



# Information Technology and Facilities Report

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Vice President & CIO

**ERCOT Board of Directors**  
**July 20, 2010**

# Highlights

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- **No SLA-impacting outages:** Zonal EMMS and Commercial systems achieved 100% SLA availability.
  
- **New Data Centers:** Construction of the new data centers in Bastrop and Taylor continues to be on schedule and under budget.
  - Building systems integration testing scheduled to start July 12<sup>th</sup>
  - Network equipment to provide connectivity between Met Center and Bastrop data center has been installed
  - T1 lines for commissioning the Bastrop data center have been delivered / verified
  - Contracts completed for dark fiber to link the data centers
  - The first of the four planned RFP's for computing and network equipment for new data centers has been issued
  
- **TRE Separation:** TRE-ERCOT separation was completed as planned on June 30<sup>th</sup>.

## Highlights (continued)

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- **Nodal Site Failover Testing:** Site failovers were tested successfully for the following systems / integrated environment:
  - 6/18 – MIS, Enterprise Integration (EIP) and External Web Services (EWS)
  - 6/25 – Nodal integrated environment
  
- **Nodal 8 Hour LFC Test:** Nodal 8 hour Load Frequency Control (LFC) test was completed as part of Market trials on June 17<sup>th</sup>.
  - Several issues noted
  - All issues resolved – fixes deployed to production

# Highlights (continued)

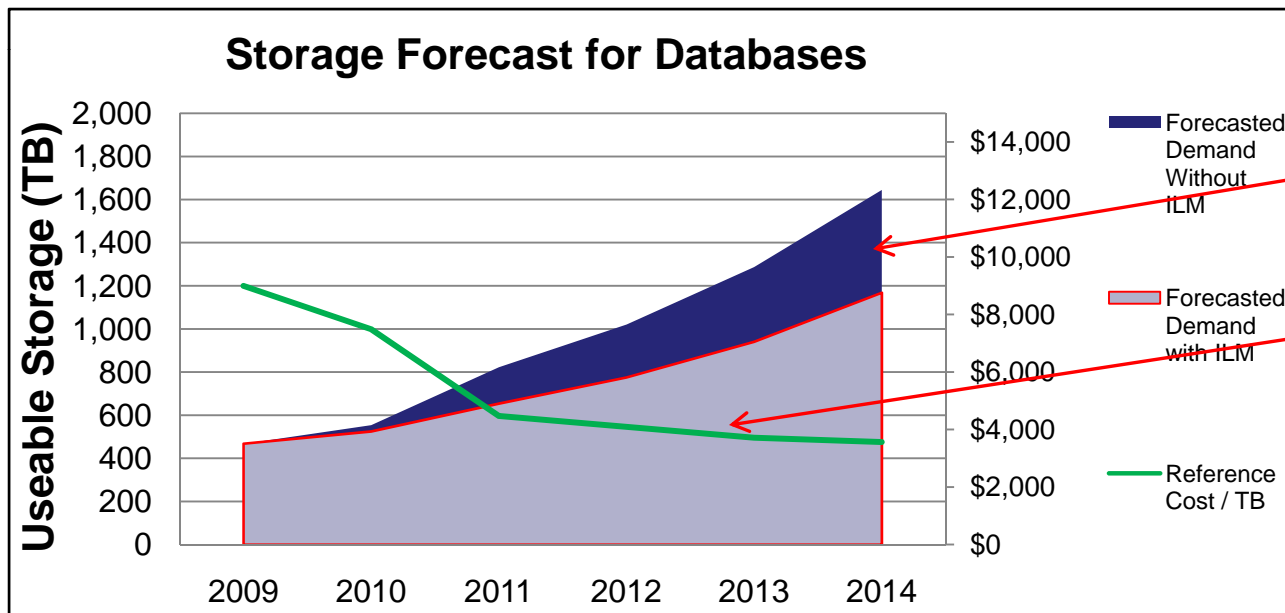
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- **Nodal NNMS restarts:** Recurring restarts of the Nodal Network Model Management System (NNMS) escalated to the vendor.
  - Issue
    - NNMS system has a software defect that impacts how the system manages computer memory, resulting in recurring application restarts.
    - A restart frequently causes users to lose interim model changes.
  - Progress
    - On Friday July 2<sup>nd</sup>, a parameter change was made to the NNMS Database application, affecting the memory allocation process.
    - *There have been no system restarts attributable to memory management since fix*
    - There was one restart on Tuesday, July 6<sup>th</sup> and one Thursday, July 8<sup>th</sup>. Neither were the result of the memory issue. Fix to be deployed week of July 12<sup>th</sup>.
  - Next Steps
    - Confirm that the system has stabilized and assess performance
    - Continue to aggressively manage NNMS stability and performance as a high priority
    - ERCOT is meeting with vendor personnel daily via conference calls
  - Service Level Metrics
    - ERCOT is developing code to continuously monitor availability and response times to provide better visibility into stability and performance
    - Expect to deploy the code by end of July.
  - System Operations
    - Over 700,000 model changes made since system implementation

# Benefits realized from ILM project

2010 Storage Addition Project	Tier 1 Storage	Lower Tier Storage	Reference Cost
Without ILM Strategy	100%	0%	\$9,000/TB
With ILM Strategy	5%	95%	\$ 1,827/TB

