Information Technology and Facilities Report

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ERCOT Board of Directors

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Highlights

- **Service Availability:**
  - ✓ Market Operations IT systems met all SLA targets
  - ✓ Market Data Transparency IT systems met all SLA targets
  - ✗ Nodal Market IT Systems missed one SLA target (MMS SCED)
    - During a planned site failover on 4/5, 15 SCED intervals were missed leading to 99.83% availability
  - ✗ Retail Market IT systems missed one SLA target (Retail Business Hours)
    - On 4/13, a 66-minute outage occurred due to server maintenance resulting in 99.56% availability for the month

- **Planned Site Failover (4/5)**
  - During a planned site failover, database patching took longer than expected and eight SCED intervals were missed
  - Following database patching, problems establishing connectivity between EMMS applications and the market database led to 10 missed SCED intervals
  - Steps have been added to the failover plan to further verify connectivity prior to active site disconnect

Highlights Cont'd

- **Retail transaction processing degradation (4/3 - 4/4)**
  - Following maintenance activities on 4/3, one piece of application functionality was not correctly enabled, and caused some transactions to be incorrectly prioritized causing a processing delay that impacted approximately 530 transactions

- **Retail outage (4/13)**
  - Human error during Operating System patching caused a 66-minute outage of all Retail systems (transaction processing, TML and MarkeTrak) and retail functionality within MIS

- **Retail outage and performance degradation (4/15 - 4/20)**
  - Disk contention within the SAN infrastructure caused numerous retail system issues, including a 120-minute outage of TML on 4/19, and slow system performance on 4/20
  - Configuration changes alleviated the messaging backlogs, and returned performance to normal levels
  - The Retail Market SLA is being updated to include performance monitoring and reporting of TML
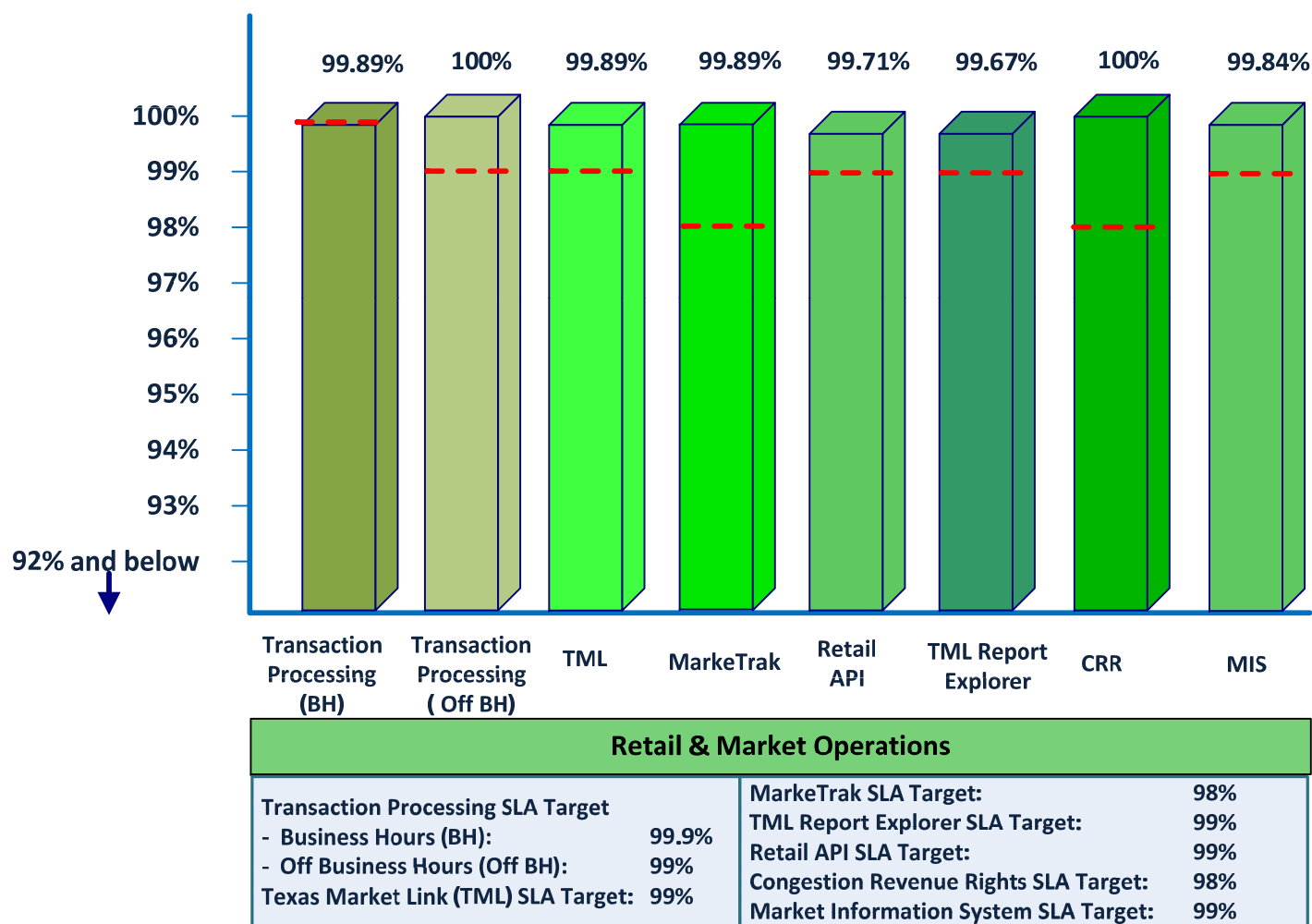
Highlights Cont'd

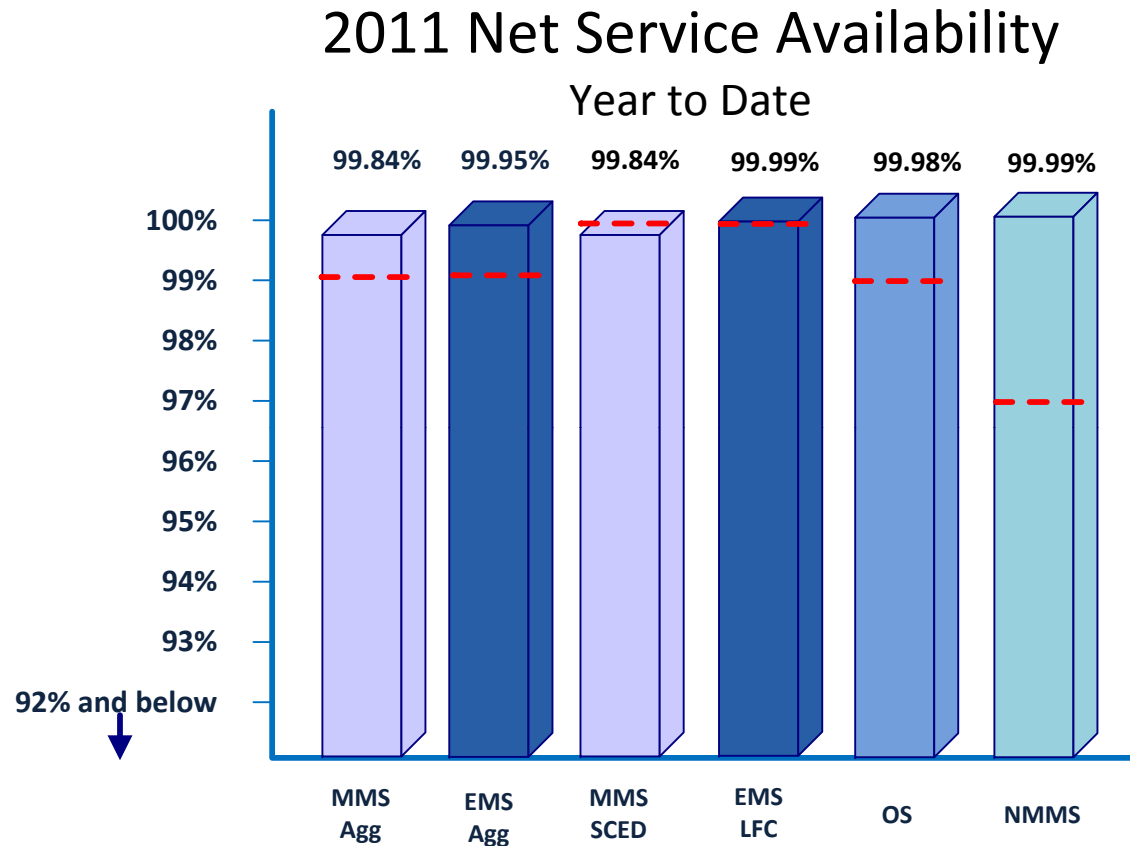- **Data Center Migration**
  - Wave 1 (Corporate environment migration) in progress and remains two weeks behind schedule
    - Schedule risk mitigated by reprioritizing all tasks necessary to start Wave 2 early. No downstream impacts of the delay.
    - Corporate virtual servers moved on schedule with remainder moving into Wave 2

