**Acronyms**

- Daily Peak Demand
- 13 Month Review of Peak Demand
- Trend of Temperature in Five Congestion Management Zones
- Relative Activity Capacity Purchases - OOMC & RMR
- Total Number of Days of Local Congestion Management
- Instances of CSC Congestion
- Notable Events

**Market Operation**

- **Ancillary Services**
  - Average Hourly Procurement by Ancillary Service
  - 13 Month Review of Average Hourly Procurement by Ancillary Service
  - Average MCPC by Ancillary Service
  - 13 Month Review of Average MCPC by Ancillary Service
  - Average Deployment by Ancillary Service
  - 13 Month Review of Average Deployment by Ancillary Service

- **Balancing Energy**
  - Average Balancing Energy Deployed
  - 13 Month Review of Average Balancing Energy Deployed
  - Average MCPE
  - 13 Month Review of Average MCPE
  - Average Deployment by Ancillary Service
  - Trend of Average Fuel Index

- **Energy Purchased Through ERCOT**
  - Total Daily Balancing Energy Scheduled for Purchase Through ERCOT (GWh)
  - Review of Total Balancing Energy Scheduled for Purchase Through ERCOT (GWh)
  - Average Balancing Energy Scheduled for Purchase Through ERCOT by Interval (MWh)

- **% of Total ERCOT Energy Requirement**
  - Average BES Deployed: as a Percentage of Total Energy Requirement
  - 13 Month Review of Average BES Deployed: as a Percentage of Total Energy Requirement

- **Average MCPE**
  - Average MCPE in Five Zones
  - Average MCPE at Each Interval for Five Zones
  - 13 Month Review of MCPE

- **Average Shadow Price**
  - Average Shadow Price
  - 13 Month Review of Average Shadow Price

**Cost Summary**

- Ancillary Service Capacity Cost
- 13 Month Review of Ancillary Service Capacity Cost
- Ancillary Service Deployment Cost
- 13 Month Review of Ancillary Service Deployment Cost
- OOMC Cost At Final
- 13 Month Review of OOMC Cost At Final Settlement and True Up
- RMR Cost (Initial Settlement)
- RMR Net Cost (Initial Settlement)
- Verified Actual RMR Cost
- Total Local Congestion Costs by Area
- Total Local Congestion Costs by Instruction Type (in Million $)
- Local Congestion Cost By Instruction Type by Day

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**Operations Monthly Report**

October 2005

Kent Saathoff, Director
ERCOT System Operations

Joel Mickey, Manager
Market Operations Support
Acronyms

AS    Ancillary Service
BES   Balancing Energy Service
DBES  Down Balancing Energy Service
DRS   Down Regulation Service
LBE   Local Balancing Energy
MCPC  Market Clearing Price for Capacity
MCPE  Market Clearing Price for Energy
NSRS  Non-Spinning Reserve Service
OOMC  Out of Merit Capacity
OOME  Out of Merit Energy
QSE   Qualified Scheduling Entity
RMR   Reliability Must Run
RPRS  Replacement Reserve Service
RRS   Responsive Reserve Service
UBES  Up Balancing Energy Service
URS   Up Regulation Service
Grid Operation

Daily Peak Demand

Peak Demand for the Month: 10/05/05 16:45  52186
13 Month Review of Peak Demand

Peak Demand is Peak Interval Demand

Relative Activity Capacity Purchases – OOMC & RMR

Note: 1 Unit-Day = 1 unit procured during any time period within one trade day.
### 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>Gibbons Creek - Bryan East - Greens Prairie</td>
<td>Texas A&amp;M - Darsby</td>
<td>20</td>
</tr>
<tr>
<td>Marion - Hill Country – Skyline</td>
<td>Schertz -Parkway</td>
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</tr>
<tr>
<td>Marion - Zorn &amp; Clear Spring</td>
<td>Zorn - Seguin</td>
<td>17</td>
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<tr>
<td>La Palma - Rio Hondo</td>
<td>Rio Hondo - Magic Valley</td>
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<tr>
<td>WHCCS - Rocky Creek/CPSES – DCSES</td>
<td>Concord transformer</td>
<td>9</td>
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<tr>
<td>Austrop transformer #1</td>
<td>Austrop transformer #2</td>
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<tr>
<td>Lytton Springs - Zorn/Austrop - Zorn</td>
<td>San Marcos - Canyon</td>
<td>4</td>
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<tr>
<td>Lytton Springs - Zorn/Austrop - Zorn</td>
<td>Zorn transformer #1</td>
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<tr>
<td>Ennis Switch - Desoto Switch</td>
<td>Sterrett - Waxahachie Pump</td>
<td>3</td>
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<tr>
<td>La Palma - Rio Hondo</td>
<td>South McAllen - Las Milpas</td>
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<tr>
<td>Morgan Creek – Eskota</td>
<td>Eskota transformer</td>
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<tr>
<td>Bowie - Patterson Street</td>
<td>Bowie transformer #1</td>
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<tr>
<td>Farmersville - Monticello SES</td>
<td>Allen Switch AXFMR 2</td>
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<tr>
<td>Jacksboro Sw- Willowcreek</td>
<td>Stephenville-Lingleville Tapp</td>
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<tr>
<td>Lytton Spring - Zorn/Austrop - Zorn</td>
<td>Canyon-Rohr</td>
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<tr>
<td>Sandow - Temple</td>
<td>Uvalde - Asphalt Mines</td>
<td>2</td>
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</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. Indicates congestion affected by outages.

