### Table of Contents

**Grid Operation**

- Peak Demand .................................................................................................................. 3
- OOMC and RMR Activity .................................................................................................. 4
- Transmission Congestion Management ............................................................................. 6
  - Local Congestion ........................................................................................................... 7
  - CSC Congestion ........................................................................................................... 8
- Notable Events .................................................................................................................. 9

**Market Operation** .......................................................................................................... 11

- Ancillary Services ............................................................................................................. 11
- Balancing Energy ............................................................................................................. 15
  - Average Balancing Energy Deployed ........................................................................... 15
  - % of Total ERCOT Energy Requirement ........................................................................ 18
  - Average MCPE ............................................................................................................... 20
  - Average Shadow Price ................................................................................................. 23

**Cost Summary** ............................................................................................................. 25

- Ancillary Service Capacity Cost ..................................................................................... 23
- Ancillary Service Deployment Cost ................................................................................. 27
- OOMC Cost ...................................................................................................................... 28
- Local Congestion Cost ................................................................................................... 30
- RMR Cost ......................................................................................................................... 30
- Cost Summary .................................................................................................................. 31
Grid Operation
Peak Demand for the Month: 3/18/2004 19:30 34202 MW

Daily Peak Demand
March 2004

Monthly Peak Demand
March 2003 - March 2004

Note: Peak Demand is Peak Interval Demand
Trend of Temperature in Five Congestion Management Zones

- Houston
- North
- South
- West
- NorthEast

3/1 to 3/31
OOMC and RMR Activity

Relative Activity Capacity Purchases - OOMC & RMR
March 2004

Note: 1 Unit-Day = 1 unit procured during any time period within one trade day.
## Local Congestion Management

### Total Number of Days of Local Congestion Management

<table>
<thead>
<tr>
<th>Contingency</th>
<th>Congestion Element</th>
<th>Number of Days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tenaska TMPP - Concord 138kv</td>
<td>Lilian - Grandview TMPP 138kv</td>
<td>25</td>
</tr>
<tr>
<td>Clear Springs-Marion-Zorn</td>
<td>Cibolo-McQueeney</td>
<td>15</td>
</tr>
<tr>
<td>N Edin-Rio Hondo</td>
<td>Weslaco-N Weslaco</td>
<td>6</td>
</tr>
<tr>
<td>STP - WhitePoint 345 KV</td>
<td>Blessing - Lolita 138kv</td>
<td>5</td>
</tr>
<tr>
<td>N McAllen-N Edin</td>
<td>North Edinburg - Moore Field</td>
<td>5</td>
</tr>
<tr>
<td>N McAllen-N Edin</td>
<td>Polk - Hall Acres</td>
<td>5</td>
</tr>
<tr>
<td>Midland-Odessa</td>
<td>Odessa-Big Three Tap</td>
<td>5</td>
</tr>
<tr>
<td>Big Brown - Venus 345 kv</td>
<td>Cedar Hill - WaterMill 345kv</td>
<td>5</td>
</tr>
<tr>
<td>Greens Bayou – King Double 345 kV</td>
<td>Greens Bayou 345/138</td>
<td>5</td>
</tr>
<tr>
<td>STP - WhitePoint 345 KV</td>
<td>Blessing - STP 138kv</td>
<td>3</td>
</tr>
<tr>
<td>Farmersville - Monticello 345kv</td>
<td>Paris Switch - Valley Switch 345kv</td>
<td>3</td>
</tr>
<tr>
<td>Farmersville - Monticello 345kv</td>
<td>Monticello - Paris Switch 345kv</td>
<td>3</td>
</tr>
<tr>
<td>Bates - Garza 138kv</td>
<td>Bates 138/69 KV</td>
<td>3</td>
</tr>
<tr>
<td>Asherton-Eagle Pass</td>
<td>Uvalde-Asphalt Mines</td>
<td>3</td>
</tr>
<tr>
<td>N Edin-Rio Hondo</td>
<td>Duke-N Edin</td>
<td>2</td>
</tr>
<tr>
<td>Ingleside Dupont Switch - Oxygen Chem Gen 138kv</td>
<td>DU_DUPP1 138kv</td>
<td>2</td>
</tr>
<tr>
<td>Graham-Parker-Benbrook</td>
<td>Stephenville-Lingleville</td>
<td>2</td>
</tr>
<tr>
<td>Crane LCRA-Midkiff Sw</td>
<td>Crane TU-Humble</td>
<td>2</td>
</tr>
<tr>
<td>Abilene Mulberry - Oklaunion 345kv</td>
<td>Wichita Falls - Fisher Road 138kv</td>
<td>2</td>
</tr>
<tr>
<td>138kv line Ennis Sw to Desoto Sw</td>
<td>Desoto Sw to S. Ennis</td>
<td>2</td>
</tr>
<tr>
<td>Abilene Elm Creek - Abilene Mulberry Creek 138kv</td>
<td>Abilene Elm Creek - Abilene Northwest 138kv</td>
<td>2</td>
</tr>
</tbody>
</table>

Note: 1 day = units procured during any time period within one trade day. Total numbers of 1 day or less of local congestion management are not shown in the graph. Occurrences of 1 day or less are not listed in table but are totaled in graph.
CSC Congestion Management

Instances of CSC congestion

Number of intervals

Notable Events

New Procedures/ Forms/ Operations Bulletins

Controlling renewable resources in the McCamey area in accordance with PRR 397.