**Implementation of ILM policies resulted in an 80% reduction in the cost per Terabyte of the storage acquisition.**



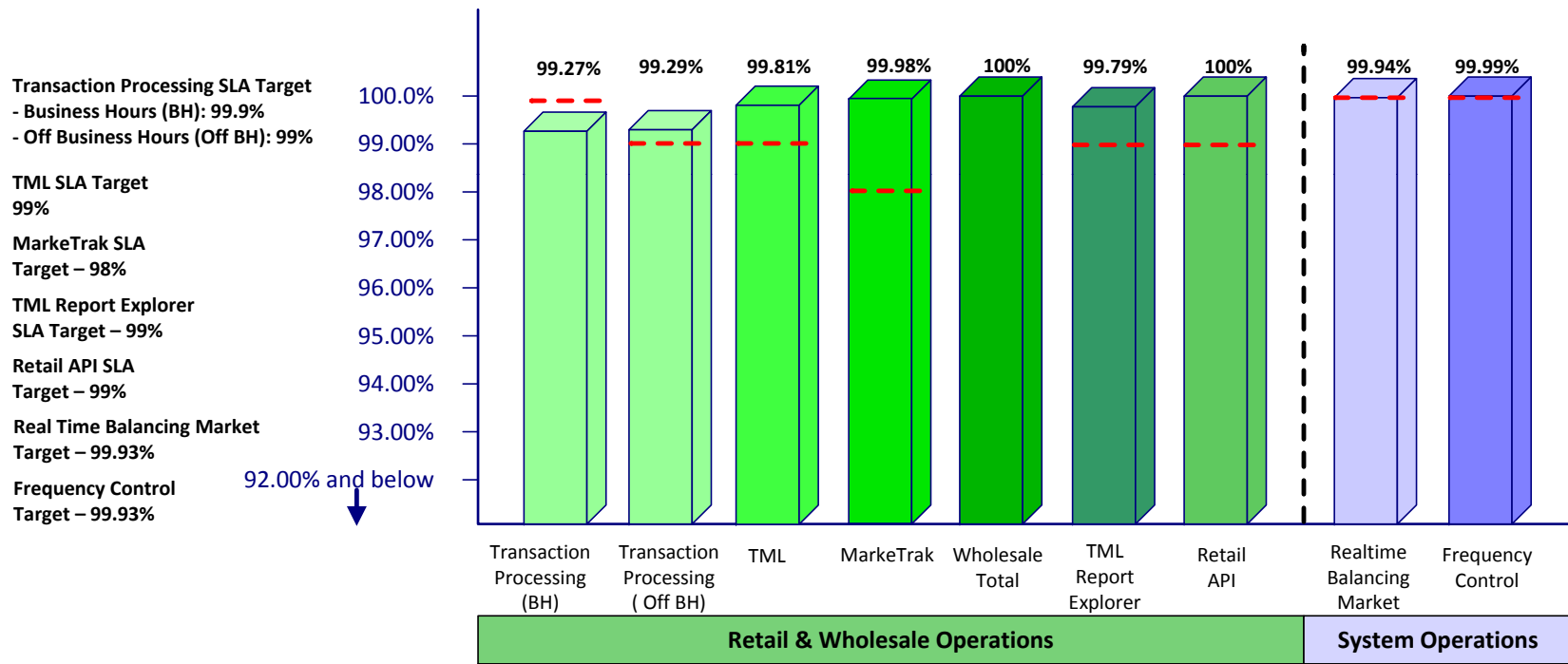
**Forecast future benefits**

**35% decrease in data volume**

**60% reduction in capital costs for new storage acquisitions.