Information Technology and Facilities Report

Richard Morgan

Vice President & CIO

ERCOT Board of Directors

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Highlights

- **Service Availability:**
  - Performance continued at high levels with only the Retail Transaction processing not meeting or exceeding expectations.

- **Wide Area Network Assessment:**
  - Cannon group performed ERCOT Telecommunications assessment
  - Findings / Outcomes:
    - ERCOT's Telecom environment meets or exceeds operational standards and cost of service within peer group
    - ERCOT's contracts rated "competitive" or "highly competitive" in all service areas
    - Rates and charges are compliant, i.e. bills match contracts

- **New Data Centers:** Construction of the new data centers in Bastrop and Taylor continues to be on schedule and under budget.
  - Commissioning of Bastrop and TCC3 data centers underway
  - Fiber connection between TCC1 and TCC3 is installed

Highlights

- **Network Model Management System (NMMS)**
    - **Stability and Performance:**
        - System stability significantly improved from June
            - 13 unplanned restarts in July vs. 96 in June
        - Performance improvements implemented August 1st
            - Test timings of 30 typical functions
            - 26 showed significant improvement averaging 50%
            - 3 functions decreased in performance by 25%
        - Code to monitor availability and response times will be deployed in August
    - **Topology Processor Defect:**
        - Continue to work with vendor to isolation and resolve

- **Nodal 5-Hour System Reliability and Market Test**: Nodal 5-hour Load Frequency Control (LFC) test was completed as part of Market trials on 7/21
    - Emergency patch to fix Shift Factor issues (noted during previous 8-hour tests) performed to expectations.
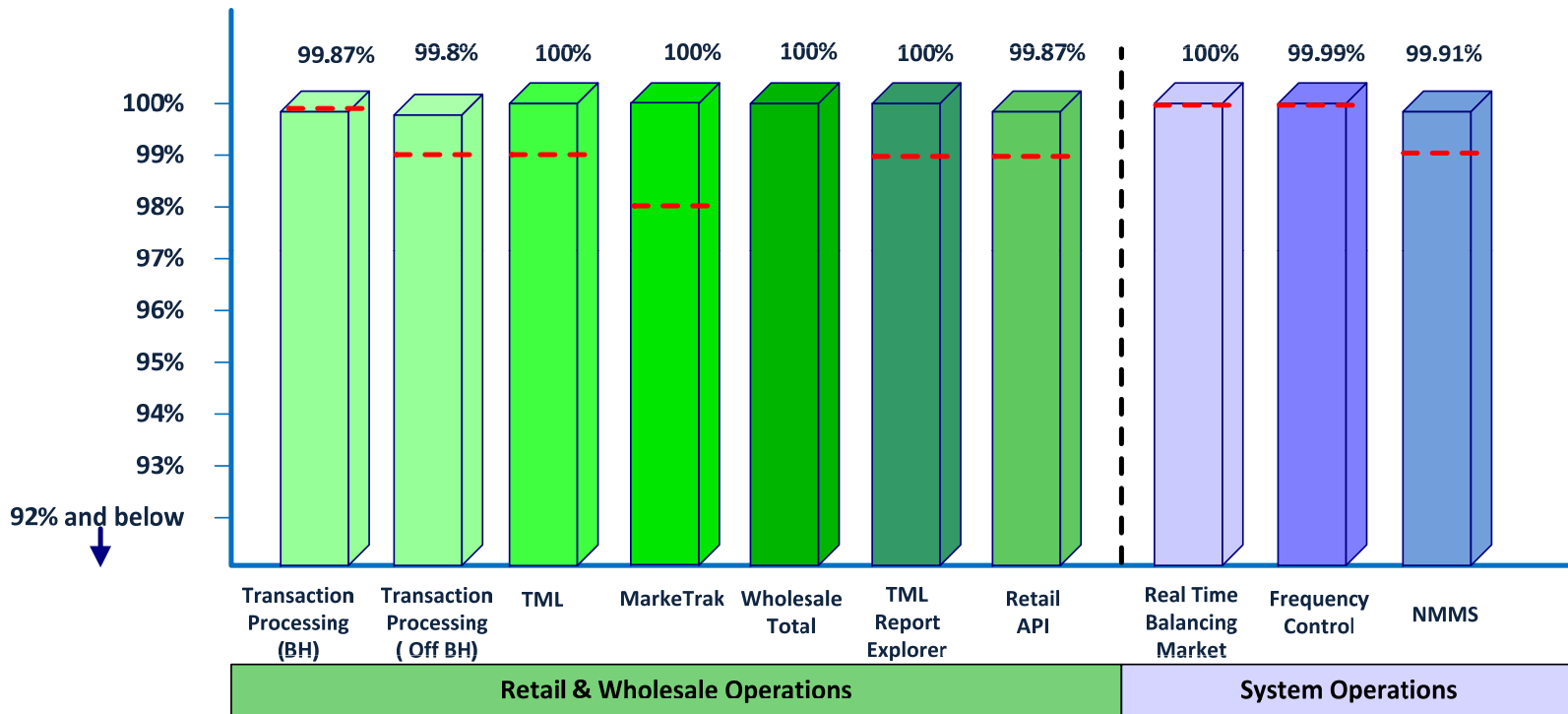
2010 Net Service Availability

