Texas Regional Entity Information Technology Update

Advisory Committee

April 19, 2010

Status of IT Separation from ERCOT

- **Define organizational structure - complete**

- **Define personnel requirements – under development**

- **Define Texas RE's future IT environment – complete**

- **Define on-going ERCOT information needs – complete**

- **Select IT vendors - complete**

- **Select HR, Payroll, Accounting applications – complete**

- **Procure hardware, software and services – on-going**

- **Port data (email, files) – in planning**

Texas RE IT Organizational Structure

- **One director for IT and CIP**

  - Ability for CIP and IT staff to provide mutual support

  - CIP staff will provide CIP compliance expertise for Texas RE IT as well as Compliance

  - IT may support CIP audits as subject matter experts

- **Small in-house IT staff**

  - Most maintenance, services and new development requiring in-depth skill will be outsourced

Current Texas RE IT Employees

- **Victor Barry – Director**

- **2 other existing employees – 1 Manager and 1 SharePoint Developer/Portal support staff**

- **Separation Project Manager – contractor**

- **2 additional staff openings – server, virtual operating system, storage, database, applications support, desktop support, projects**

- **Summer Intern – offer made**

TEXAS REGIONAL ENTITY

Texas RE IT Staffing

- **Day-to-day IT operations will be outsourced**

- **Texas RE IT will monitor IT systems performance**

- **Texas RE IT staff will monitor contractor Service Level Agreement (SLA) performance**

- **Over time, Texas RE may chose to bring some services back in-house as expertise grows and procedures mature**

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Texas RE IT Environment

- **Top Priority = Reliability**
  - No single point of failure for infrastructure, support business continuity
  - Dual path Wide Area Network (WAN) backbone between sites and back up Internet access
  - Redundant power supplies and network connections on servers
  - Primary data center – Dallas
    - 24x7 security & support
    - On-site generators, dual utility feeds, cooling
  - Back up data/application site – Austin
    - 24x7 security & support
    - On-site generators, dual utility feeds, cooling

Texas RE's IT Environment (cont.)

- **Performance**
  - Ability to add processors and memory to servers should more performance be needed
  - Virtual server architecture for flexibility and redundancy (ability to run multiple applications on a server and to shift applications on server failure)
  - Network speeds can be increased on-the-fly ("burstable") and can be permanently adjusted to meet business needs (up or down)
  - Network switches can be expanded another 40% through card additions
  - Voice-over-Internet (IP) phone system supports modular expansion and is fully featured with low cost of ownership

Texas RE's IT Environment (cont.)

- **Security**
  - Double firewall protection against unauthorized access to computers, servers and network at all three sites
  - Virus protection on all servers and laptops
  - Intrusion detection and alarming
  - Encrypted hard drives on all laptops
  - Electronic keys for all laptops/encrypted USB drives
  - Dual speed 3G/4G wireless modems for secure remote communications and will also support disaster recovery
  - Laptop drives automatically backed up to networked storage

Texas RE's Mobile Workforce

- **Mobile workforce**
  - Support high level of travel – audits & meetings
    - Portability
    - Remote access
    - Security
    - Remote team coordination
    - Collection and transportation of Critical Energy Infrastructure Information (CEII) data

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ERCOT Transition

- **Define needed information & system access from ERCOT ISO post separation - complete**

    - (listed below)

    - ERCOT ISO has assigned a project manager

- **Implement ERCOT limited read-only interfaces – on-going**

    - ERCOT Market Management System (EMMS) – Zonal and Nodal

    - Enterprise Information Services (EIS) Information Services Master (ISM) Database – Historical Market and Operations Data

    - Voice Logger (operator phone records)

Texas RE Applications

- **Define software needs - complete**

  - New laptop software (standard office software, email, antivirus, job-specific software)

  - New remote network management software

  - Existing applications currently outsourced:

  - New server software (servers and databases, backup, electronic and physical access management)

    - Texas RE Portal

    - Texas RE reporting system to automate reports and data flow to and from NERC

    - Regional reliability standards voting and commenting system

    - Website content management system

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Accounting, Payroll, HRIS Software

- **Accounting – selected**

- **Payroll – selected**

- **HR Information Systems – selected**

- **Expense Reimbursement - selected**

TEXAS REGIONAL ENTITY

Item 3b - IT Separation Update
April 19, 2010

Challenges

- **Many new procedures needed**
- **Mid-May IT separation goal with full independent operation required by June 1 is tight, but still on track**
- **Dependent on vendors to deliver, stage, install and test**
- **Dependent on ERCOT ISO for interfaces and data access**
- **Minimal Texas RE IT staff**

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