**

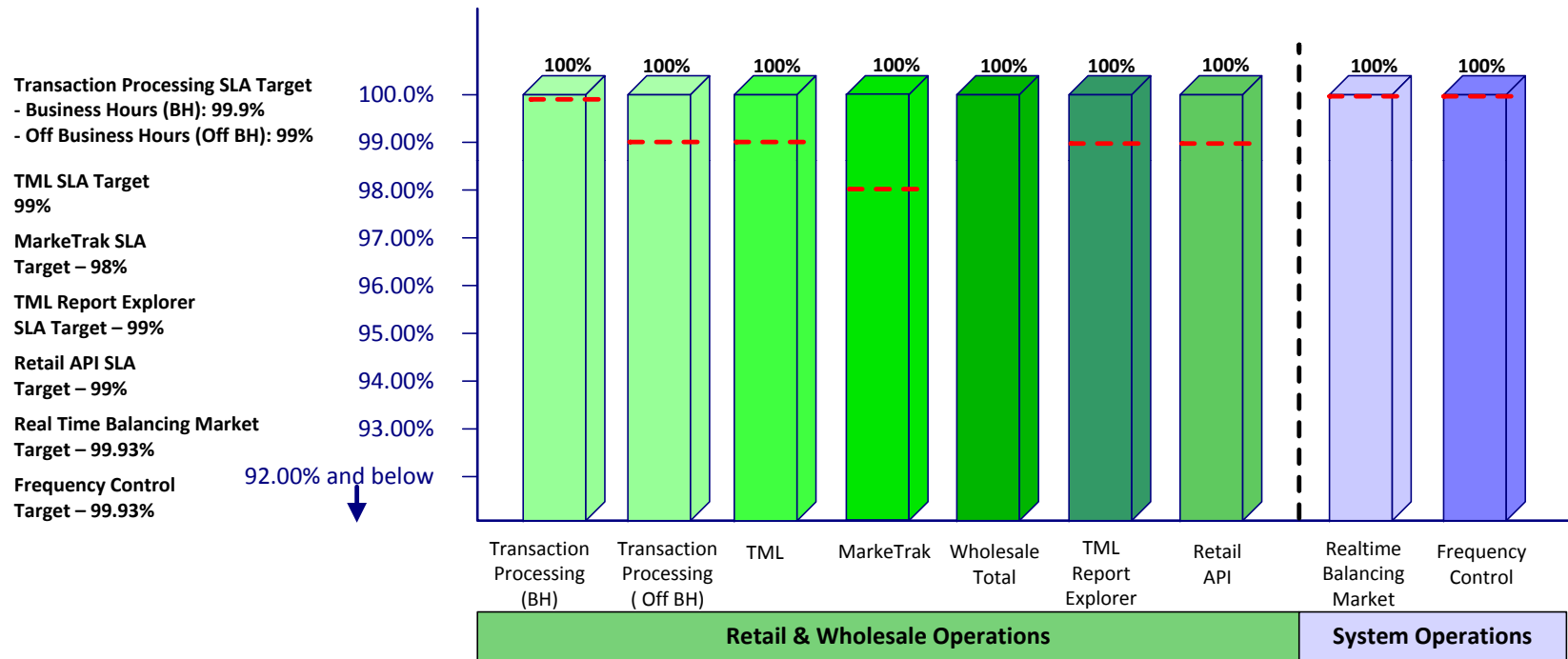
# 2010 Net Service Availability

## 2010 Net Service Availability Through June 30<sup>th</sup>, 2010



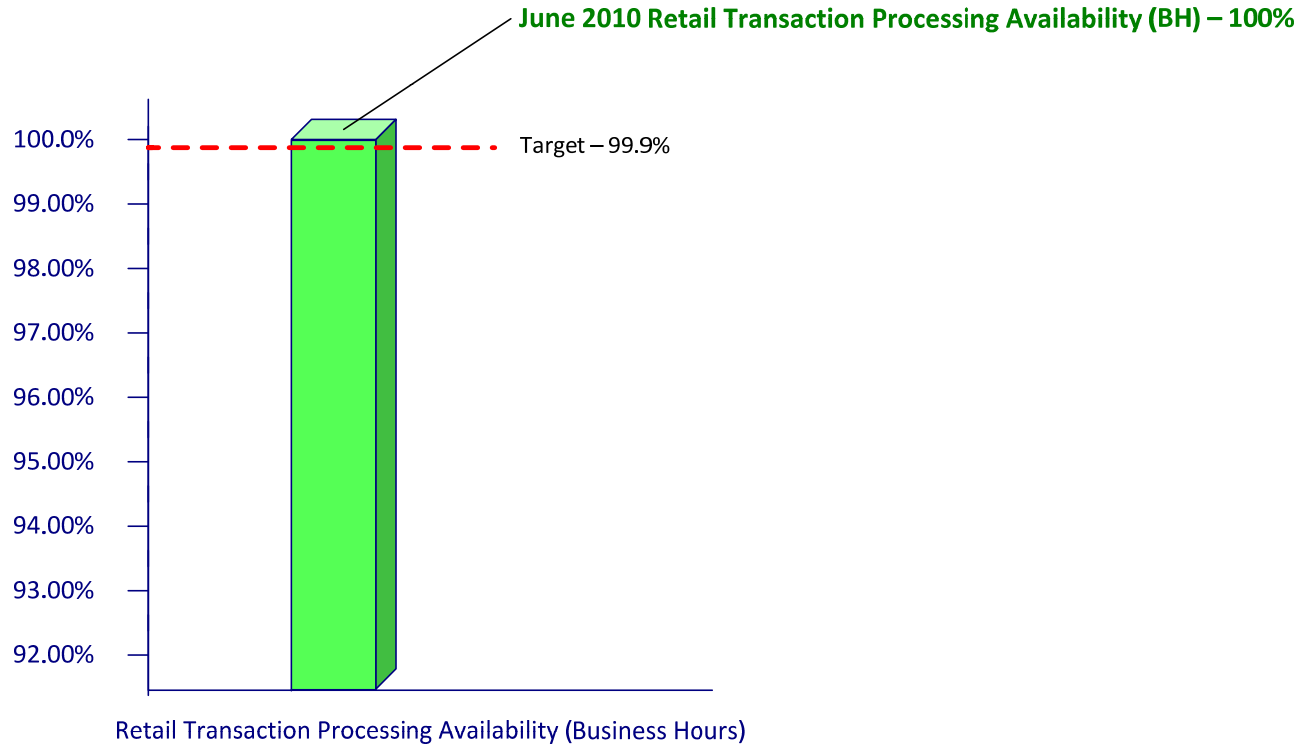
# June 2010 Net Service Availability

## June 2010 Net Service Availability



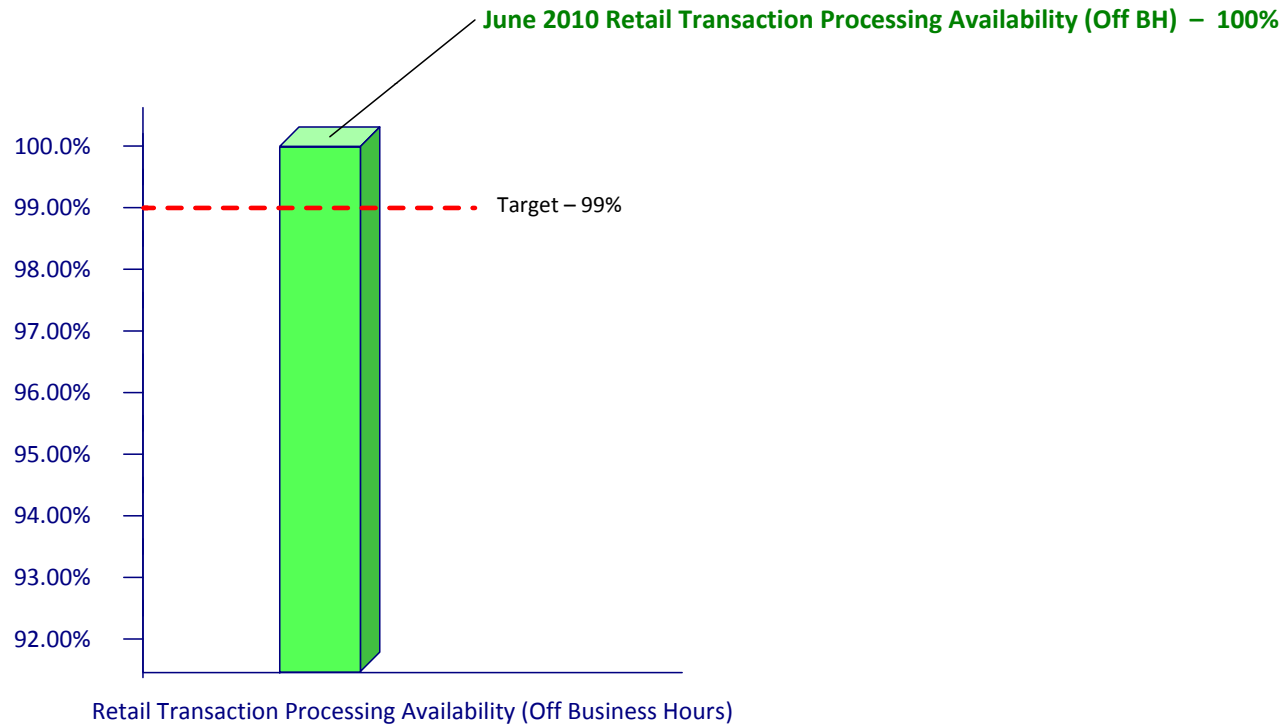
