Ancillary service bid awards – From ERCOT
  - Regulation Ancillary Service signals every 4 seconds – From ERCOT
  - Base Energy Schedules – From QSEs
  - Resource Plans – From QSEs
  - Balancing Energy and Ancillary Service Bids – From QSEs
  - Real time generation data – From QSEs
- **Telephone**
  - Verbal dispatch instructions – From ERCOT
  - Hot Lines to TDSP and QSE for unusual operating situations - From ERCOT
  - Miscellaneous information – QSEs and ERCOT

ERCOT Operations Communication with TDSPs

- **Electronic**
  - SCADA data every 10 seconds - From TDSPs
  - Transmission facility Outage Requests – From TDSPs
  - Outage Approval/Denial – From ERCOT

- **Telephone**
  - Verbal instructions – From ERCOT
  - Hot Line for unusual operating situations - From ERCOT
  - Miscellaneous information – TDSPs and ERCOT

ERCOT
THE TEXAS CONNECTION

Transmission Planning

- ERCOT works with Regional groups of TDSPs to determine future transmission needs

- ERCOT evaluates all Generation Interconnection Requests for new generation to determine what new construction and Special Protection Schemes are needed

- ERCOT has developed voltage and reactive standards and operating procedures for maintaining appropriate voltage profiles, including nuclear plant requirements

ERCOT
THE TEXAS CONNECTION

Black Start Plans

- Black Start plans are being revised with TDSPs to replace those in effect prior to deregulation
- Black Start resources have been selected and tested to verify compliance with requirements
- Nuclear facilities continue to be considered critical loads in the plans

Communications

John Jonte

Reliant Energy, Division Manager of Real Time

Operations

Real Time Communications Between Nuclear Plants and Transmission Operators

- **Voltage Monitoring and Control**

  Normal voltage communications are routed through the QSE. If real time voltage moves outside prescribed limits, Plant Control Room is notified by the Transmission Operator.

- **Forced Outages**

  The Plant Control Room is notified of transmission outages that relay out or that are forced out because of potential failure of the equipment and danger to personnel.

- **Implementing Planned Outages**

  The Plant Control Room is notified of switching activities in the yard before the switching commences.

Real Time Communications
Cont'd

- **Emergency and Reliability Communication Path**

  Various communications paths are available for communications between Plant Operators and the Transmission Operators. Critical unit status changes such as "Mid-Loop" and other unit information are communicated this way.

- **Real Time Alarming**

  Transmission voltage alarm limits are set more conservatively than nuclear plant requirements. TDSP, QSE, and ERCOT Operators take appropriate actions to prevent voltage levels from going outside plant design limits.

Short Term Planning

- **Planned Outage Scheduling and Execution of Switching**

1. Requesting party notifies TDSP of planned outage. TDSP performs studies and seeks concurrence with plant, if affected. If there is an operational conflict with the planned switching, the planned switching may be rescheduled.

2. TDSP submits requests to ERCOT and ERCOT perform studies of Planned Outages that may occur over the next several days. If contingency or voltage violations show up, the Planned Outage switching will not be approved.

3. Transmission Operators coordinate and control switching activities so that switching is done safely according to plan.

Long Term Planning

Switchyard Committee

- **Both plants have committees which meet periodically to discuss long-range needs of the switchyard based on studies, equipment problems, and upgrades.**

Transmission Planning

- **The TDSPs for both plants perform studies and take appropriate actions to ensure that substation fault duty, voltage profiles, transmission line capacity, system stability, and other components of the system are reliable and secure.**