2010 Net Service Availability
Through July 31st, 2010

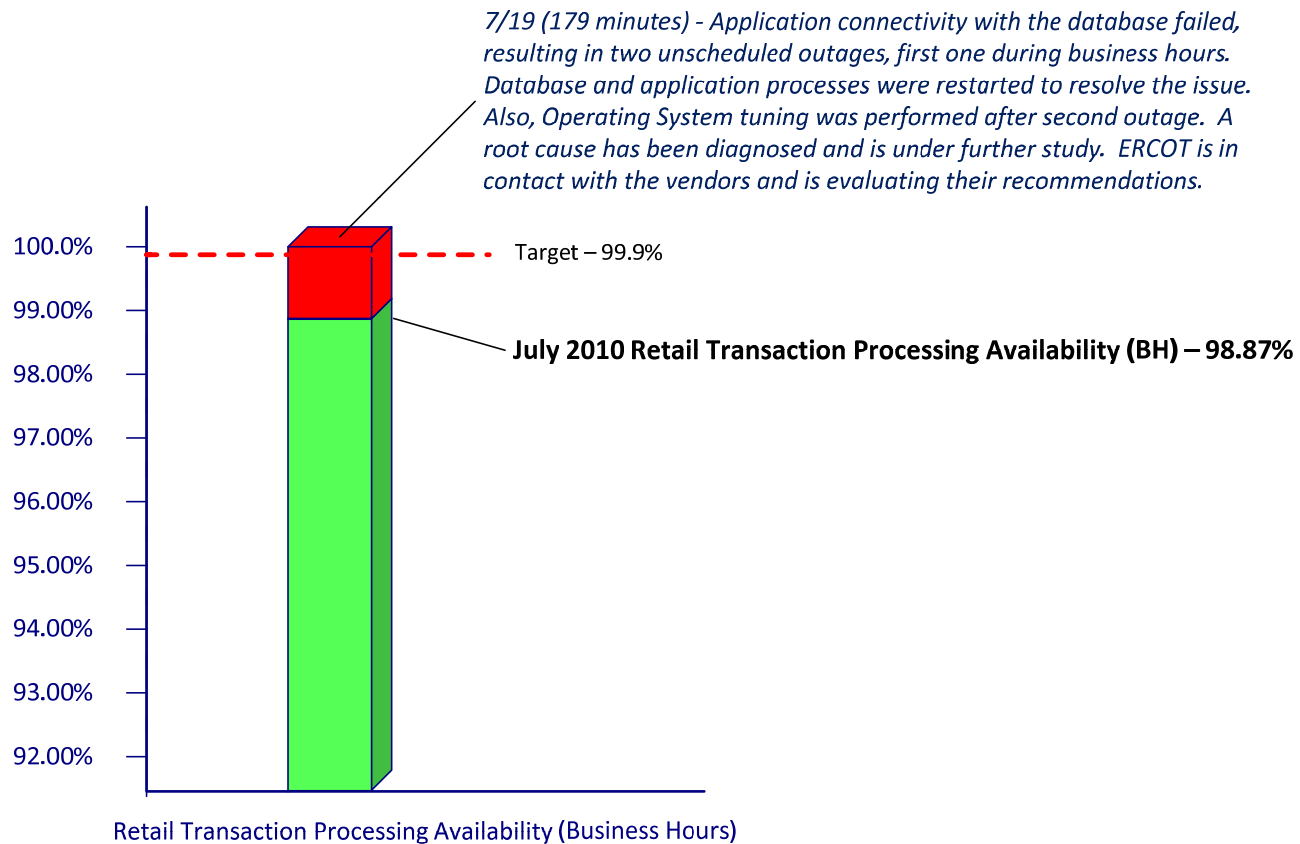|		
Transaction Processing SLA Target	TML SLA Target: 99%	RTBM Target: 99.93%
- Business Hours (BH): 99.9%	MarkeTrak SLA Target: 98%	Frequency Control Target: 99.93%
- Off Business Hours (Off BH): 99%	TML Report Explorer SLA Target: 99%	NMMS Target: 99%
	Retail API SLA Target: 99%	