  - Wave 2 (Development and Integrated Test systems) started four weeks early
    - Daily coordination meetings are being held to maximize resource utilization and to avoid conflicts with other projects and efforts

  - Wave 4 (Bastrop Disaster Recovery environment) planning in progress for early start

  - Additional project information will be presented during the Business Integration update

2011 Net Service Availability (Retail and Market Ops)

2011 Net Service Availability
Year to Date

Transaction Processing (BH)	Transaction Processing (Off BH)	TML	MarkeTrak	Retail API	TML Report Explorer	CRR	MIS
99.89%	100%	99.89%	99.89%	99.71%	99.67%	100%	99.84%

Retail & Market Operations

Transaction Processing SLA Target		MarkeTrak SLA Target:	98%
- Business Hours (BH):	99.9%	TML Report Explorer SLA Target:	99%
- Off Business Hours (Off BH):	99%	Retail API SLA Target:	99%
Texas Market Link (TML) SLA Target:	99%	Congestion Revenue Rights SLA Target:	98%
		Market Information System SLA Target:	99%

2011 Net Service Availability (Grid Ops)

2011 Net Service Availability
Year to Date

99.84%	99.95%	99.84%	99.99%	99.98%	99.99%

Bars: MMS Agg, EMS Agg, MMS SCED, EMS LFC, OS, NMMS

Y-axis: 100%, 99%, 98%, 97%, 96%, 95%, 94%, 93%, 92% and below

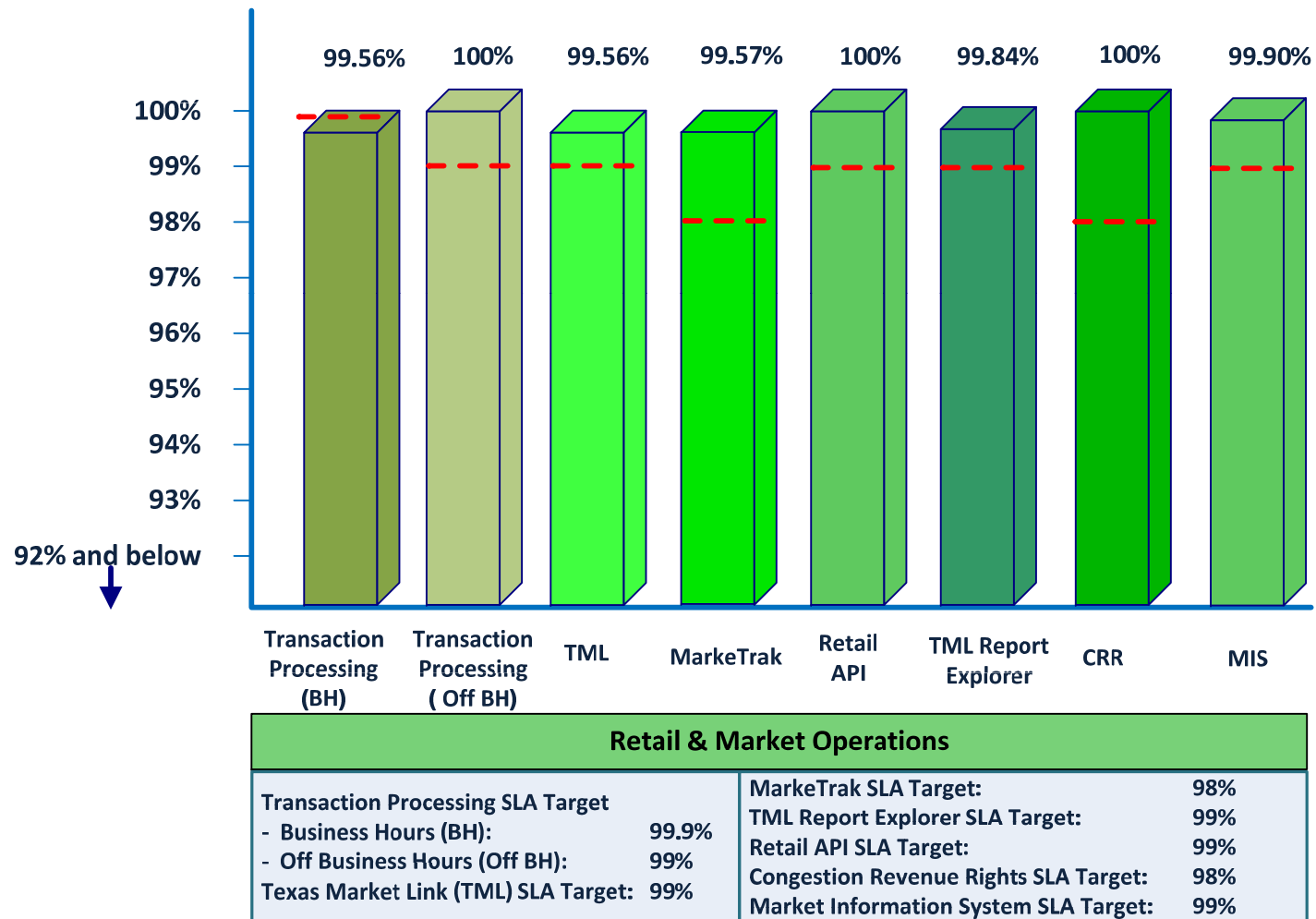| Grid Operations	
MMS Aggregate SLA Target: 99%	EMS LFC Target: 99.93%
EMS Aggregate SLA Target: 99%	Outage Scheduler Target: 99%
MMS SCED SLA Target: 99.93%	NMMS Target: 97%