Licensee Perspective

David Rencurrel

STP Operations Manager

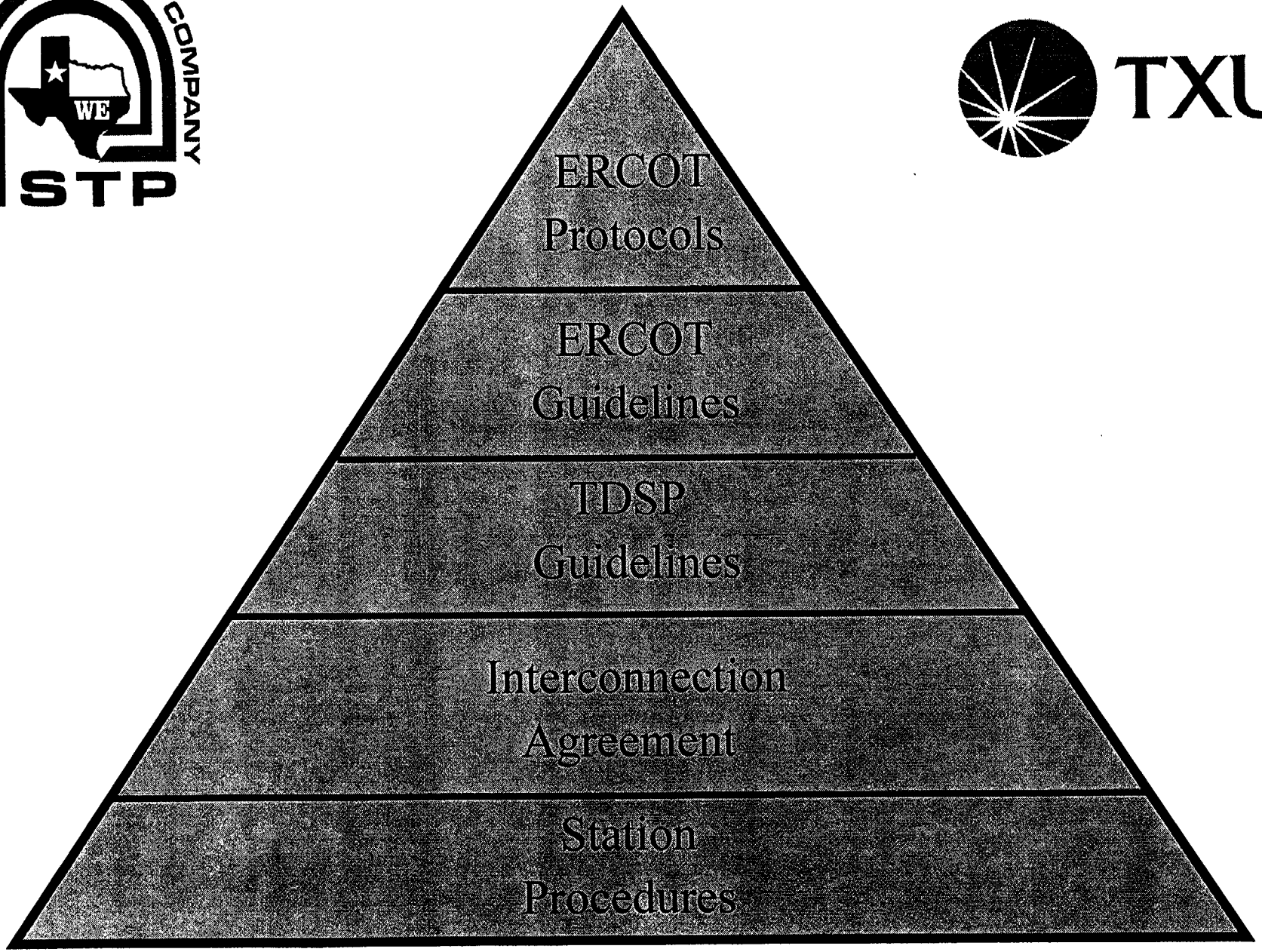
Steve Ellis

CPSES Operations Manager

Licensee Perspective

- Our Off-site Power Sources are RELIABLE
  - ERCOT, TDSP, QSE understand our design requirements
    - Our requirements are in protocols and formal agreements
  - We will be notified of future grid changes or voltage studies
  - Plant notified by TDSP and/or QSE of abnormal voltage conditions

Hierarchy of Grid Procedures



Licensee Perspective

- Control room staff will respond to notifications of off-normal voltage
  - control room indications will display real condition
  - procedures are in place to direct operator action if telephone notification is received for abnormal voltage condition
  - operators are trained on abnormal voltage conditions
  - risk management tools are applied to grid activities that affect the switchyard

Licensee Perspective

- All parties will continue to communicate
  - periodic voltage studies
  - switchyard committee
  - formal agreements
  - periodic meeting of nuclear generators, TDSPs, QSEs, and ERCOT

CONCLUSIONS

Electric Utility De-Regulation

- CPSES and STP are Operating within their Design Basis with De-Regulation
- ERCOT is Effectively Managing the Electric Grid - Highly Reliable Service, Knowledgeable on Nuclear Plant Issues, and Can Accommodate Future Changes
- Communications Protocols are in Place to Deal with Short Term and Long Term Issues

QUESTIONS?

Electronic distribution from ADAMS by RIV:
Regional Administrator **(EWM)**
DRP Director **(KEB)**
DRS Director **(ATH)**
Senior Resident Inspector **(DBA)**
Branch Chief, DRP/A **(DNG)**
Senior Project Engineer, DRP/A **(JMK)**
Staff Chief, DRP/TSS **(PHH)**
RITS Coordinator **(NBH)**

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