



Information Technology Service Availability Metrics

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Agenda and Commentary

▪ **Retail and Wholesale Systems Performance**

- **Retail Transaction Processing** – November performance was 100%
- **TML** – November performance was 100%
- **MarkeTrak** – November performance was 99.81%
- **TML Report Explorer** – November performance was 100%
- **Retail API** – November performance was 100%
- **Wholesale Total** – November performance was 100%

▪ **Market and Grid Control Systems Performance**

- **Real Time Balancing Market (RTBM)** – November performance was 100%
- **Frequency Control (FC)** – November performance was 99.84%

Agenda and Commentary (continued)

▪ **Nodal Systems Performance**

- **Energy Management systems (EMS)** – November performance level was 86.02%
- **Market Management systems (MMS)** – November performance level was 100%
- **External Web Services (EWS)** – November performance level was 100%

Agenda and Commentary (continued)

▪ **Retail Transaction Processing issues**

- 11/19 (27 minutes) – MarkeTrak experienced an application issue which required a restart of services. Root cause is capacity limitation for simultaneous report generation. Additional monitoring has been installed while a permanent solution is being tested.

▪ **Wholesale Batch Processing issues**

- On 11/12, a formatting issue was discovered on the Initial Settlement Statements for Operating Day November 1, 2009. There was an error on the Settlement Statement details page where time stamps were missing the extra intervals to account for the DST time change. Market Participants that were affected worked with ERCOT to work around the issue and a SIR has been written for a permanent fix by March 2010.

▪ **Frequency Control issues**

- 11/24 (37 minutes and 34 minutes) – EMS servers were rebooted on two separate occasions as a result of a shared memory lock. The root cause was identified as a controller over load on the storage array. ERCOT is in the process of redistributing file systems to alleviate the over load condition.

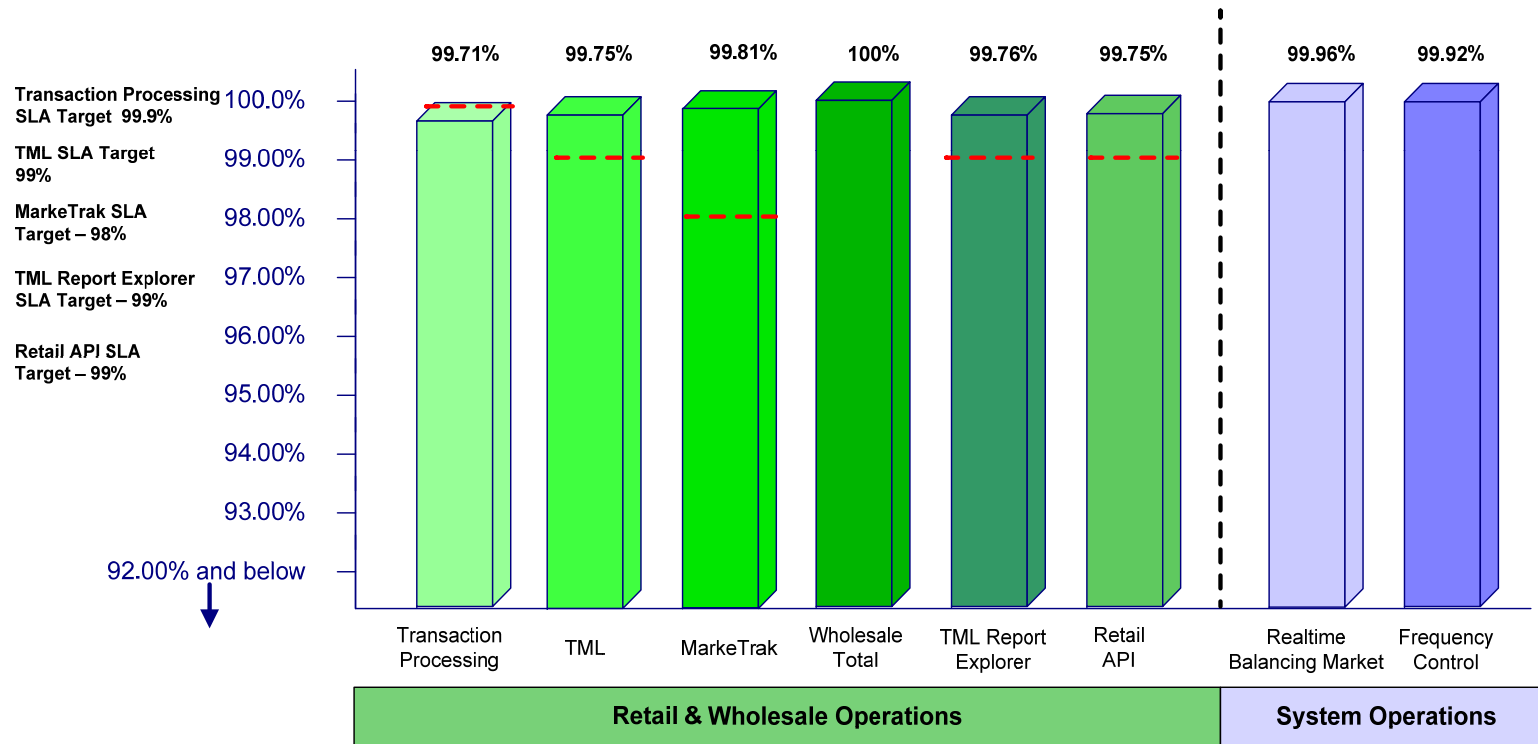
Agenda and Commentary (continued)