July 2010 Net Service Availability

July 2010 Net Service Availability

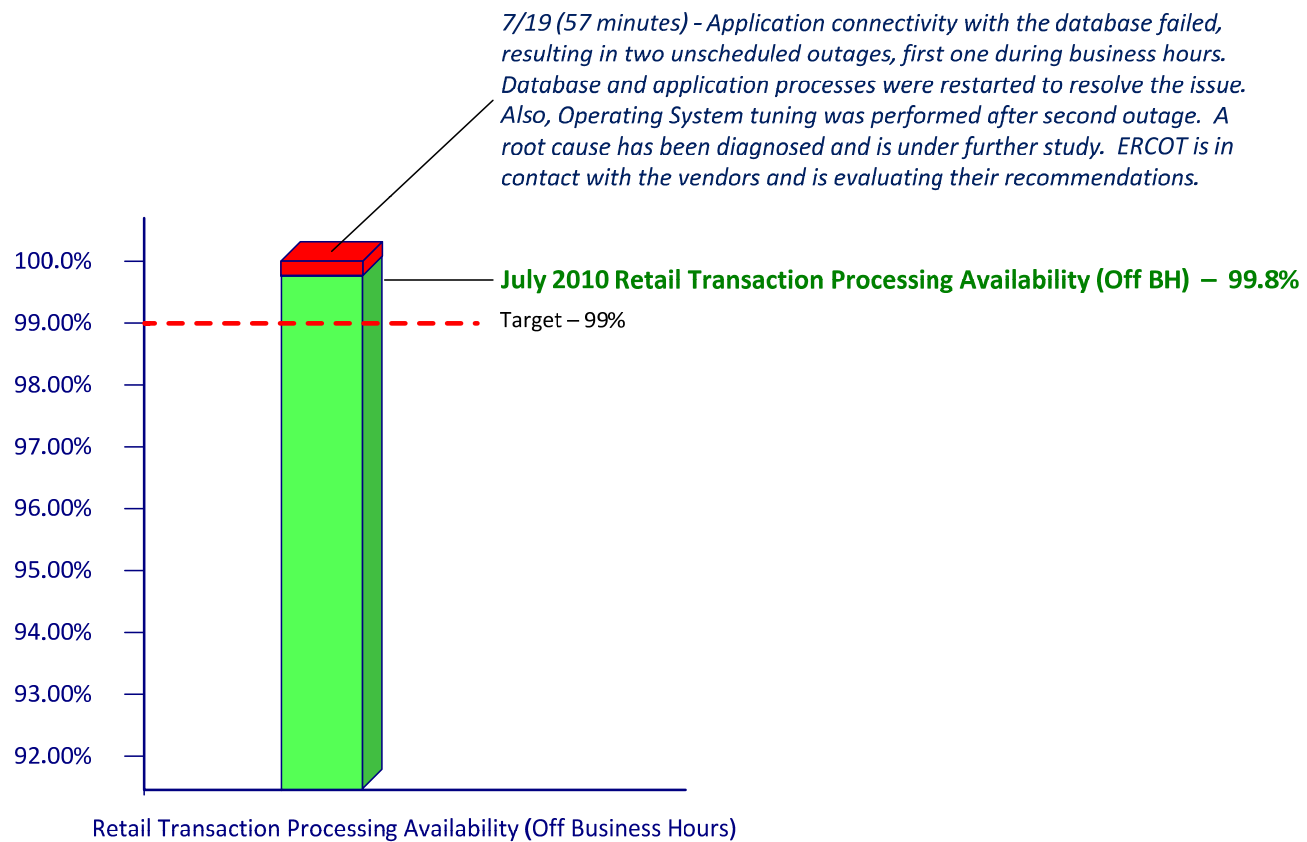| Transaction Processing SLA Target		TML SLA Target:	99%	RTBM Target:	99.93%
- Business Hours (BH):	99.9%	MarkeTrak SLA Target:	98%	Frequency Control Target:	99.93%
- Off Business Hours (Off BH):	99%	TML Report Explorer SLA Target:	99%	NMMS Target:	99%
		Retail API SLA Target:	99%		

Retail Transaction Processing Availability Summary

July 2010 Retail Transaction Processing Availability Summary (Business Hours)

7/19 (179 minutes) - Application connectivity with the database failed, resulting in two unscheduled outages, first one during business hours. Database and application processes were restarted to resolve the issue. Also, Operating System tuning was performed after second outage. A root cause has been diagnosed and is under further study. ERCOT is in contact with the vendors and is evaluating their recommendations.

Target – 99.9%

July 2010 Retail Transaction Processing Availability (BH) – 98.87%

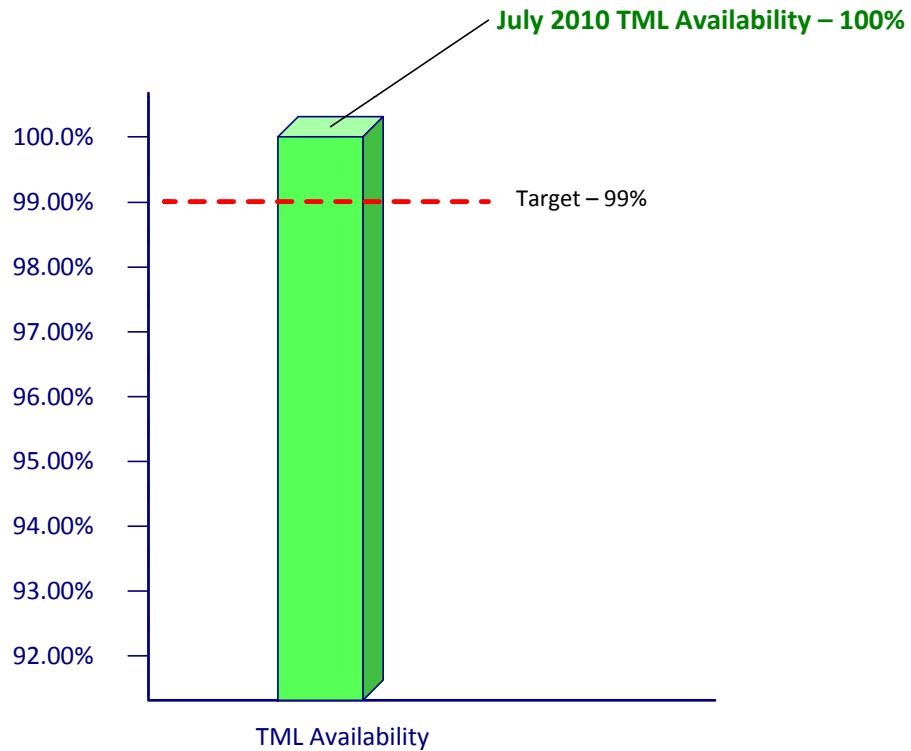Retail Transaction Processing Availability (Business Hours)

Retail Transaction Processing Availability Summary (contd.)