# Retail Transaction Processing Availability Summary

## June 2010 Retail Transaction Processing Availability Summary (Business Hours)



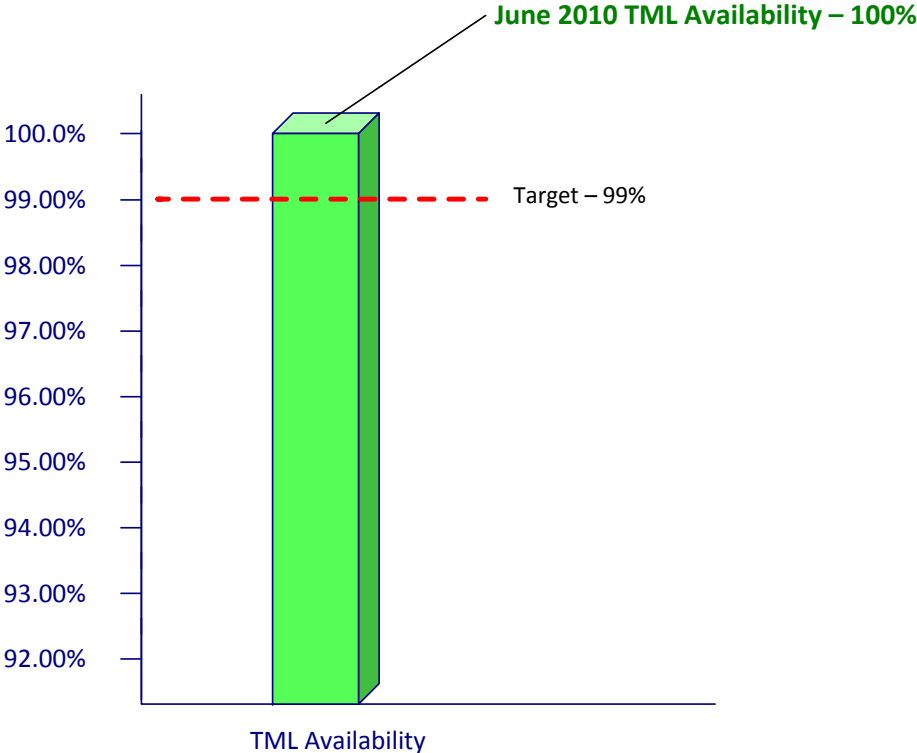
# Retail Transaction Processing Availability Summary (contd.)