- **Nodal Energy Management System issues**

- Disk utilization was more than 90% and caused the EMS application to fail. The Nodal production environment is not monitored during off business hours and holidays at this time and this incident started during off hours. Disk space was cleared and EMS was restarted on 11/30. Notification alarming is in place to monitor this situation once a 24 x 7 SLA is in place

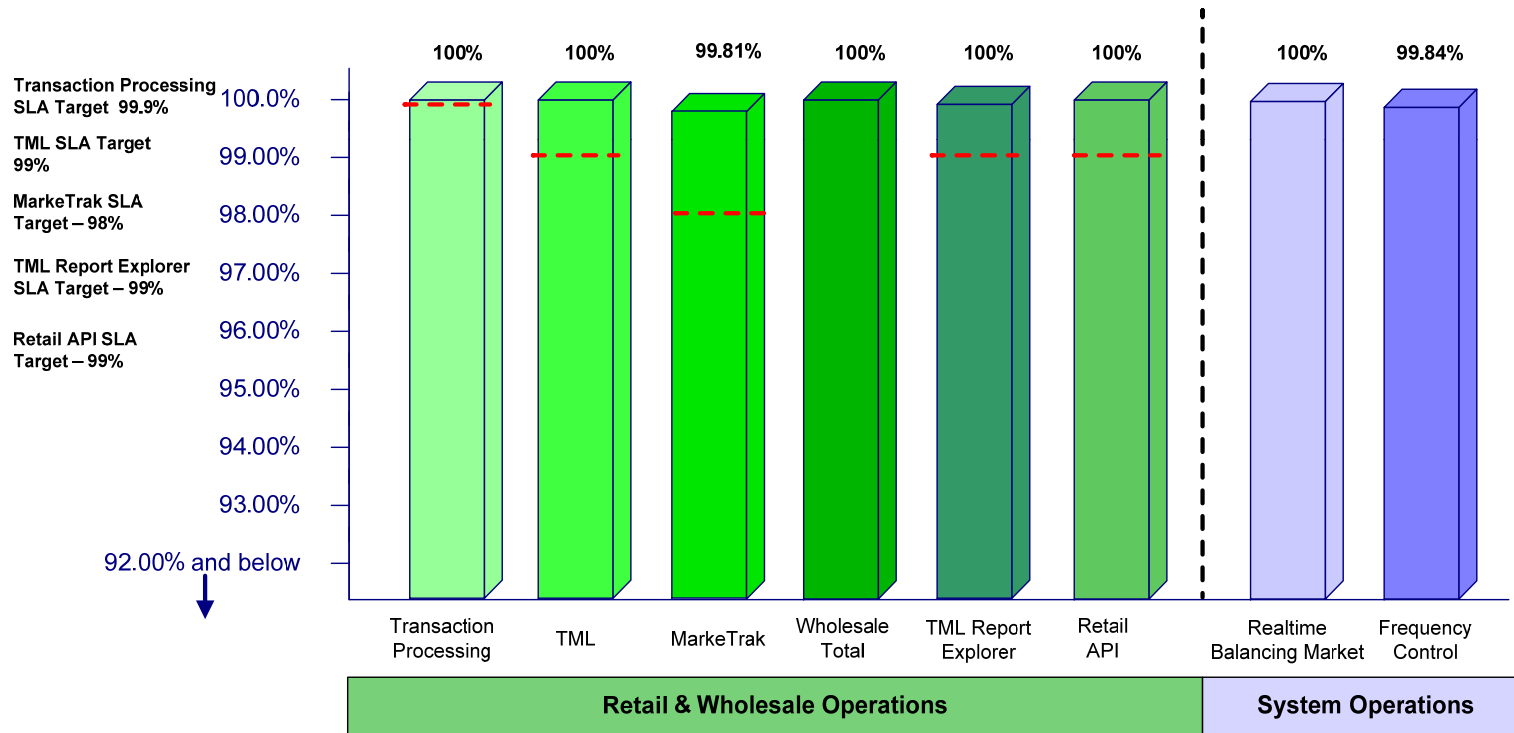
2009 Net Service Availability