Clarification added to POB 70.

Manual processes used for phase 1 of PRR 425 implementation (outage approval process).

Clarification added to POB 70.

TCN#96 – Procedure for implementing TO provided dynamic ratings.

Security Alert Stage/ Threatcon/ Related issues

Security Threat Alert Yellow (Elevated) maintained through March.

EECP Occurrence

None.

Major Weather Related Power System Problems

Severe spring storms swept through West and North Texas the evening of March 4 causing the outage of several major transmission lines, some for several days. These outages required a significant level of congestion management.

Major system Voltage problems

None.

OCN, Advisory, Alert, Emergency Notice and Major Disturbances

3/04  13:00 – 23:00  
Weather Advisory for North and Central Texas

3/04  14:25 to 23:00  
Alert issued due to forced outage of Northeast-North CSC elements.

3/04  17:15 to 03/05 18:45  
Emergency Notice for transmission in Northeast Texas Due to multiple forced transmission outages

3/15  13:27  
Emergency Notification posted for the outage of the East DC tie.

3/16  15:30 to 24:00  

3/29  23:30-00:15  
Transmission Alert. Loss of Oklaunion-Mulberry Creek 345 kV overloads Wichita Falls-Fisher Road 138 kV.
**Significant Communication Problems**

- **302** 14:15 – 15:15 Held deployments, both SPD servers crashed.
- **3/03** 10:15 Fail over populated incorrect short-term load forecast values.
- **3/05** 01:30 Held interval
- **3/13** 19:02 Portal down for planned maintenance
- **3/14** 10:50 & 11:45 Portal down
- **3/15** 13:45-03:45 Deployments sent via phone due to Portal not sending them.
- **3/15** 13:45 Extended market to 14:00 due to problems with the MOI.
- **3/16** 21:45 Held interval, deployments were not sent.
- **3/23** 09:55 Planned site fail over
- **3/23** 09:55-10:05 MOI disabled
- **3/23** 09:55-10:08 POS disabled
- **3/23** 10:00-10:50 Portal disabled

**Major Computer System Problems/Fixes**

None

**Load Shed incidences**

None

**Update on New Generation**

- Deer Park Energy #4 185 MW Harris County
- Leon Creek CT1 57 MW Bexar County

**Max / Min Temperature**

- Max: 87.5°F FW
- Min: 37.2°F W

**New SPS & RAP’s**

None.

**Other**

None.
Market Operation

Ancillary Services
Average Hourly Procurement by Ancillary Service
March 2004

Average Hourly Procurement by Ancillary Service
March 2003 - March 2004
Balancing Energy
Average Balancing Energy Deployed
Balancing Energy

% of Total ERCOT Energy Requirement
Balancing Energy

Average MCPE
Balancing Energy

Average Shadow Price
Note: There is not a price for self-arranged Ancillary Services. MCPC is used to calculate the cost for self-arrangement.
Estimated OOMC Cost At Final Settlement
March 2004

- **Start-Up Payment (Total: $1.16 Million)**
- **Total OOMC Payment (Total: $3.60 Million)**

**Note:**
All OOMC’d units are paid Generic Start-Up Cost and Generic Operational Cost in Initial Settlement. The Start-Up payment for some units will be taken back in Final Settlement if those units did not have an actual startup.

OOMC Cost provided in this chart is an estimation because of the potential of disputes before Final Settlement. This chart will be updated after Final Settlement is completed.
Local Congestion Cost (Total: $8.60 Million)

- DN Payment for Aggregated Units for Both Manual and LBE Deployment
- UP Payment for Aggregated Units for Both Manual and LBE Deployment
- DN Payment for LBE Deployment without Market Solution
- UP Payment for LBE Deployment without Market Solution
- DN Payment for Manual OOME Deployment
- UP Payment for Manual OOME Deployment
- DN Payment for LBE Deployment with Market Solution
- UP Payment for LBE Deployment with Market Solution
Note:

1. DBES cost is a credit to system costs and therefore is shown as a negative number here to differentiate it from the other types of Reliability Costs.

2. BES deployment costs include two parts: the cost for Power Balance and the cost for CSC Congestion. Due to Relaxed Balanced Schedule, the cost paid for Power Balance covers both the difference between ERCOT load forecast and QSE's schedule and the difference between QSE's Relaxed scheduled load and the load it would schedule should RBS were not allowed. The cost for Power Balance is not further divided accordingly because currently we do not have a way to differentiate these two types of Power Balance costs.
Please contact Shuye Teng at 512-248-3998 or email at steng@ercot.com should you have any questions.