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



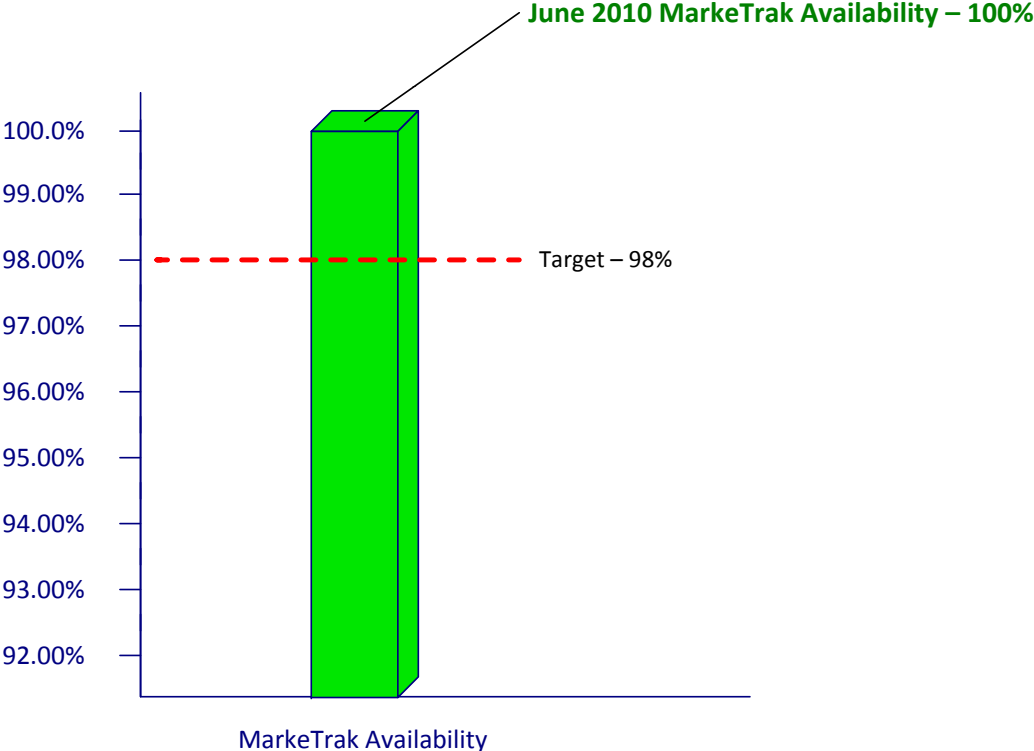
# TML Availability Summary

## June 2010 TML Availability Summary



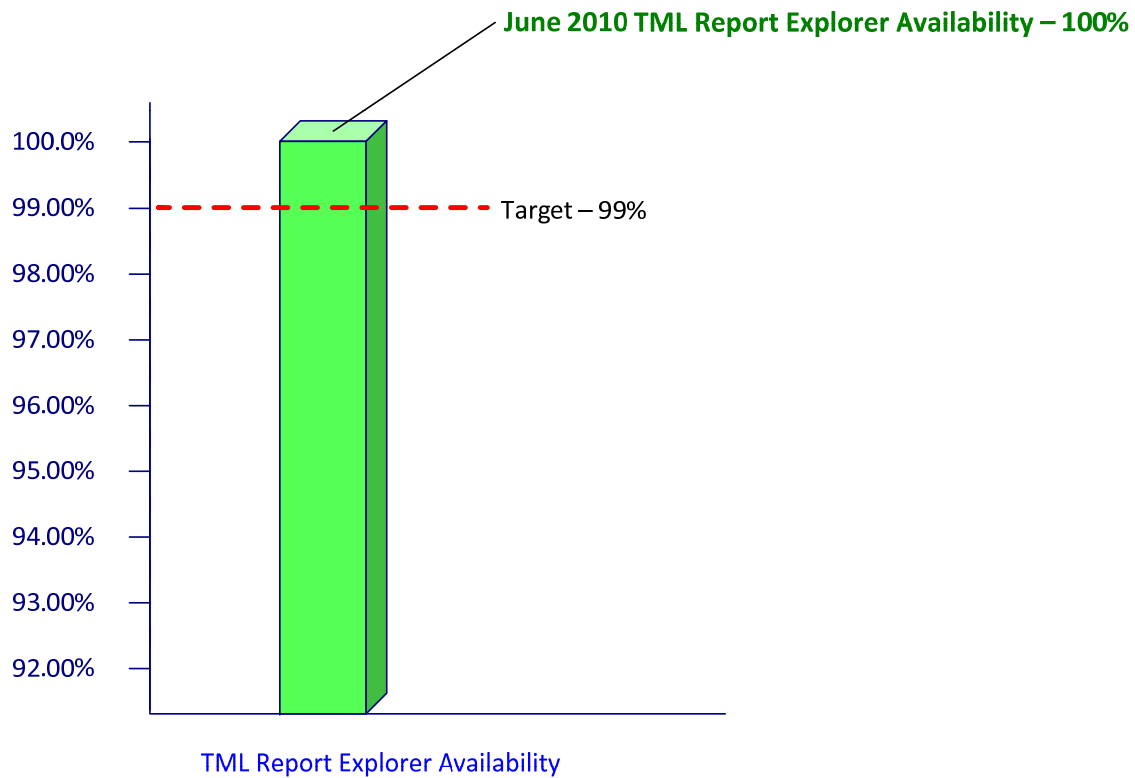
# MarkeTrak Availability Summary

## June 2010 MarkeTrak Availability Summary



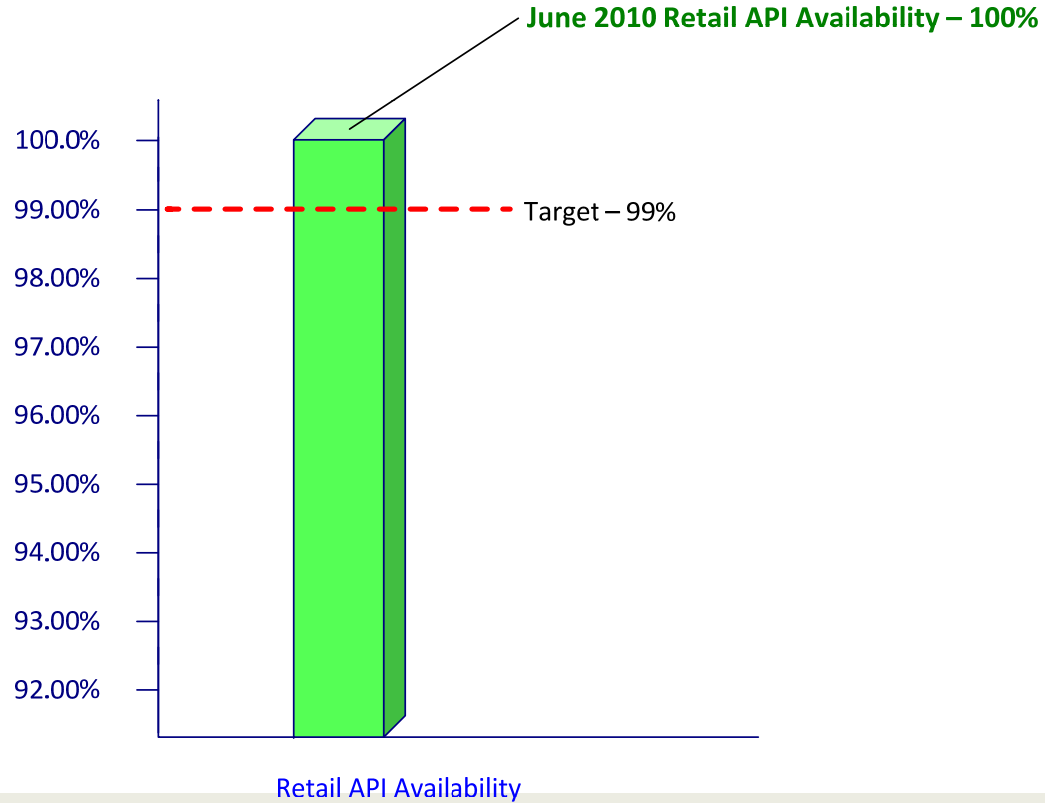
# TML Report Explorer Availability Summary