July 2010 Retail Transaction Processing Availability Summary
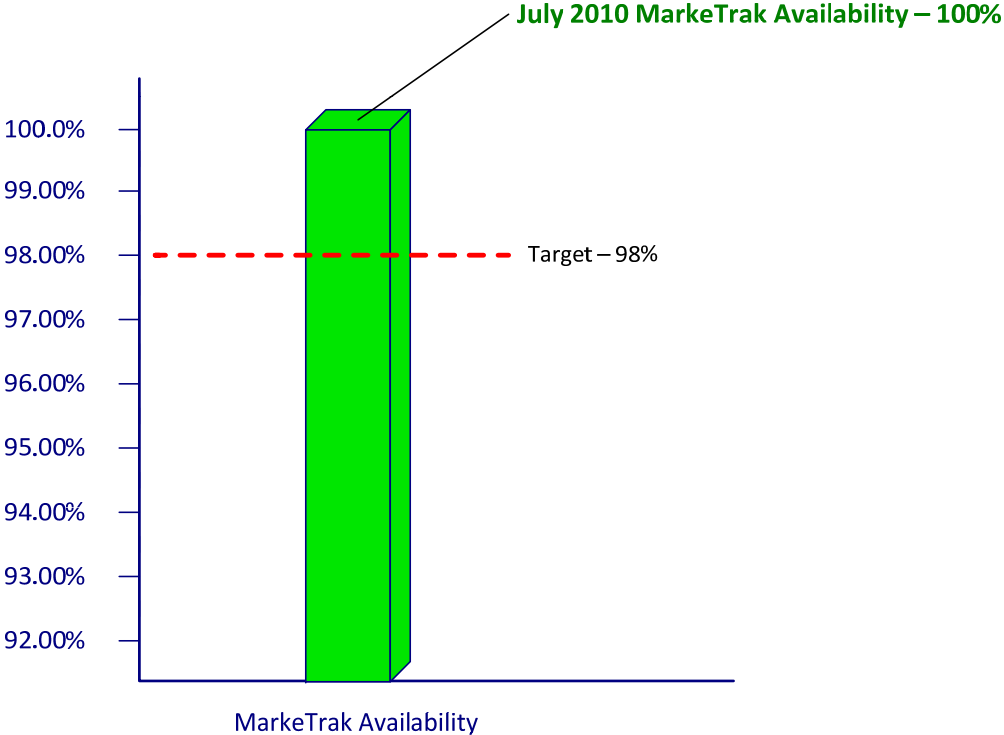## (Off Business Hours)

7/19 (57 minutes) - Application connectivity with the database failed, resulting in two unscheduled outages, first one during business hours. Database and application processes were restarted to resolve the issue. Also, Operating System tuning was performed after second outage. A root cause has been diagnosed and is under further study. ERCOT is in contact with the vendors and is evaluating their recommendations.

July 2010 Retail Transaction Processing Availability (Off BH) – 99.8%

Target – 99%

100.0%
99.00%
98.00%
97.00%
96.00%
95.00%
94.00%
93.00%
92.00%

Retail Transaction Processing Availability (Off Business Hours)