2009 Net Service Availability Through November 30th, 2009



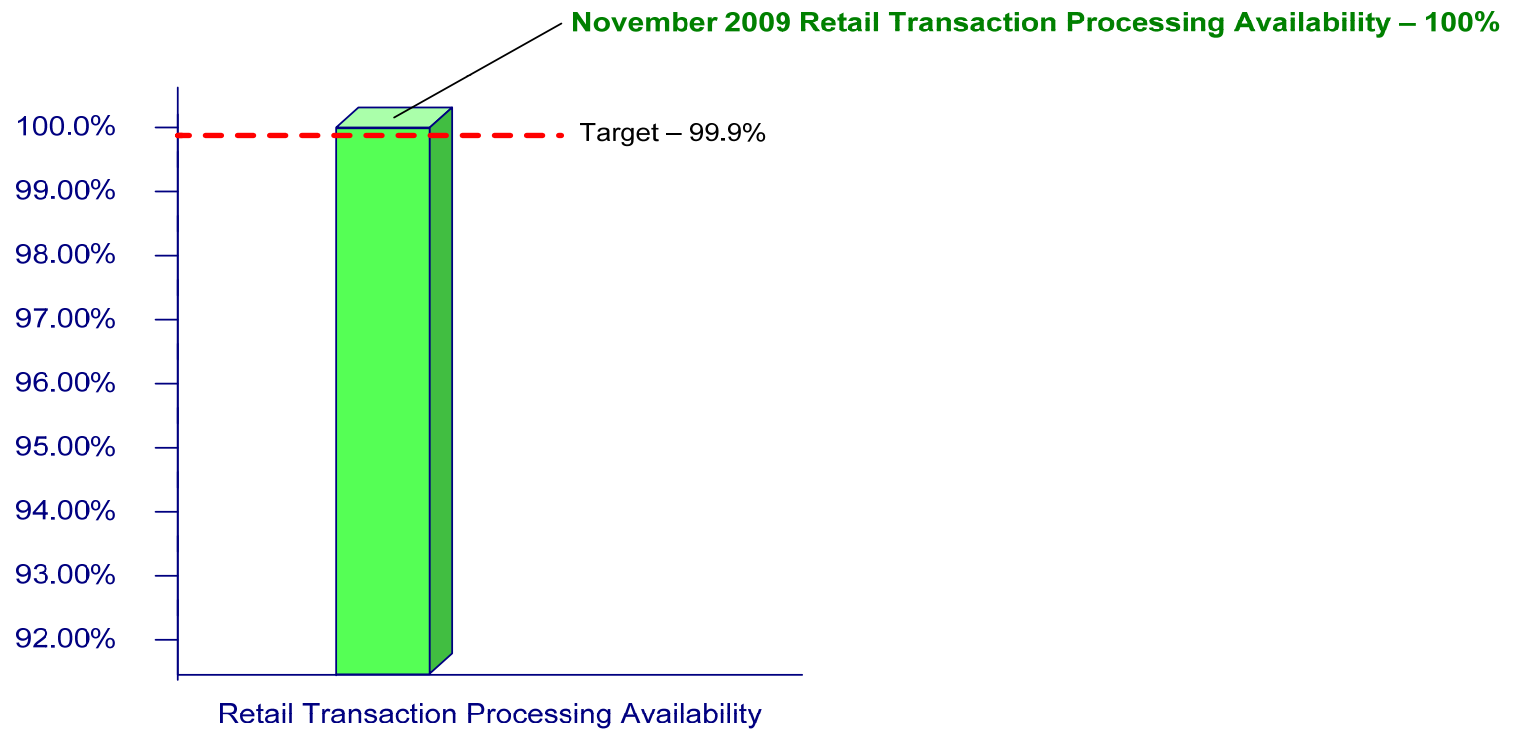
November 2009 Net Service Availability

November 2009 Net Service Availability



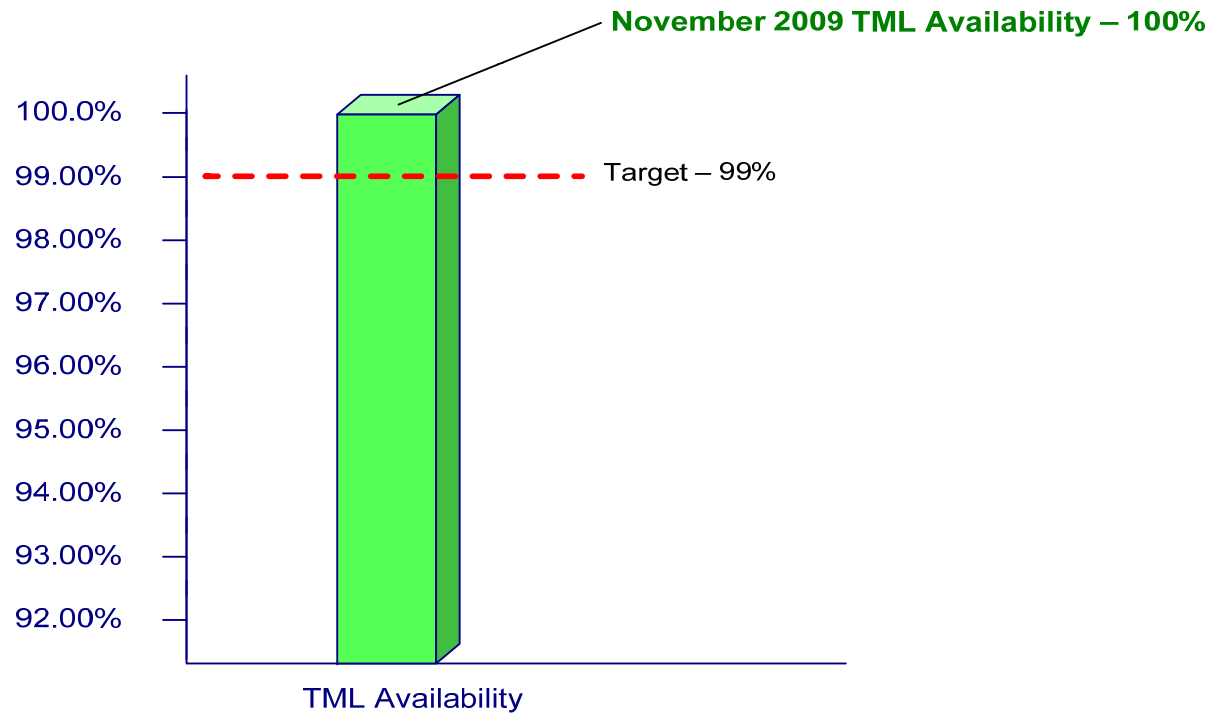
Retail Transaction Processing Availability Summary