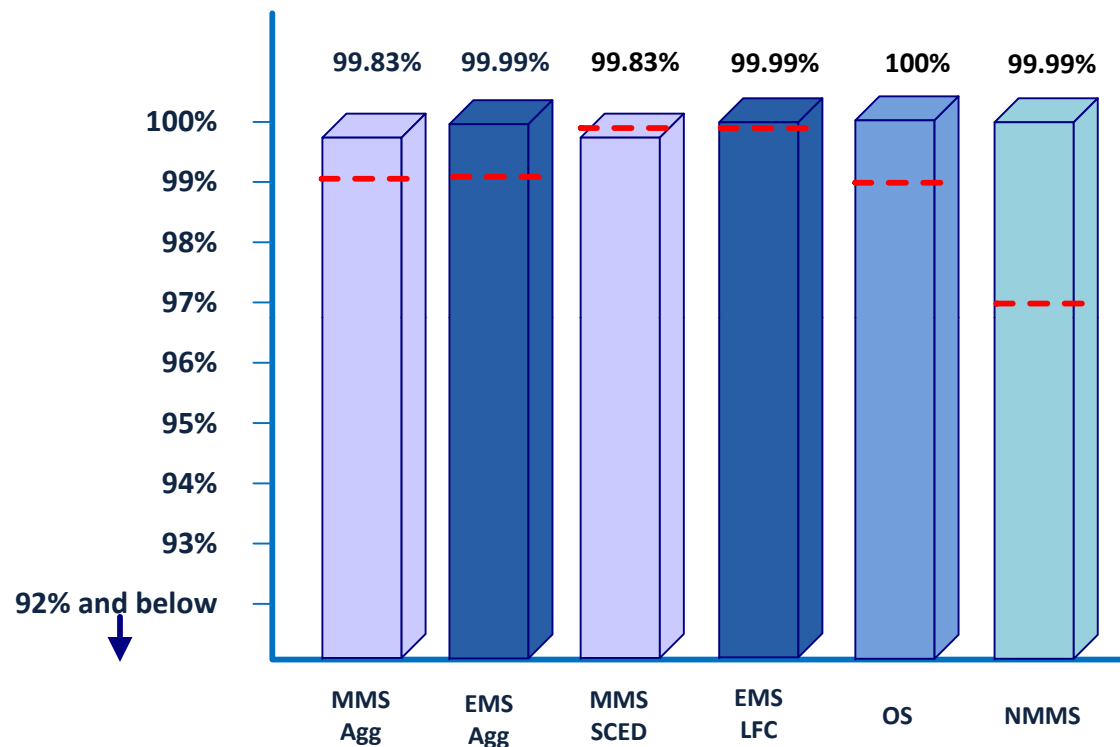# 2011 Data Center Availability

2011 Data Center Availability
Year to Date

Target – 99.982%

100% 100% 100% 100%

Taylor 1   Taylor 2   Austin   Bastrop

Outage prevented due to Tier 3 redundancy

April 2011 Net Service Availability

April 2011 Net Service Availability

Chart: April 2011 Net Service Availability

Service	Availability
Transaction Processing (BH)	99.56%
Transaction Processing (Off BH)	100%
TML	99.56%
MarkeTrak	99.57%
Retail API	100%
TML Report Explorer	99.84%
CRR	100%
MIS	99.90%

Retail & Market Operations

Transaction Processing SLA Target		MarkeTrak SLA Target:	98%
- Business Hours (BH):	99.9%	TML Report Explorer SLA Target:	99%
- Off Business Hours (Off BH):	99%	Retail API SLA Target:	99%
Texas Market Link (TML) SLA Target:	99%	Congestion Revenue Rights SLA Target:	98%
		Market Information System SLA Target:	99%

April 2011 Net Service Availability

April 2011 Net Service Availability

Grid Operations		
MMS Aggregate SLA Target: 99%	EMS LFC Target:	99.93%
EMS Aggregate SLA Target: 99%	Outage Scheduler Target:	99%
MMS SCED SLA Target: 99.93%	NMMS Target:	97%

April 2011 Data Center Power Availability

April 2011 Data Center Availability

Bar chart showing April 2011 Data Center Availability. All four data centers — Taylor 1, Taylor 2, Austin, and Bastrop — show 100% availability, exceeding the Target – 99.982%.