### Instances of CSC Congestion

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Notable Events

New Procedures/ Forms/ Operations Bulletins
- 10/27/2005 Power Ops Bulletin 223 | T&S Desk-Voltage Issues and Contingency Analysis
- 10/10/2005 Power Ops Bulletin 222 | T&S Desk-Emergency Site Failover
- 10/10/2005 Power Ops Bulletin 220 | DA Desk-VDI Instruction
- 10/10/2005 Power Ops Bulletin 219 | FC Desk-Emergency Site Failover

Significant Communication Problems
- 10/5/2005 Held 14:00 interval. Two NSRS deployments for IE 14:15 caused problems in the MOI
- 10/6/2005 Held 04:00 interval. MOI would not accept the offset entry.

OCN, Advisory, Alert, Emergency Notice and Major Disturbances
- 10-01-05 23:00 OCN Capacity insufficiency for operating day Sunday 10/02/05 hours 16:00 - 18:00
- 10-02-05 01:00-17:00 Alert Capacity insufficiency for operating day Sunday 10/02/05 hours 15:00 - 18:00
- 10-02-05 13:50-15:30 Transmission Alert Post Contingency limit on Bates-North Edinburg
- 10-02-05 0:15-01:00 OCN Capacity insufficiency for operating day Sunday 10/02/05 hours 16-18. (Continuation from 10/01/05)
- 10-03-05 4:05-16:30 Alert Capacity insufficiency for operating day Monday 10/03/05 hours 15:00 -18:00
- 10-03-05 00-04:00 OCN Capacity insufficiency for operating day Monday 10/03/05 hours 15:00 -18:00
- 10-03-05 16:05-23:15 Transmission Alert Howard Lane Tap - McNeil LCRA
- 10-05-05 15:30-19:00 OCN Capacity insufficiency for hour 17:00
- 10-05-05 14:30-23:45 Transmission Alert Dilley Switch - North Laredo loads Alsherton - North Laredo
- 10-10-05 16:00-cont. Transmission Alert Ingleside Cogen loads DuPont Switch Ingleside - Air Liquide
- 10-10-05 14:30 - 16:00 Transmission Alert Kingsville - Lon Hill loads Fallurias transformer
- 10-10-05 14:30-23:45 Transmission Alert San Miguel transformer loads Pearsalt - Derby Sub
- 10-10-05 14:30-23:45 Transmission Alert San Miguel Switchyard-Stigar loads Kenedy Switch-Kenedy Sub
- 10-11-05 00:15-23:45 Transmission Alert Ingleside Cogen loads DuPont Switch Ingleside - Air Liquide
- 10-17-05 18:00-21:00 Transmission Alert Coppell - Lewisville loads Coppell - Roanoke
- 10-17-05 10:15-24:00 Transmission Alert Ingleside Cogen loads DuPont Switch Ingleside - Air Liquide
- 10-18-05 01:35-23:00 Alert Capacity insufficiency for hours 16:00 - 21:00.
- 10-18-05 00:20-01:35 OCN Capacity insufficiency for hours 16:00 -18:00
- 10-19-05 00:13-20:00 Alert Capacity insufficiency for hours 17:00 - 21:00.
- 10-20-05 13:00-18:00 Transmission Alert Uvalde-Asphalt 138 KV line loading.
- 10-24-05 06:30-10:15 Alert Capacity insufficiency for hours 11:00 - 12:00.
- 10-24-05 01:30-06:30 OCN Capacity insufficiency for hours 11:00 -14:00
- 10-30-05 1:15-2:30 OCN Capacity insufficiency for hours 20:00 - 21:00.
- 10-30-05 2:30-20:00 Alert Capacity insufficiency for hours 20:00 - 21:00.

