Electric Reliability Council of Texas

Retail Market IT Services

Service Level Agreement

Summary:

Availability targets and related service information for the IT services provided by ERCOT that facilitate retail customer choice in the ERCOT market.

EFFECTIVE: 02/07/17

Document Revisions

Date	Version	Description	Author(s)
March 23rd, 2006	.9	First draft	Aaron Smallwood
March 28th, 2006	.91	Revised draft	Aaron Smallwood
June 1st, 2006	1.0	Final Version	Aaron Smallwood
June 15th, 2006	1.1	Revised final version	Aaron Smallwood
May 1, 2007	2.0	2007 annual review revisions with ERCOT business and Market input	Aaron Smallwood
June 25th, 2007	2.1	Revised following further Market input	Aaron Smallwood
June 18th, 2008	2.2	Revised for 2008	Trey Felton
July 31st, 2008	2.21	Updated	Trey Felton
Aug 28th, 2008	2.22	Revisions from TDTWG	Trey Felton
Sept 25th, 2008	2.3	Final revisions for TDTWG	Trey Felton
Oct 1st, 2008	2.4	TDTWG approval with changes	Trey Felton
Oct 15th, 2008	3.0	Approved by RMS	Trey Felton
Feb 22nd, 2009	3.1	Quarterly Update	Trey Felton
Apr 15th, 2009	3.2	Approved by RMS	Kyle Patrick
Jun 5th, 2009	3.3	Initial updates for 2010. Added release weekend chart for 2010. Added Appendix with definitions. Clarified wordings. Recommendations for Incident Log.	Trey Felton
Sep 28th, 2009	3.4	Updates: Dual-tiered SLA metric for Retail Processing. New graphs for outage windows.	Trey Felton
Oct 10th, 2009	3.5	TDTWG Updates to graph colors, wording in 2.1.2, and chart sizes	TDTWG
Nov 2nd, 2009	3.6	Updated definitions based on feedback from TDTWG. Updated MT verbiage section 2.2.3. Updates Outage definitions. Corrected error in Availability calculations for Retail.	Trey Felton
Nov 5th, 2009	3.7	TDTWG Updates: revised outage definition.	Trey Felton
Nov 13th, 2009	3.8	Changed 20% to 15% in outage definition	Trey Felton
Dec 2nd, 2009	3.9	Review by TDTWG; minor changes	TDTWG
Dec 9th, 2009	4.0	Approved by RMS	RMS
Sep 28th, 2010	4.1	Updates for 2011 – new maintenance outage schedule, performance and availability monitoring changes, scope not changed.	Trey Felton
Aug 1st, 2011	5.0	Updates for 2012 – added Release windows (same as prior to Nodal Go-Live, changed core hours SLA target.	Trey Felton
Sept 3rd, 2011	5.1	Updated 2.1.2, 2.2.2, and 4.0	Trey Felton
Oct 3rd, 2012	6.0	Revised Sec 2.1.1, updated outage/release windows and added 2013 calendar, removed references to TXSET4.0 implementation and Windows 7 Browser support	Trey Felton
Nov 7th, 2012	6.1	2013 Draft SLA to TDTWG	Trey Felton
Sept 4th, 2013	7.1	2014 Draft – updates to SLA Exception process	
Oct 2nd, 2013		Updated release calendar for 2014 – not complete	Trey Felton

November 2014	9.1	Updated 2015 release calendar – Section 2.1.2	Dave Pagliai
January 2015	9.2	Updates - Section 2.1.2	Dave Pagliai
November 2015	10.0	Updated Section 2.1.2 – 2016 Release Calendar Updated Section 2.2.2 – Removed SLO chart Updated Section 4 – Browser Compatibility General Update – replaced TDTWG with TDTMS	Dave Pagliai
July 2016	10.1	Updated Section 2.2.2 – added SLO chart General Update – updated ERCOT logo throughout	Dave Pagliai
January 2017	10.2	Updated Section 2.1.2 – 2017 Release Calendar	Dave Pagliai

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1. Introduction

This document describes the service availability targets, operating hours and reporting mechanisms for several IT services provided by ERCOT to the Texas competitive retail electric market.

Where applicable, these service targets build upon the requirements outlined in ERCOT Protocols Section 15 and the Retail Market Guide to provide additional guidance to Competitive Retailers and Transmission/Distribution Service Providers (TDSPs).

In the event of a conflict between this document and the ERCOT Protocols, Retail Market Guide or PUCT Substantive Rules, the Protocols or PUCT Substantive Rules take precedence over this document.