Legend: Outage prevented due to Tier 3 redundancy
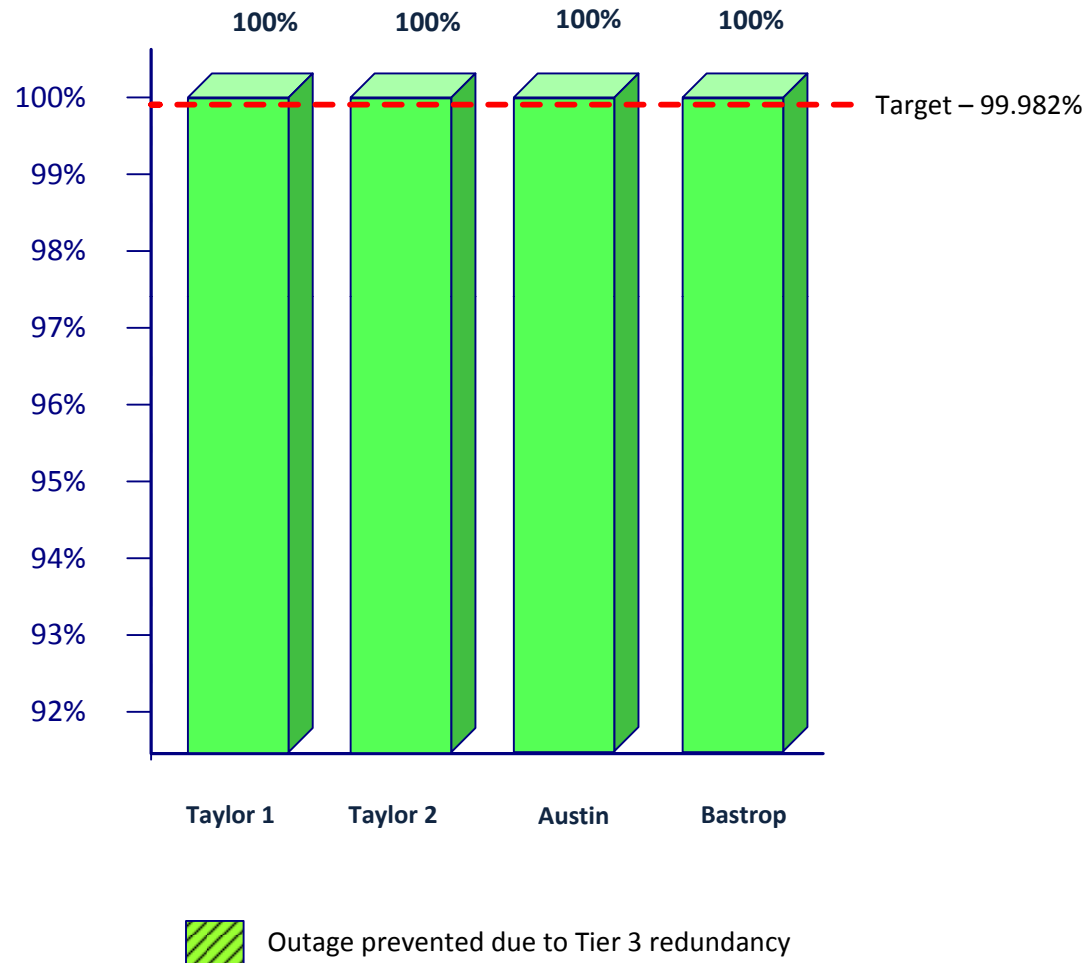
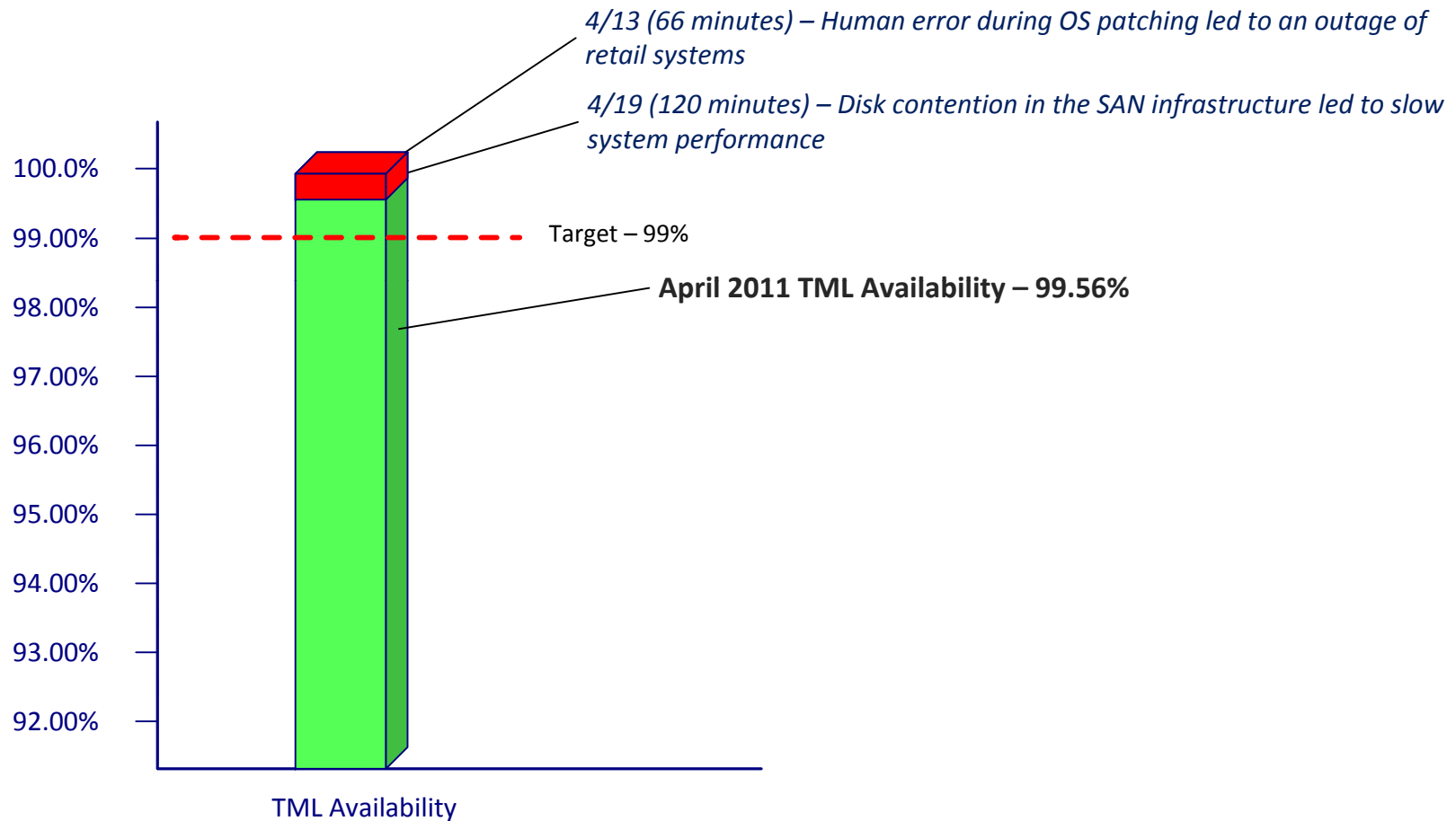# Retail Processing (Business Hours) Availability

April 2011 Retail Transaction Processing Availability Summary (Business Hours)

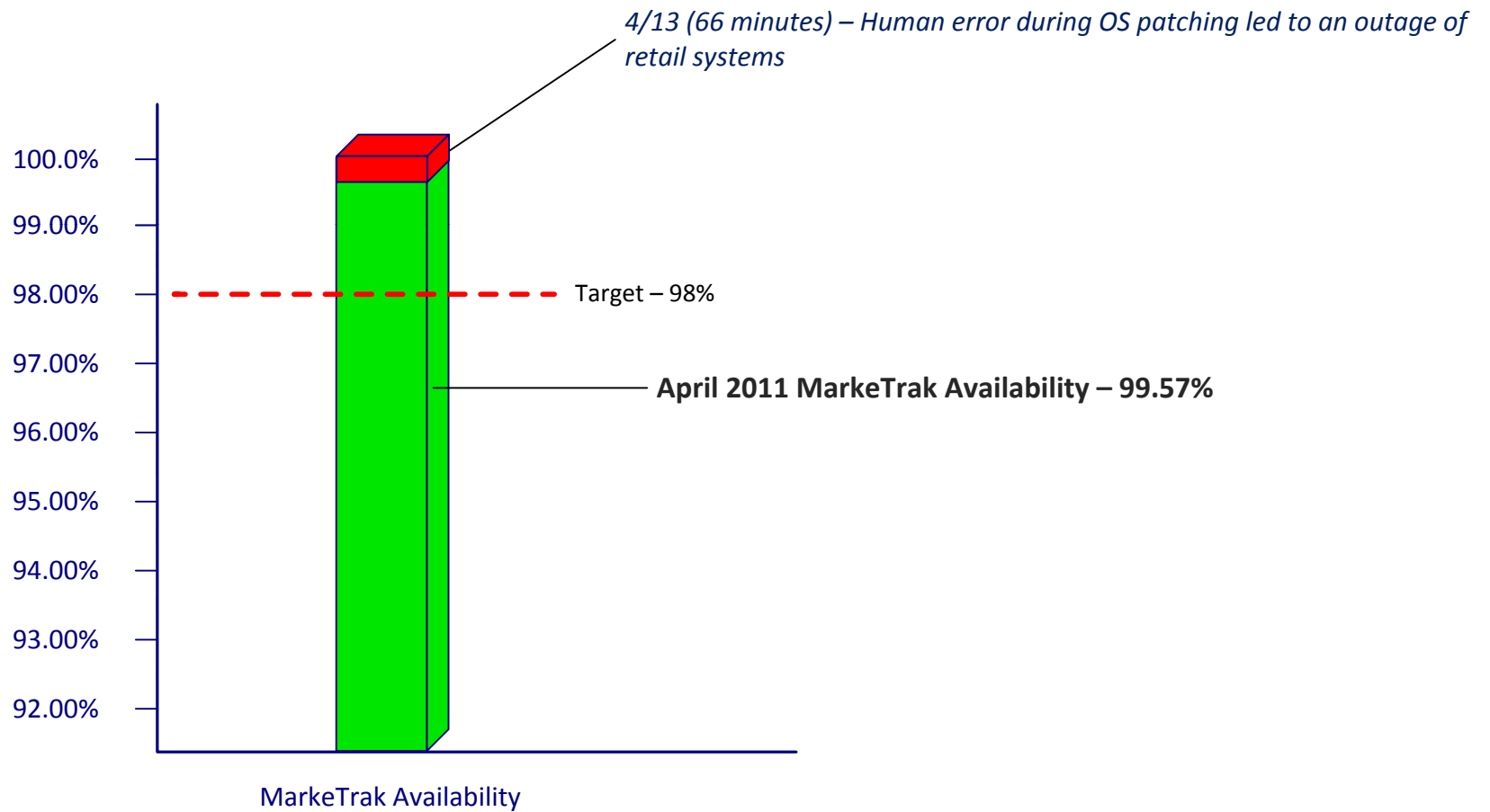*4/13 (66 minutes) – Human error during OS patching led to an outage of retail systems*