TML Availability Summary

July 2010 TML Availability Summary

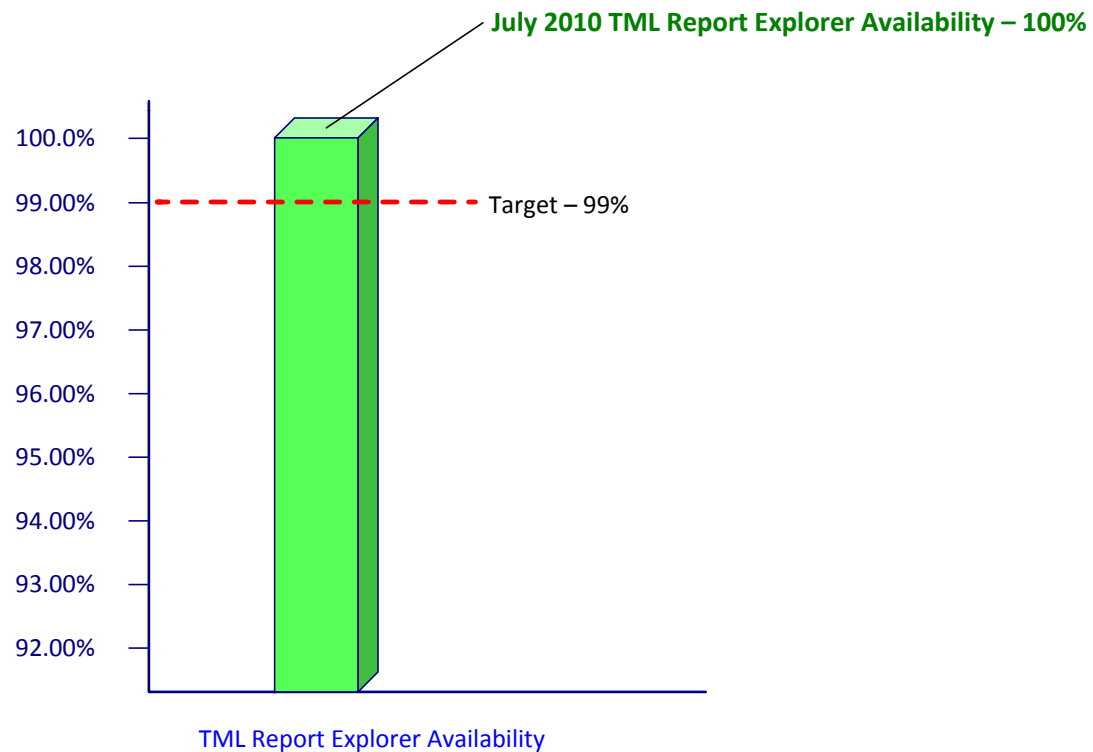**July 2010 TML Availability – 100%**

Target – 99%

- 100.0%
- 99.00%
- 98.00%
- 97.00%
- 96.00%
- 95.00%
- 94.00%
- 93.00%
- 92.00%

TML Availability

MarkeTrak Availability Summary

July 2010 MarkeTrak Availability Summary

July 2010 MarkeTrak Availability – 100%

Target – 98%

MarkeTrak Availability

TML Report Explorer Availability Summary

July 2010 TML Report Explorer Availability Summary
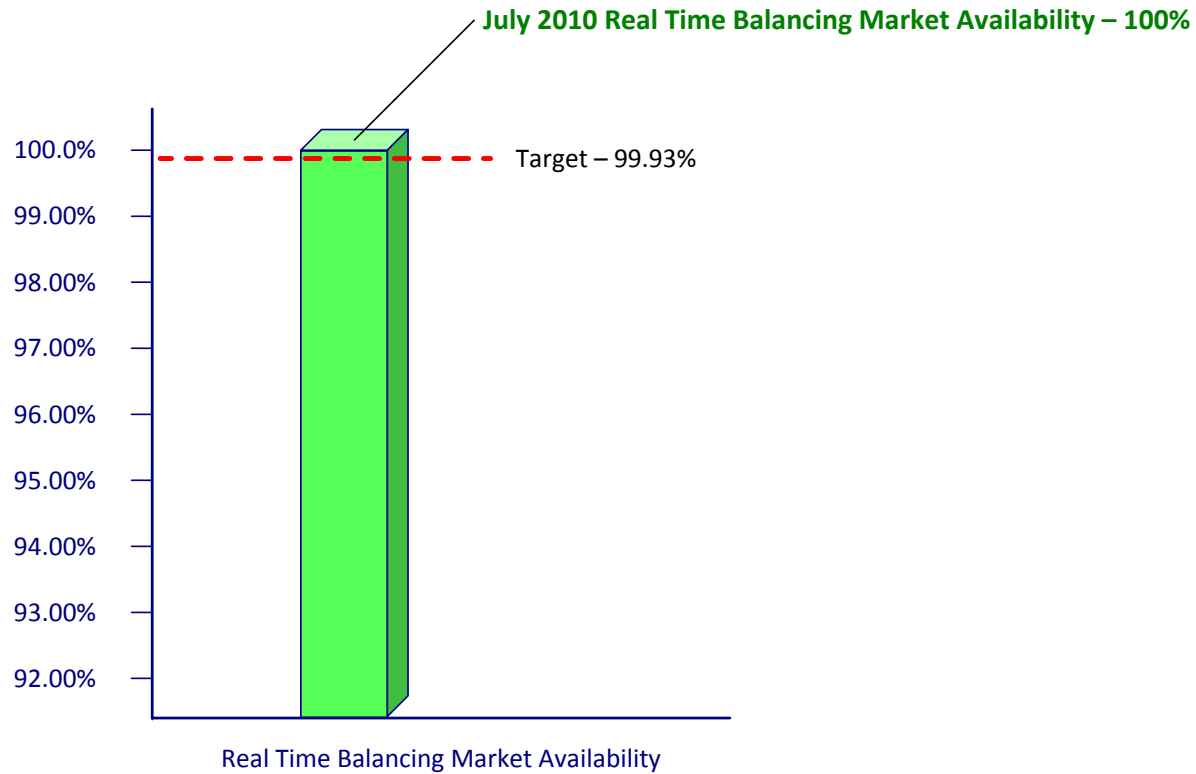
July 2010 TML Report Explorer Availability – 100%

100.0%	
99.00%	Target – 99%
98.00%	
97.00%	
96.00%	
95.00%	
94.00%	
93.00%	
92.00%	

TML Report Explorer Availability

Retail API Availability Summary

July 2010 Retail API Availability Summary

7/19 (57 minutes) – Application connectivity with the database failed, resulting in this outage. Database and application processes were restarted to resolve the issue. Also, Operating System tuning was performed. A root cause has been diagnosed and is under further study. ERCOT is in contact with the vendors and evaluating their recommendations.

July 2010 Retail API Availability – 99.87%

Target – 99%

100.0%
99.00%
98.00%
97.00%
96.00%
95.00%
94.00%
93.00%
92.00%

Retail API Availability

Real Time Balancing Market Availability Summary

July 2010 Real Time Balancing Market Availability Summary

July 2010 Real Time Balancing Market Availability – 100%

Target – 99.93%

Real Time Balancing Market Availability

Frequency Control Availability Summary

July 2010 Frequency Control Availability Summary

7/22 (1 Minute) – Frequency Control failed for 1 minute due to Load Forecast database partition lock issues. System resumed normal operation automatically. Root cause for failure is under investigation.