Major Computer System Problems/Enhancements/Fixes
- 10/2005 00:00 Implemented R-4 on the production systems

Security Alert Stage/ Threatcon/ Related issues
None/Yellow
EECP Occurrence
None
Major Weather Related Power System Problems
None
Major system Voltage problems/ Load Shed incidences
None
New SPS & RAP’s
None
Update on New Generation
None
Max / Min Temperature
Max: 98˚F FWest
Min: 35.5˚F North/SCentral
Market Operation

Ancillary Services

Average Hourly Procurement by Ancillary Service

13 Month Review of Average Hourly Procurement by Ancillary Service
Balancing Energy
Average Balancing Energy Deployed

Average UBES Deployment in Five Zones

Average DBES Deployment in Five Zones
13 Month Review of UBES Deployment

13 Month Review of DBES Deployment

Balancing Energy
Energy Purchased Through ERCOT

(PRR404: Any Balancing Energy scheduled through the ERCOT Scheduling process)
Average BES Deployed: as A Percentage of Total Energy Requirement

13 Month Review of Average BES Deployed: as A Percentage of Total Energy Requirement

Balancing Energy
Average MCPE
Average MCPE in Five Zones

Average MCPE at Each Interval for Five Zones

13 Month Review of MCPE

Average Fuel Index
Balancing Energy
Average Shadow Price

13 Month Review of Average Shadow Price

Average Shadow Price
Note: There is not a price for self-arranged Ancillary Services. MCPC is used to calculate the cost for self-arrangement.

Cost Summary

Total: $87.23 Million
Ancillary Service Deployment Cost

- **DRS**
- **URS**
- **RRS**
- **NSRS**

Total w/DRS: $4.71 Million  Total w/o DRS: $12.24 Million

13 Month Review of Ancillary Service Deployment Cost

- **DRS**
- **URS**
- **RRS**
- **NSRS**

Total w/DRS: $4.84 Million  Total w/o DRS: $75.67 Million

13 Month Review of OOMC Cost At Final Settlement and True Up

- **Start-Up Payment (Total: $2.28 Million)**
- **Total OOMC Payment (Total: $68.86 Million)**

Totals are for time range of the chart.
*Note:
1. Trade dates thru 10/31/05 complete with Initial Settlement data, using estimated eligible costs.
2. Trade dates thru 11/16/05 complete with Final Settlement data, using verifiable actual cost data provided by the RMR Unit owner.
Total Local Congestion Costs by the Physical Location of Instructed Units

<table>
<thead>
<tr>
<th>Location</th>
<th>Cost (Million $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CENTEX</td>
<td>6.8</td>
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<tr>
<td>CORPUS</td>
<td>2.17</td>
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<tr>
<td>SOUTH</td>
<td>1.1</td>
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<tr>
<td>VALLEY</td>
<td>0.86</td>
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<tr>
<td>DFW</td>
<td>3.3</td>
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<tr>
<td>NORTH</td>
<td>4.37</td>
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<tr>
<td>HOUSTON</td>
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<td>WEST</td>
<td>0.77</td>
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<tr>
<td>MCCAMEY</td>
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</table>

Total: $19.98 Million

Local Congestion Cost By Instruction Type by Day

- LBE-operate at or below a level
- LBE-operate at or above a level
- LBE-hold at a level
- Manual OOME UP
- Manual OOME DN
- OOMC

Total $19.98 Million
Top Ten Local Energy Deployment Cost by Local Constraints
(Does not include OOMC)

Total: $7.39 Million

<table>
<thead>
<tr>
<th>Category</th>
<th>Cost (Millions $)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marion-Zorn &amp; Clear Spring 345kv</td>
<td>1.84</td>
</tr>
<tr>
<td>Marion-Hill County &amp; Fayetteville 345kv</td>
<td>1.54</td>
</tr>
<tr>
<td>Comanche Peak - Decorah-Wyoming 345kv</td>
<td>1.26</td>
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<tr>
<td>Farmerville-Bindulco 245kv</td>
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<tr>
<td>Stillons Creek - Elkmont - Evans 345/138kv</td>
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<tr>
<td>Lahno Spring-Zorn &amp; Austrop 345</td>
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<td>Sandow-Temple 345</td>
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<td>Austin Tr 12 345/138kv Auto</td>
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<td>Texas A&amp;M - Canyon LCRA 138</td>
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<tr>
<td>Usable Asphalt 138</td>
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<tr>
<td>Austin Arth 345/138kv Auto</td>
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<td>Simi-Linco 138</td>
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<tr>
<td>McNeil-Havard Lone</td>
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</tr>
</tbody>
</table>

Cost Summary

Total with DBES: $185.52
Total without DBES: $218.99
13 Month Review of Cost Summary

- Total with DBES (Total: $1,506.38 Million)
- Total Without DBES (Total: $1,771.56 Million)

Totals are for time range of the chart.

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 QSEs’ schedule and the amount of energy that QSEs intend to buy from Real-Time Energy market.

The historical data gathered from the monthly reports has been compiled into an Excel workbook which will be updated and posted along with this report at the following link:


Or at the new ERCOT website at the following link:


Please contact Shuye Teng at 512-248-3998 or email at steng@ercot.com should you have any questions.

Addendum: Map of Local Congestion Areas (charts on page 36)