Target – 99.9%

April 2011 Retail Transaction Processing Availability (BH) – 99.56%

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

Retail Transaction Processing Availability (Business Hours)
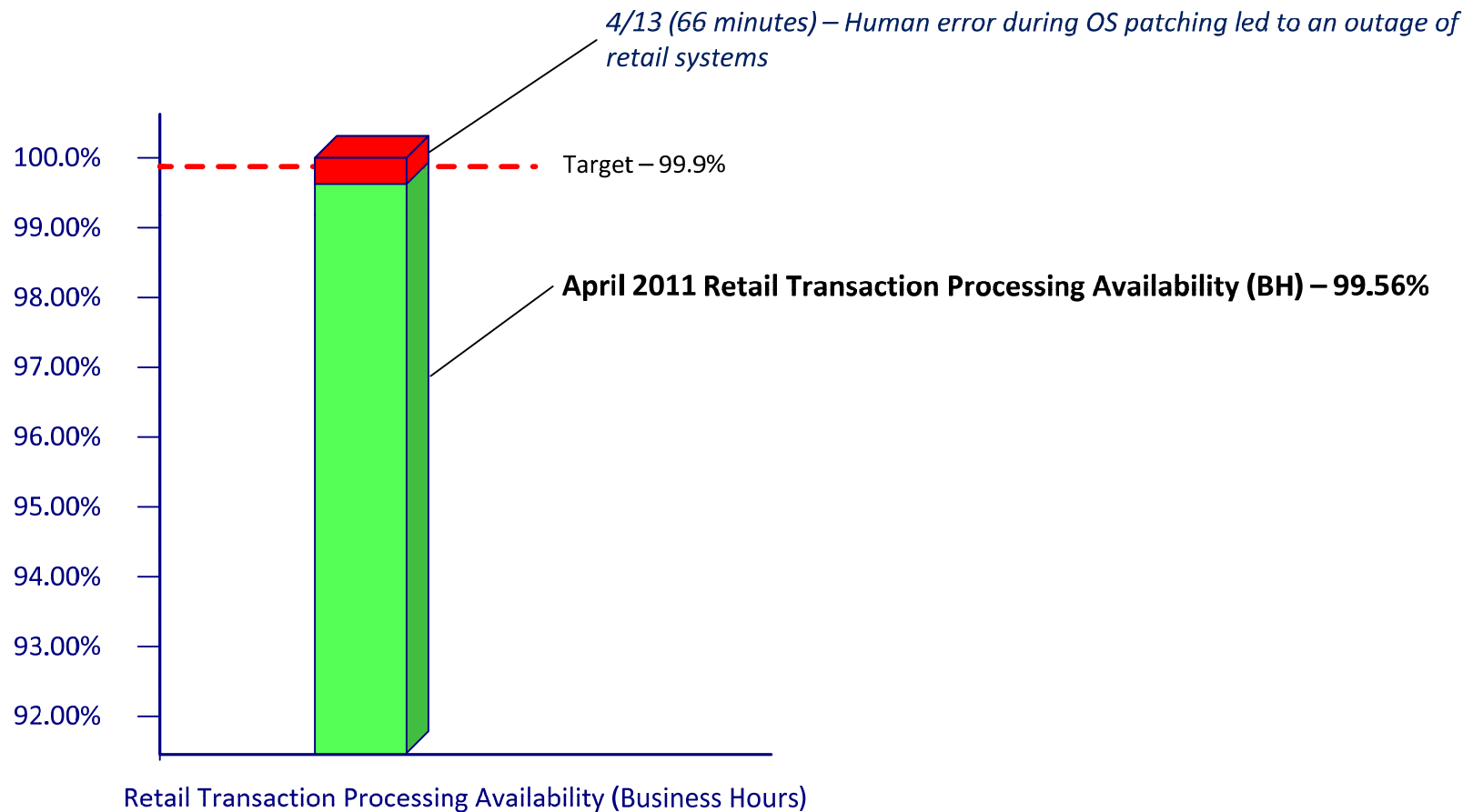
TML Availability

April 2011 TML Availability Summary

4/13 (66 minutes) – Human error during OS patching led to an outage of retail systems

4/19 (120 minutes) – Disk contention in the SAN infrastructure led to slow system performance

Target – 99%

April 2011 TML Availability – 99.56%

TML Availability

MarkeTrak Availability

April 2011 MarkeTrak Availability Summary

4/13 (66 minutes) – Human error during OS patching led to an outage of retail systems
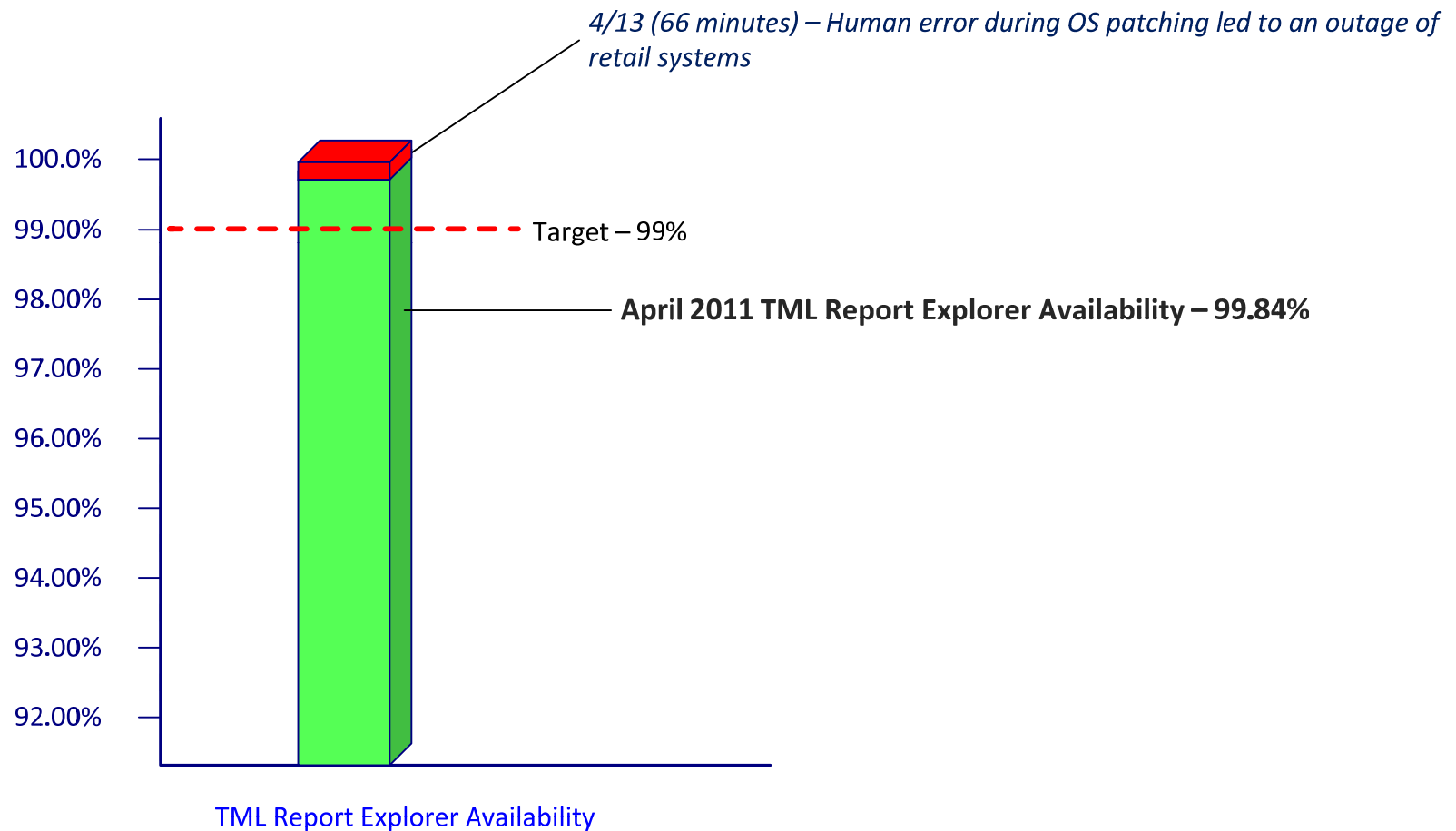
Target – 98%