July 2010 Frequency Control Availability – 99.99%

Target – 99.93%

- 100.0%
- 99.00%
- 98.00%
- 97.00%
- 96.00%
- 95.00%
- 94.00%
- 93.00%
- 92.00%

Frequency Control Availability
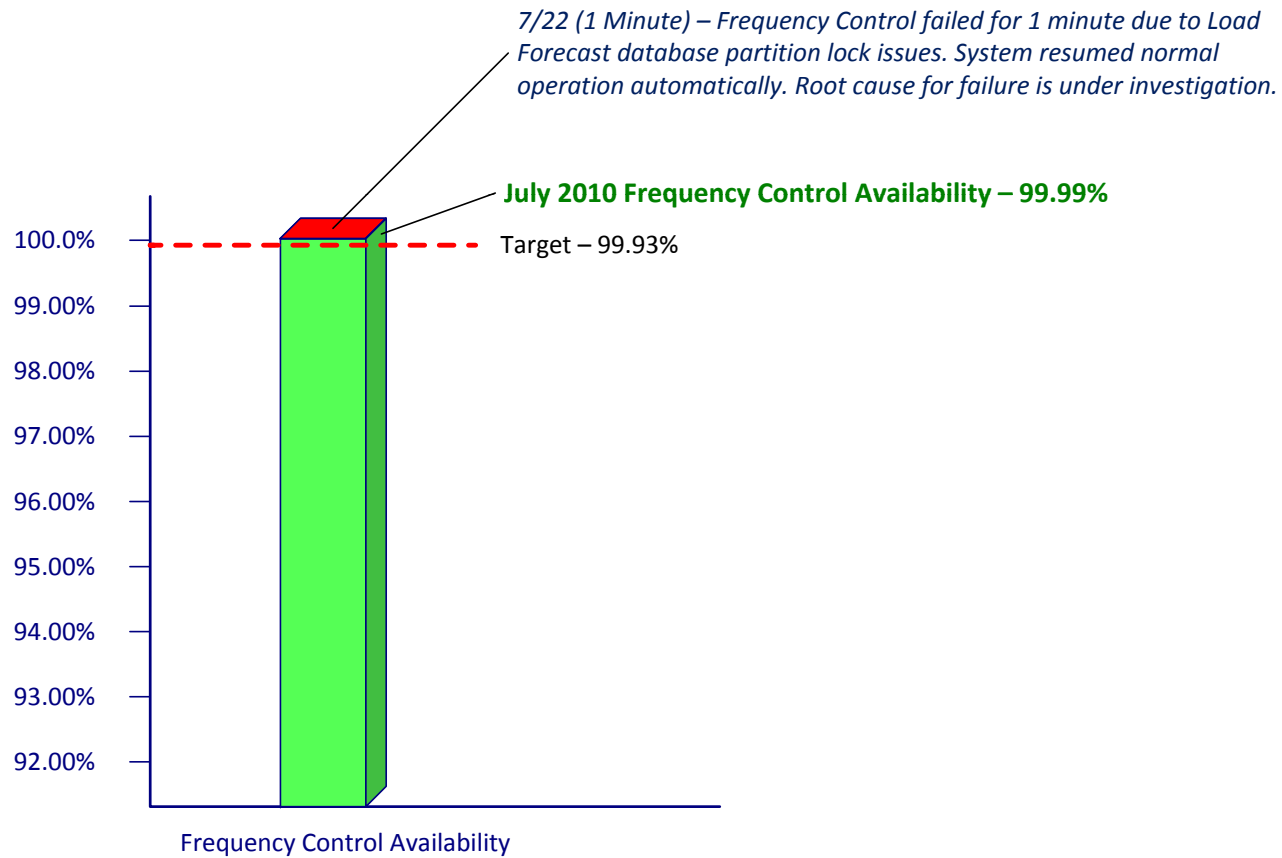
Network Model Management System

July 2010 Network Model Management System
(NMMS) Availability Summary

7/1 – 7/31 (39 Minutes): NMMS was impacted with 39 minutes of outage due to 13 restarts in July. The recurrence of restarts has declined significantly from June. Fixes include the following: A parameter was modified on 7/2 which resolved a memory management defect. A patch was applied on 8/1 to resolve a navigation performance issue. ERCOT continues to work with the vendor closely and is actively monitoring the system.
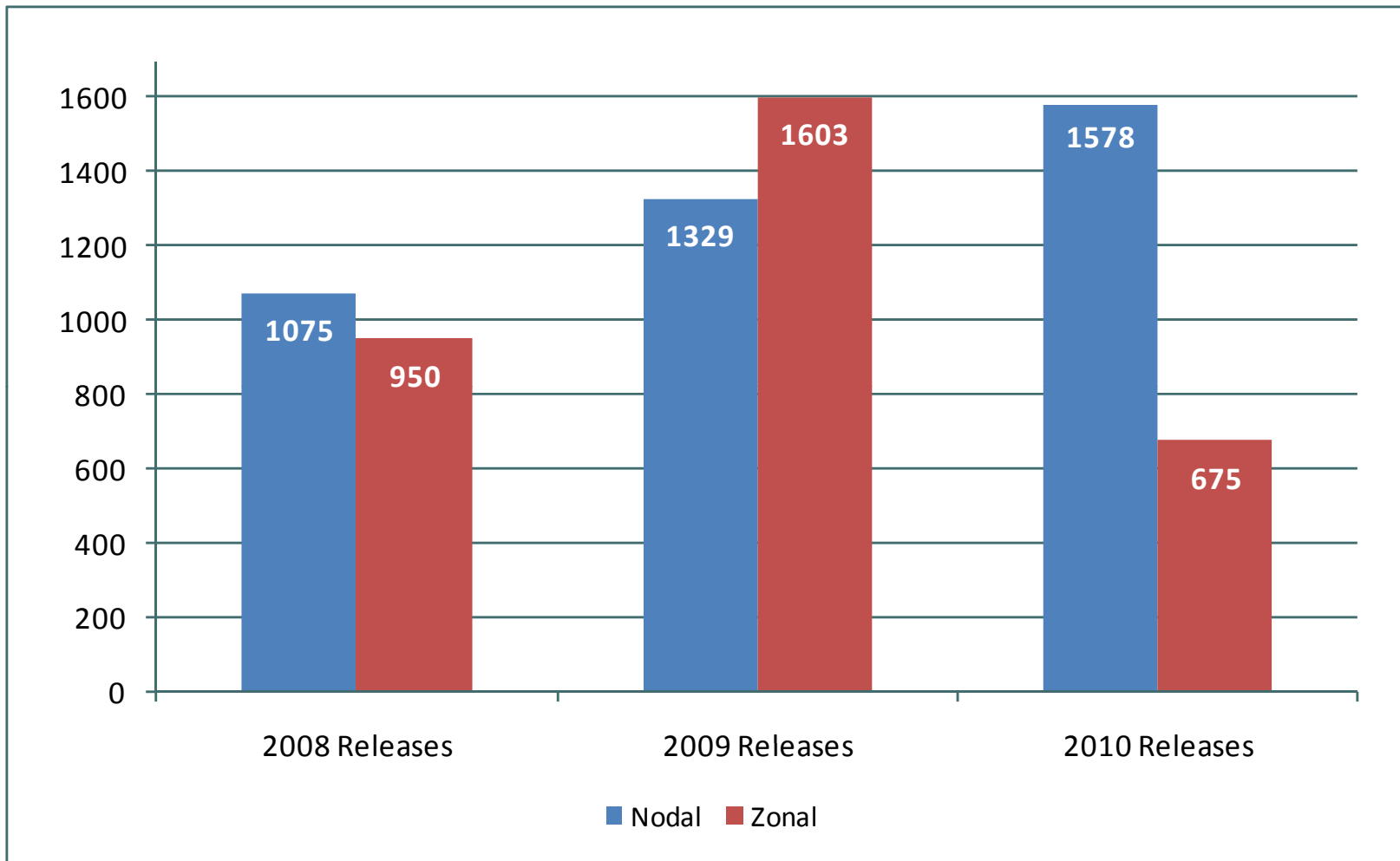
July 2010 NMMS Availability – 99.91%