## June 2010 TML Report Explorer Availability Summary



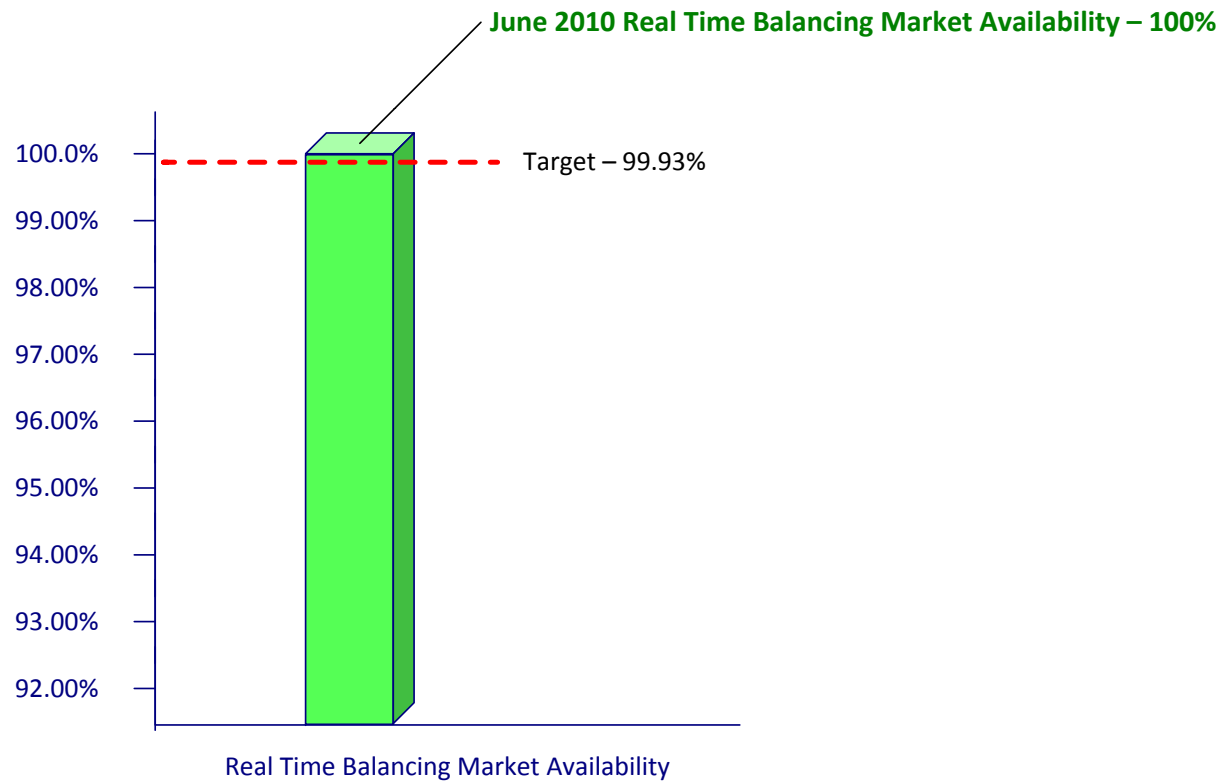
# Retail API Availability Summary

## June 2010 Retail API Availability Summary



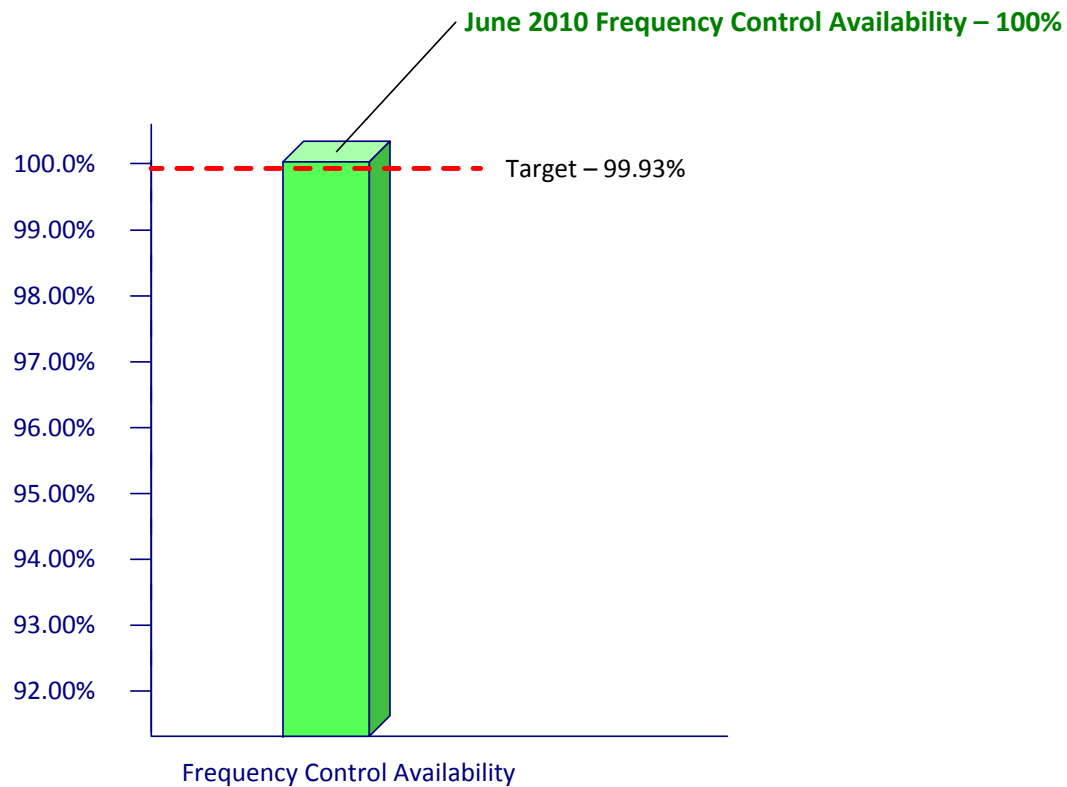
# Real Time Balancing Market Availability Summary