April 2011 MarkeTrak Availability – 99.57%

MarkeTrak Availability

TML Report Explorer Availability

April 2011 TML Report Explorer Availability Summary

4/13 (66 minutes) – Human error during OS patching led to an outage of retail systems
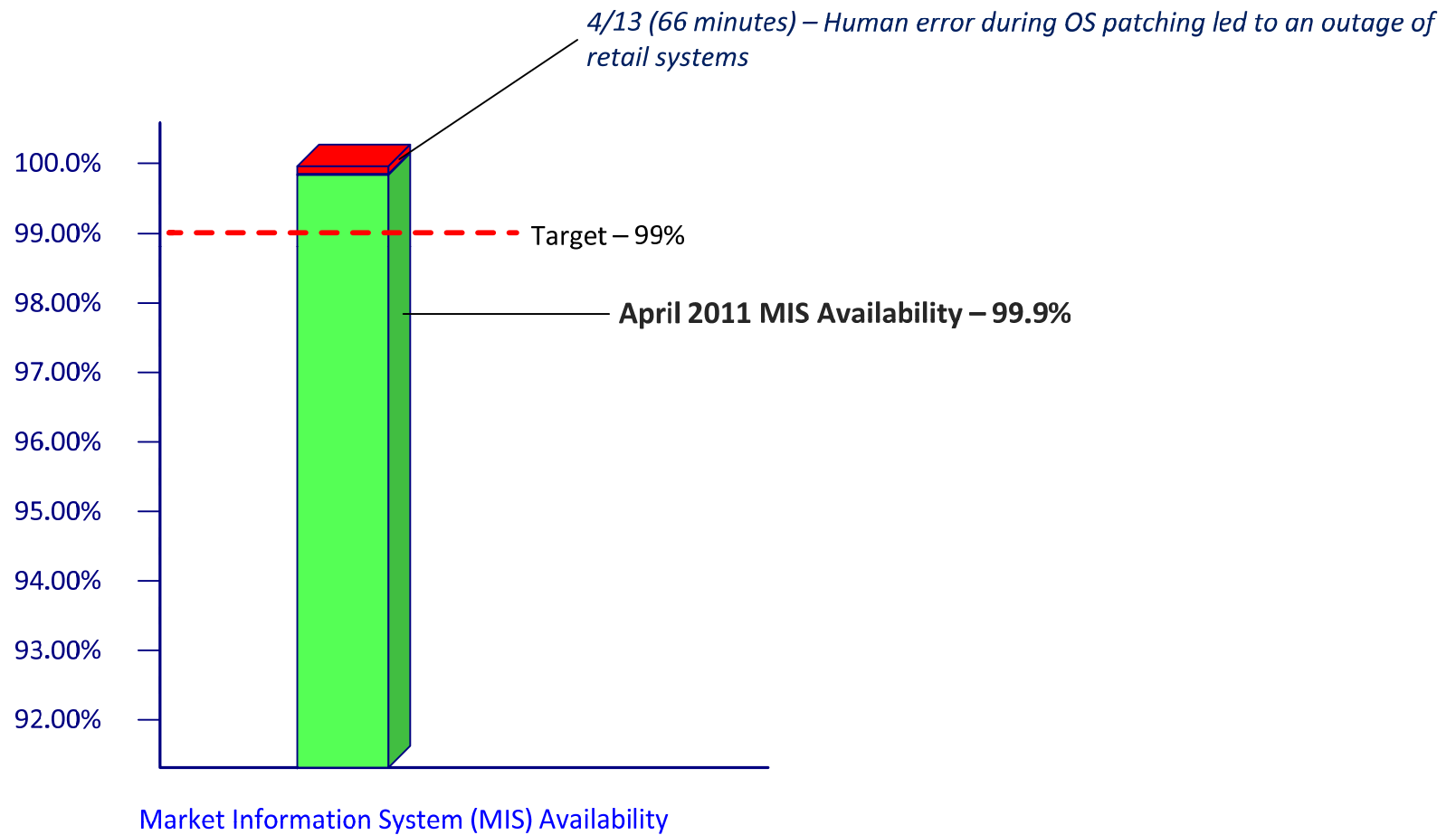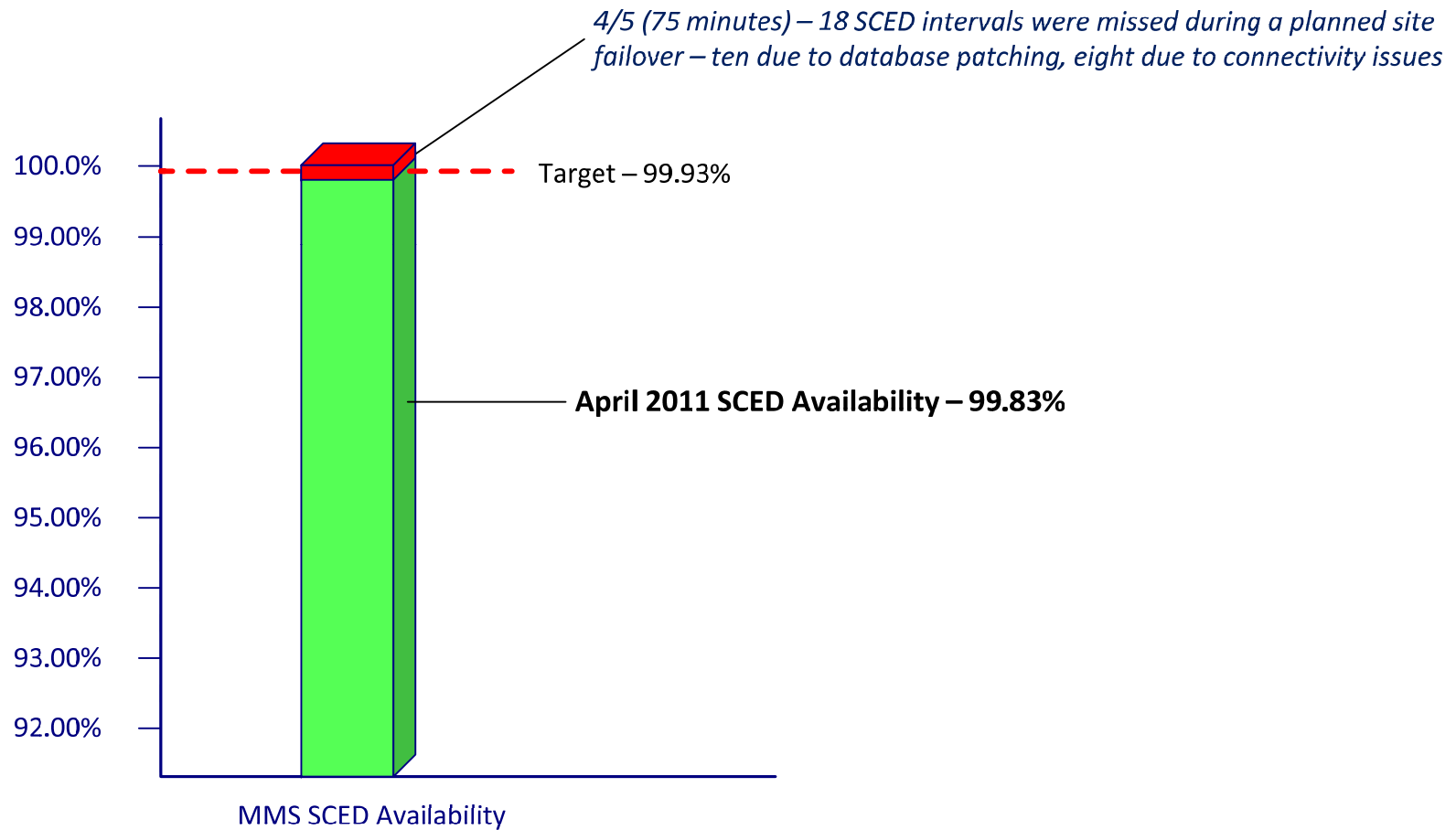
Target – 99%