Target – 99%

June - July 2010 NMMS unscheduled restarts

NMMS Availability
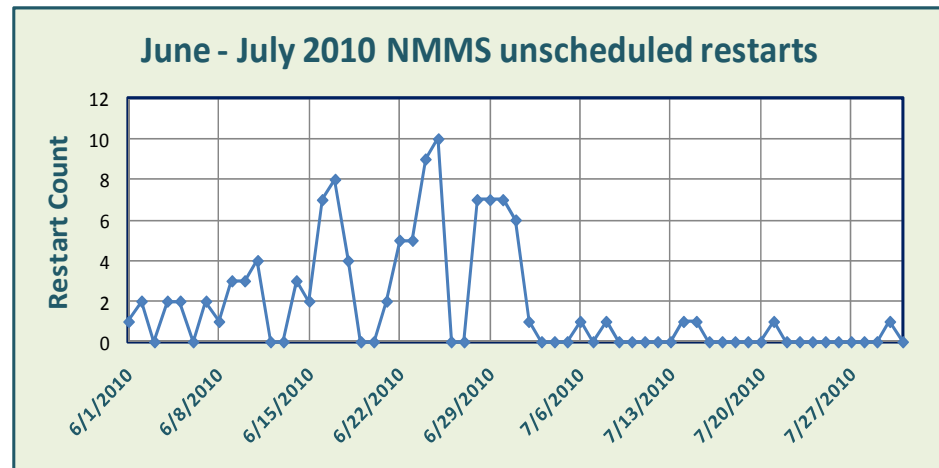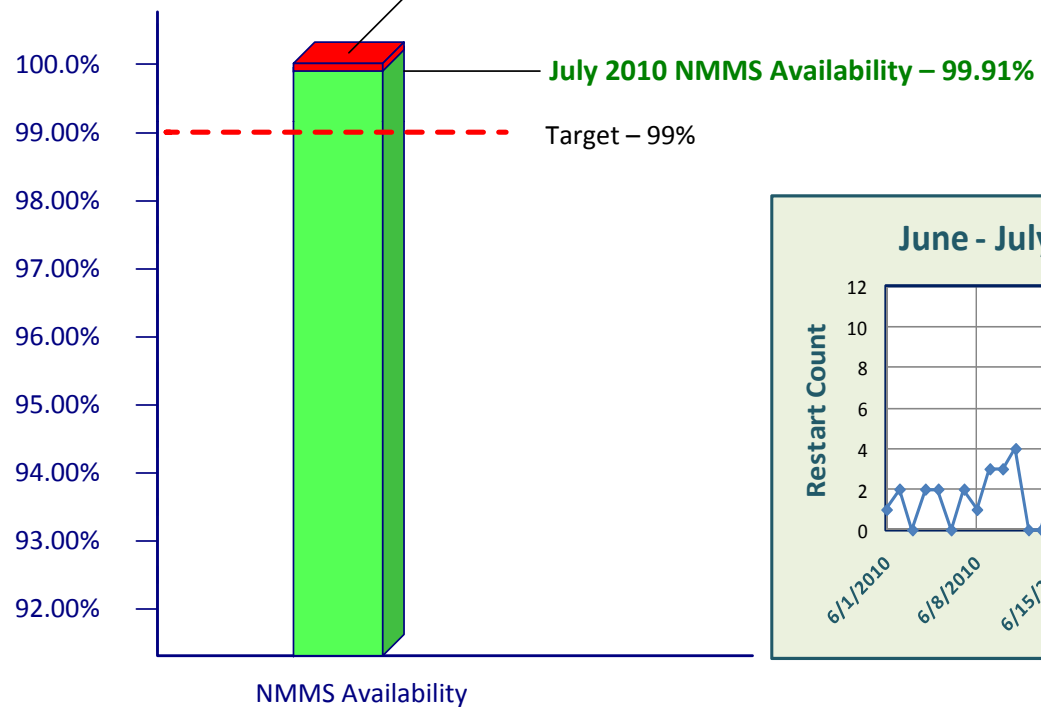
Release Management Metrics (3-Year Releases by Month)
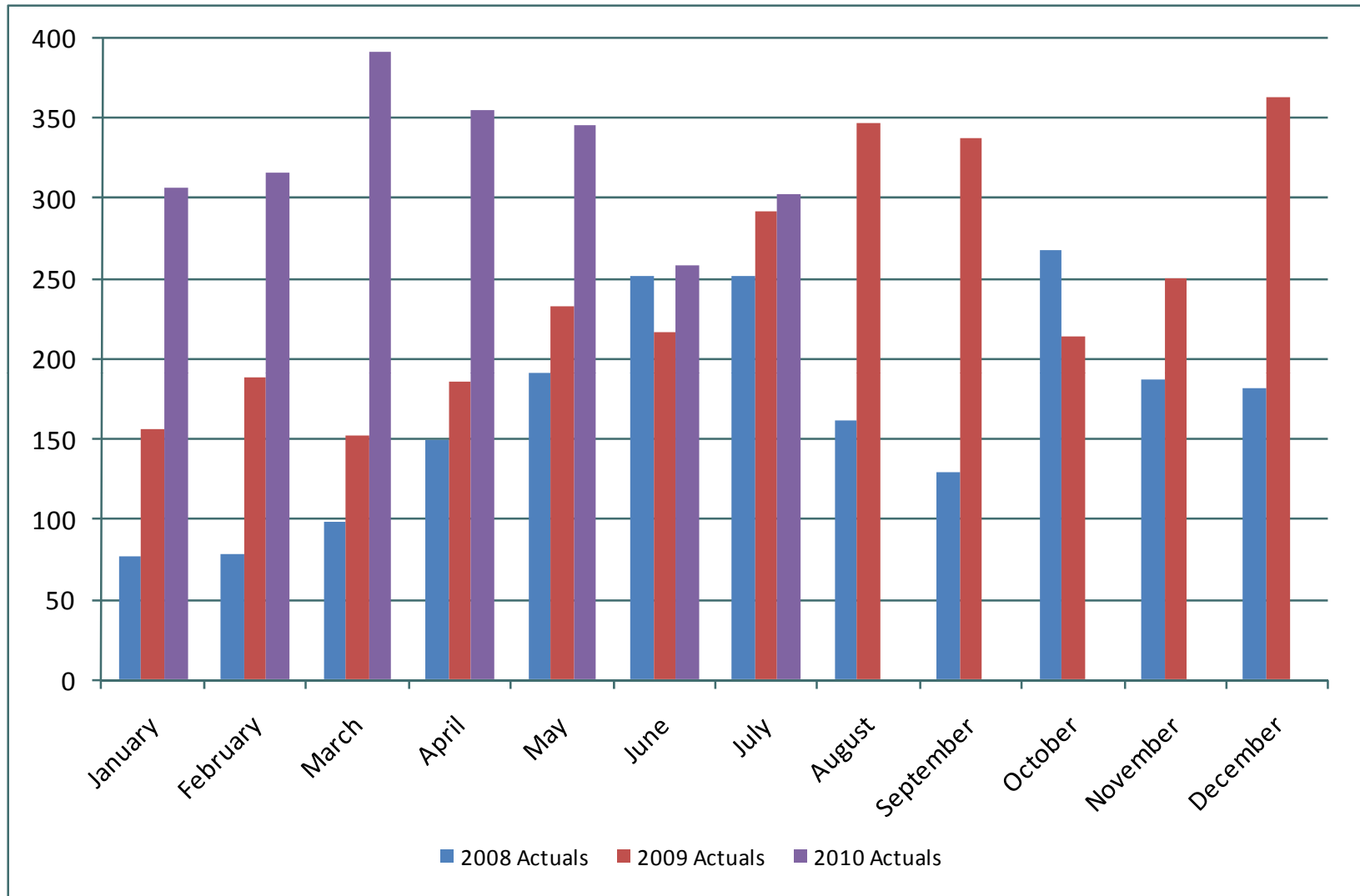
Legend: ■ 2008 Actuals ■ 2009 Actuals ■ 2010 Actuals

Release Management Metrics (Nodal vs. Zonal Releases)

Note: 2010 metrics are YTD

ERCOT Public Website Metrics (July 2010)

Name↑	Reports	Status	Visits	Avg. Time on Site	Bounce Rate	Completed Goals	Visits % Change
http://faq.ercot.com UA-460876-6							
☆ faq.ercot.com	View report	✔	1,133	00:02:08	46.51%	0	🔴 -0.61%
http://nodal.ercot.com UA-460876-5							
☆ nodal.ercot.com	View report	✔	13,512	00:03:55	35.13%	0	🟢 1.33%
http://planning.ercot.com UA-460876-7							
☆ planning.ercot.com	View report	✔	2,127	00:04:54	19.46%	0	🟢 5.77%
http://search.ercot.com UA-460876-8							
☆ search.ercot.com	View report	✔	5,152	00:03:05	50.87%	0	🔴 -3.45%
http://www.ercot.com UA-460876-2							
☆ www.ercot.com	View report	✔	96,462	00:02:31	60.65%	0	🔴 -4.76%

Legend
Bounce Rate: % of single page visits; **Completed Goals:** Measure of specific predefined actions completed by visitors;
% Change: % change in visits relative to previous month

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

- **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

Nodal Production – July 2010 Net Availability

July 2010 Net Availability for Nodal Production systems

	Aggregate EMS	Outage Scheduler	CRR
Availability	99.95	100.00	100.00
SLA Target	98.00	98.00	98.00