## June 2010 Real Time Balancing Market Availability Summary

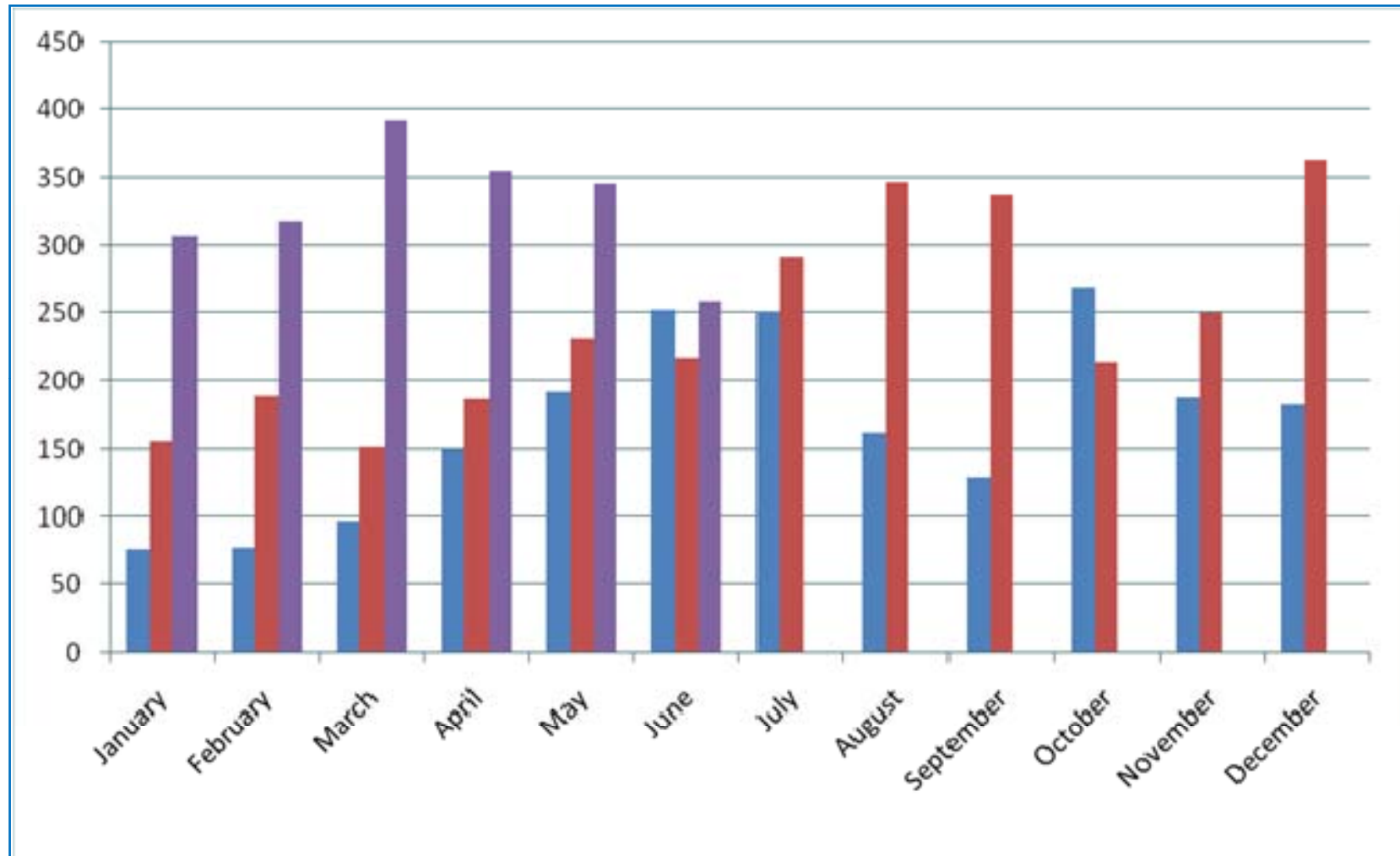


# Frequency Control Availability Summary

## June 2010 Frequency Control Availability Summary

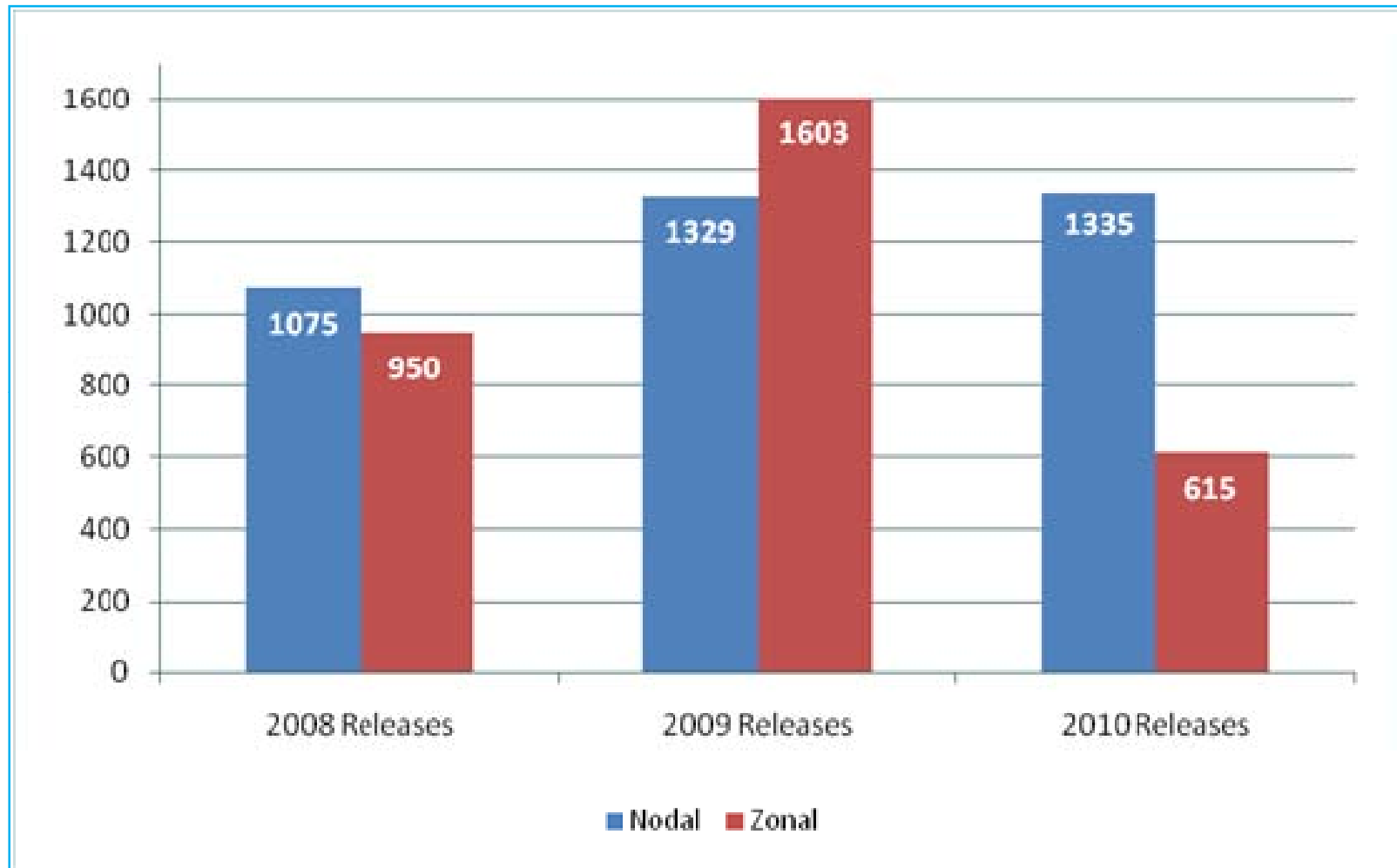


## Release Management Metrics (3-Year Releases by Month)



■ 2008 Actuals ■ 2009 Actuals ■ 2010 Actuals

## Release Management Metrics (Nodal vs. Zonal Releases)



**Note:** 2010 metrics are YTD

# ERCOT Public Website Metrics (June 2010)

Name↑	Reports	Status	Visits	Avg. Time on Site	Bounce Rate	Completed Goals	Visits % Change
<b>http://faq.ercot.com UA-460876-6</b>							
★ faq.ercot.com	<a href="#">View report</a>	✓	1,167	00:01:52	47.73%	0	↑ 5.61%
<b>http://nodal.ercot.com UA-460876-5</b>							
★ nodal.ercot.com	<a href="#">View report</a>	✓	13,642	00:04:04	34.20%	0	↑ 4.68%
<b>http://planning.ercot.com UA-460876-7</b>							
★ planning.ercot.com	<a href="#">View report</a>	✓	2,008	00:04:19	19.57%	0	↓ -8.44%
<b>http://search.ercot.com UA-460876-8</b>							
★ search.ercot.com	<a href="#">View report</a>	✓	5,477	00:03:01	49.35%	0	↑ 10.65%
<b>http://www.ercot.com UA-460876-2</b>							
★ www.ercot.com	<a href="#">View report</a>	✓	103,539	00:02:32	60.14%	2	↑ 5.40%

## 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

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- **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 – June 2010 Net Availability

**June 2010 Net Availability for Nodal Production systems**