April 2011 TML Report Explorer Availability – 99.84%

TML Report Explorer Availability

MIS Availability

April 2011 MIS Availability Summary

4/13 (66 minutes) – Human error during OS patching led to an outage of retail systems

Target – 99%

April 2011 MIS Availability – 99.9%

Market Information System (MIS) Availability

MMS SCED Availability Summary

April 2011 MMS SCED Availability Summary

4/5 (75 minutes) – 18 SCED intervals were missed during a planned site failover – ten due to database patching, eight due to connectivity issues
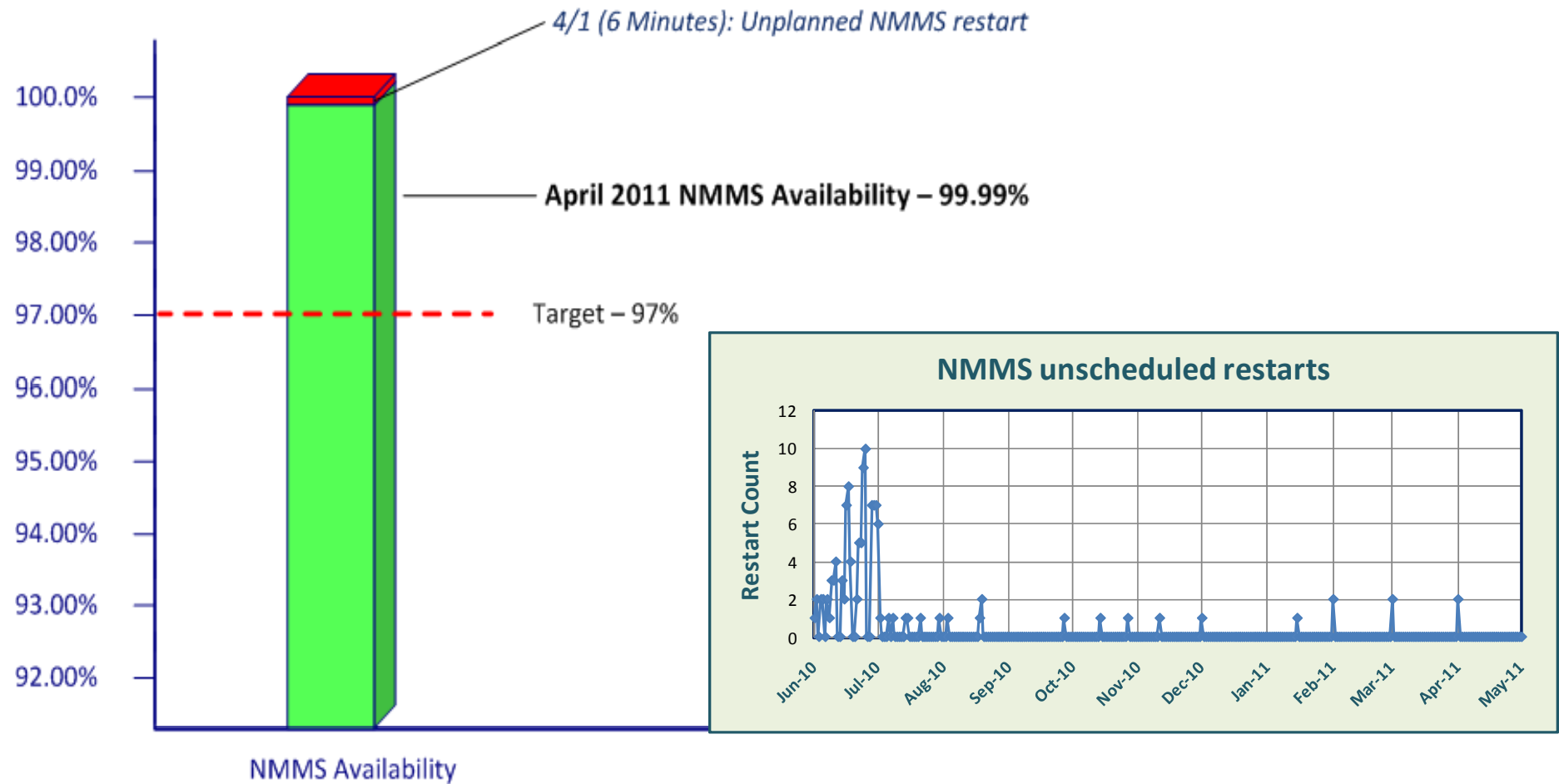
Target – 99.93%

April 2011 SCED Availability – 99.83%

MMS SCED Availability

Network Model Management System

April 2011 Network Model Management System (NMMS)
Availability Summary

4/1 (6 Minutes): Unplanned NMMS restart

April 2011 NMMS Availability – 99.99%

Target – 97%

NMMS unscheduled restarts

NMMS Availability

Release Management Metrics (Releases)