November 2009 Retail Transaction Processing Availability Summary



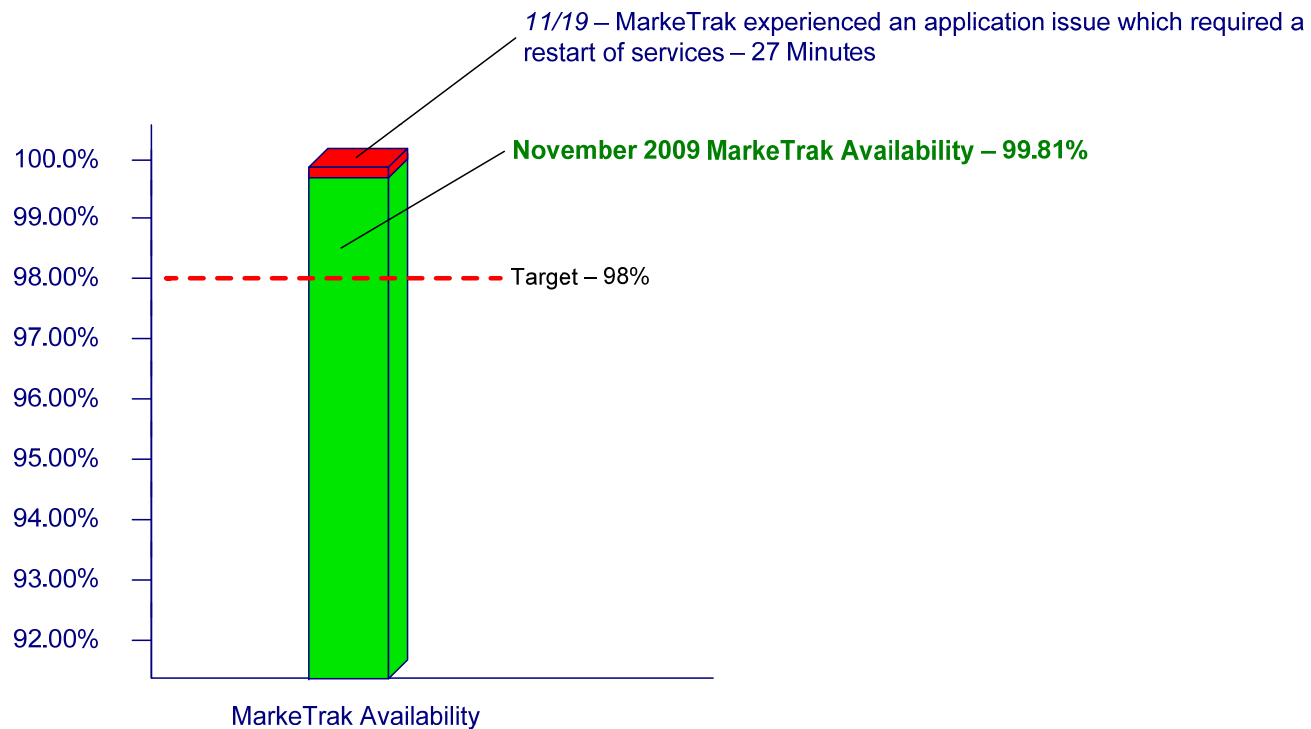
TML Availability Summary

November 2009 TML Availability Summary