Legend: ■ 2008 Actuals ■ 2009 Actuals ■ 2010 Actuals ■ 2011 Actuals
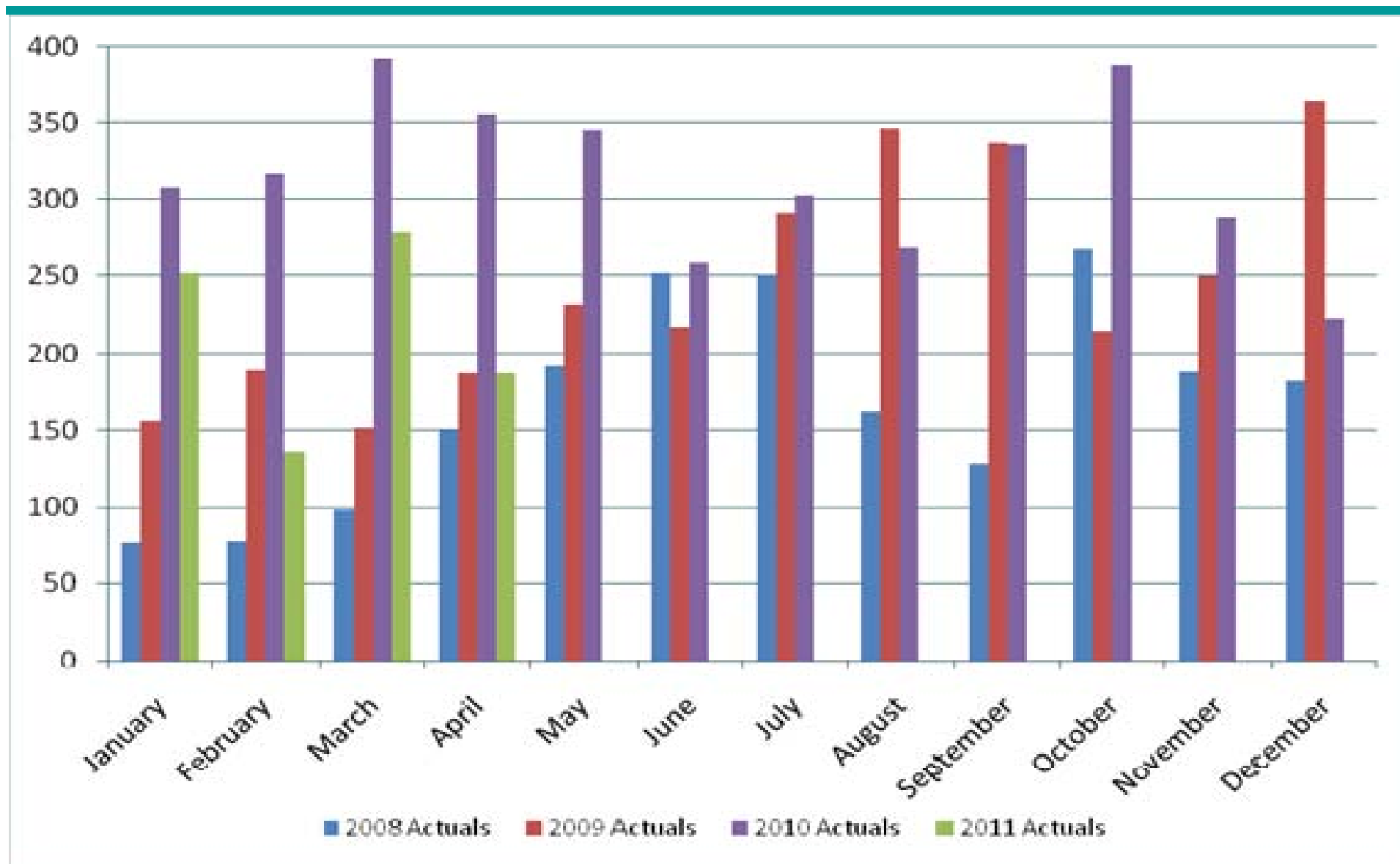
Release Management Metrics (Changes)
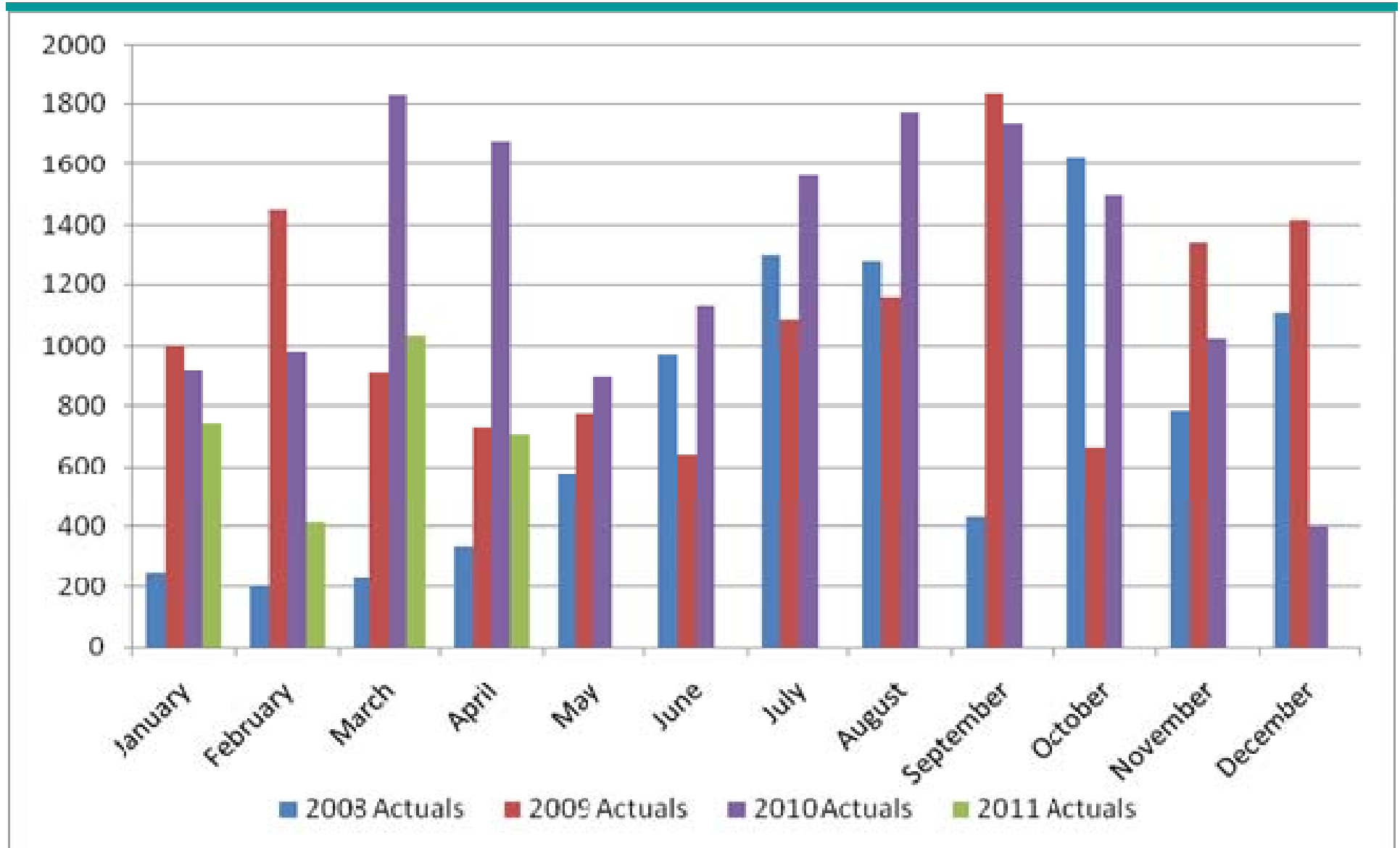
ERCOT Public Website Metrics (April 2011)

Name ↑	Reports	Status	Visits	Avg. Time on Site	Bounce Rate	Completed Goals	Visits ▼ % Change		Actions
http://faq.ercot.com UA-460876-6									
☆ faq.ercot.com	View report	✓	937	00:02:00	49.31%	0	🔻 -0.74%		
http://search.ercot.com UA-460876-8									
☆ search.ercot.com	View report	✓	5,969	00:03:08	50.68%	0	🔺 4.32%		
http://www.ercot.com UA-460876-2									
☆ www.ercot.com	View report	✓	109,845	00:02:51	60.16%	2	🔺 10.01%		

Find profile: [_____]   Show rows: 10 ▾   1 of 1 ◀ ▶