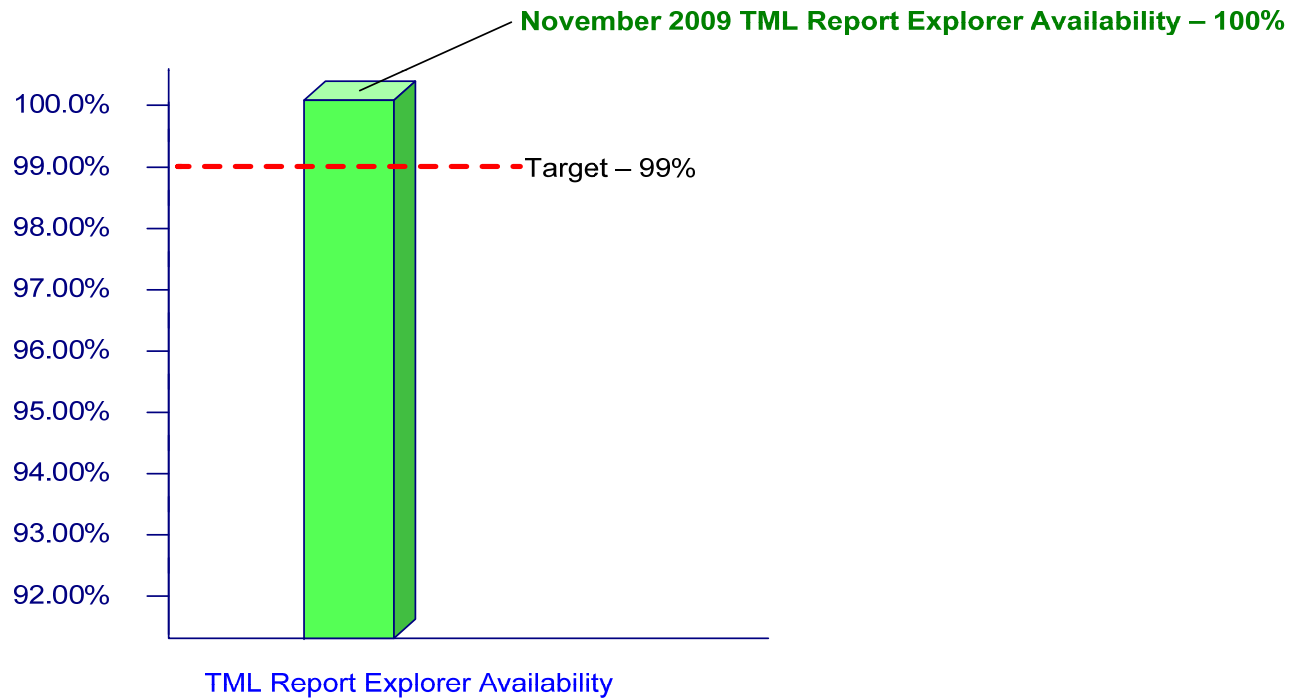
MarkeTrak Availability Summary

November 2009 MarkeTrak Availability Summary



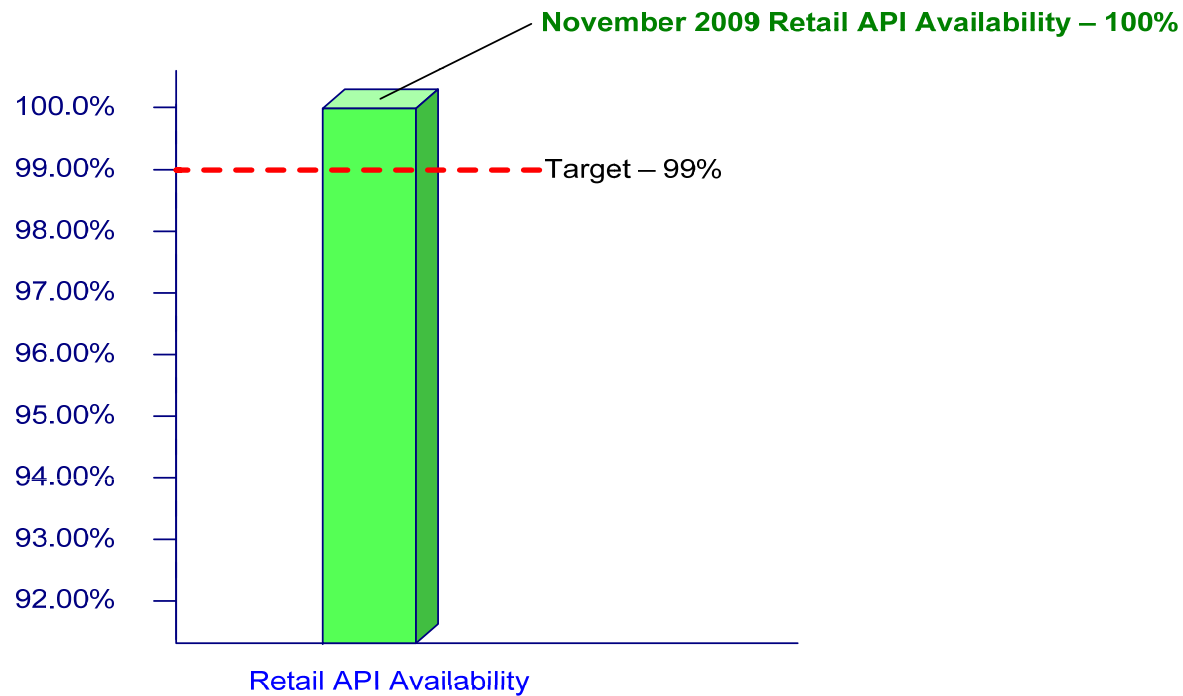
TML Report Explorer Availability Summary

November 2009 TML Report Explorer Availability Summary



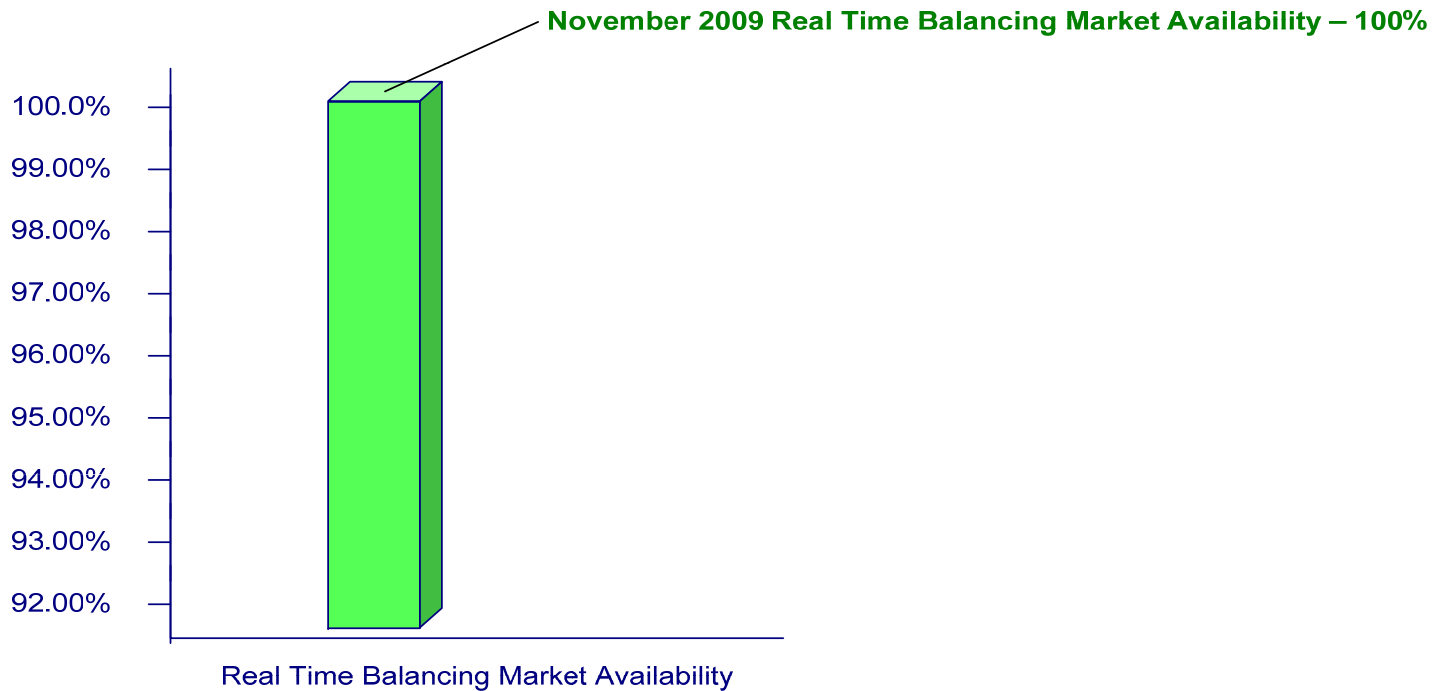
Retail API Availability Summary

November 2009 Retail API Availability Summary



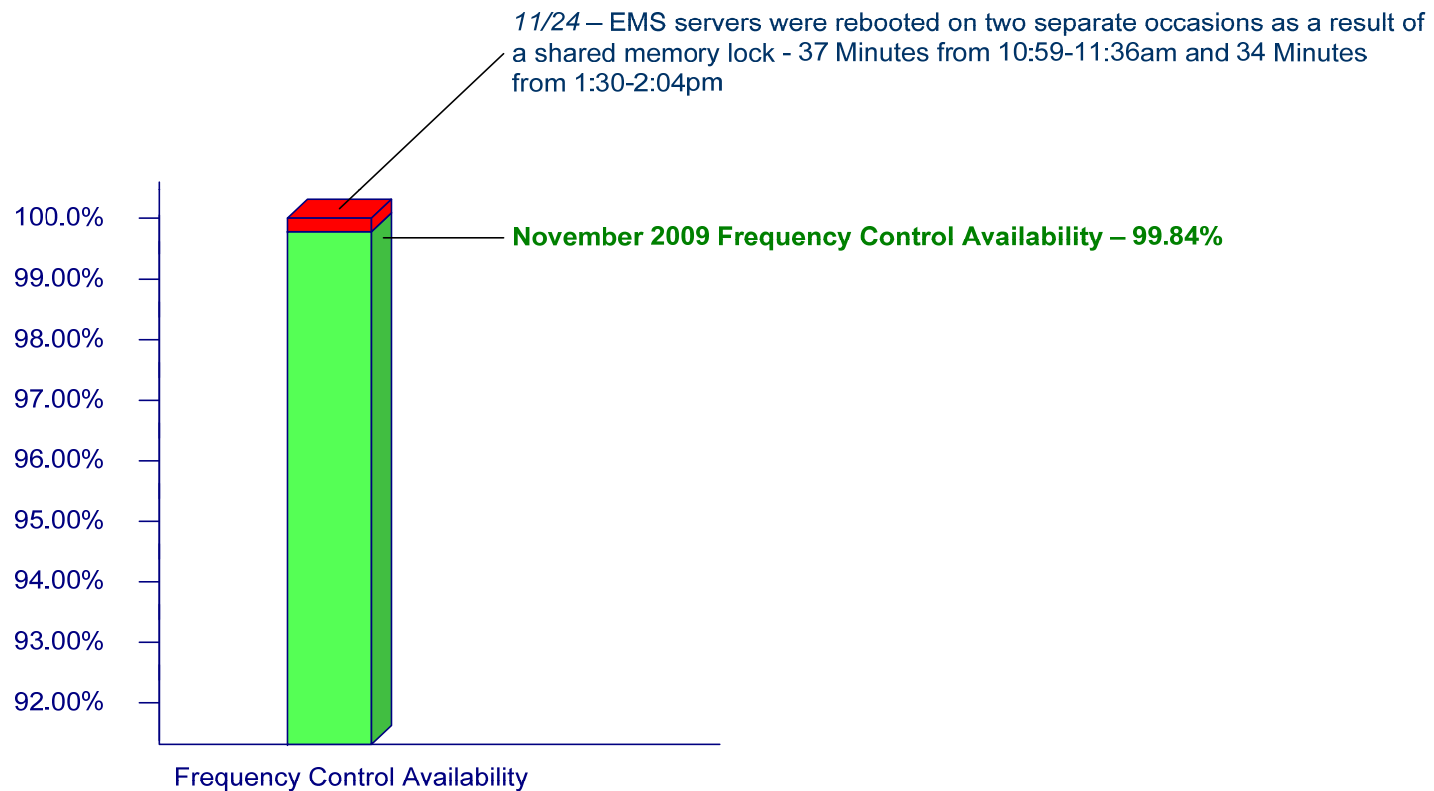
Real Time Balancing Market Availability Summary

November 2009 Real Time Balancing Market Availability Summary



Frequency Control Availability Summary

November 2009 Frequency Control Availability Summary



Metrics Guide – Nodal Production

- **Aggregate Energy Management System (EMS)**
 - Measure of the availability of the software that provides real time grid control capability. Calculated as average of deployed & monitored components availability
- **Aggregate Market Management System (MMS)**
 - Measure of the availability of the software to economically deploy generation and manage day ahead, real time and ancillary services markets. Calculated as average of deployed & monitored components availability
- **Outage Scheduler**
 - Measure of the availability of the software to manage the submission, modification, deletion of schedules for various types of transmission and generation systems outages
- **Network Model Management System (NMMS)**
 - Measure of the availability of the software to manage the ERCOT network model. Calculated as availability of model management core engine (IMM)
- **Congestion Revenue Rights (CRR)**
 - Measure of the availability of the software to manage the financial instruments that help Market Participants hedge against losses due to transmission constraints
- **Web Services**
 - Measure of the availability of the software that provides machine-to-machine (non-browser based) interfaces for MP interaction with ERCOT

Nodal Production – November 2009 Net Availability

November 2009 Net Availability for Nodal Production systems