2. Retail Market IT Services

2.1 Retail Transaction Processing

2.1.1 Service Scope

Retail Transaction Processing is the flow of retail transactions between ERCOT and Market Participants. The service is provided by an integrated group of applications and includes the following components:

- NAESB Proxy Servers
- NAESB
- Electronic Data Interchange (EDI)
- Registration Application
- ERCOT maintained infrastructure supporting retail transaction processing

Excluded from the scope of the retail transaction processing service are systems that communicate with, but are not a primary component of, retail market transaction processing services. These services are covered by the Market Data Transparency SLA:

- External Web Services (EWS)
- Market Information System (MIS)

2.1.2 Service Availability

ERCOT targets retail transaction processing services to be available at least 99.9% of the time from 7am to 7pm (core hours) Monday through Friday, and outside of scheduled maintenance outage windows. ERCOT targets retail transaction processing to be available at least 99% of the time 7pm to 7am (non-core hours) Monday through Friday, and all day Saturday and Sunday, excluding

scheduled maintenance outage windows. Outages included in the retail transaction processing service availability metrics will be reported as follows:

Any outage regardless of duration

- NAESB Proxy Servers
- NAESB
- ERCOT maintained infrastructure supporting NAESB processes

Outages greater than 30 minutes*

- Electronic Data Interchange (EDI)
- Registration Application
- ERCOT maintained infrastructure supporting retail transaction processing

*Market Notices will be sent in accordance with the Commercial Operations Market Guide, Appendix A.
http://www.ercot.com/mktrules/guides/commercialops/current.

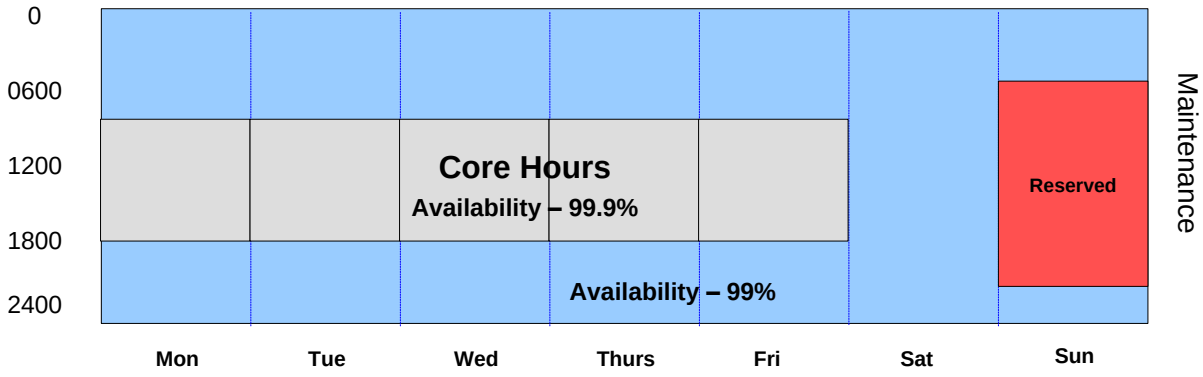
Outages greater than 1 hour during core hours (7am to 7pm Monday-Friday) and Saturday 7am to 7pm, will be defined as an Extended Unplanned Outage.

- ERCOT will hold a Retail Market Call within 2 hours of initial market notice to provide updates, estimated outage duration, and possible restoration timeframe.

Maintenance Window:

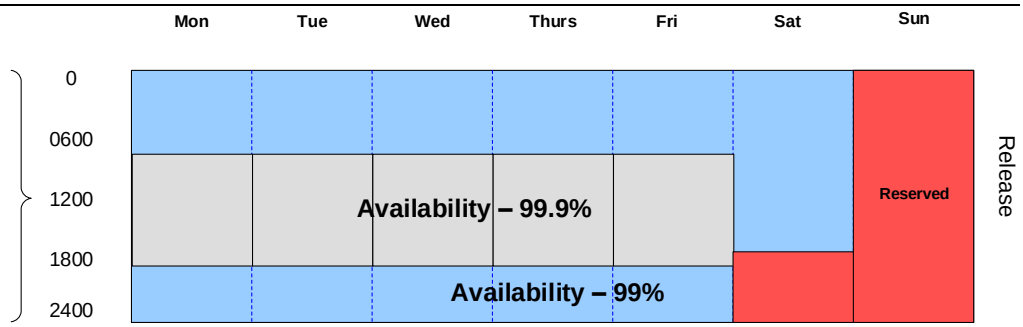
ERCOT reserves the following times as maintenance outage windows:

- Every ***Sunday—6:00am until 9:00pm*** (15 hours)



Release Window:

- ERCOT will schedule 6 planned application releases per year during the following timeframe. Changes to this schedule are handled as exceptions, below.
- Weekends ***7:00pm Saturday until 12:00am Monday*** (29 hours)



2017 Release Calendar

Weekend/Retail Release

Release	Month	Weekend Release
Retail R1	Mar	25, 26
Retail R2	Jun	03, 04
Retail R3	Jul	15, 16
Retail R4	Sep	16, 17
Retail R5	Nov	11, 12
Retail R6	Dec	09, 10

Weekday Release

Release	Month	Weekday Release
R1	Mar	07 – 09
R2	May	01 – 11
R3	Jun	27 – 29
R4	Aug	29 – 31
R5	Oct/Nov	31 – 02
R6	Dec	05 - 07

Exceptions:

ERCOT will update and communicate maintenance and release expectations via the stakeholder process. Exception requests to the maintenance and release windows included in this SLA will first be addressed at the Texas Data Transport and MarkeTrak Systems (TDTMS) Working Group. TDTMS will be responsible for providing a recommendation to RMS based upon the consensus of the working group. RMS has the responsibility for approving or disapproving the exception request.

Changes or postponement to release dates require a 15 day notice. Cancellation of release dates requires a minimum 10 day notice.
If the timeframe between a TDTMS meeting where an exception is requested and the subsequent RMS meeting is greater than the required 15 days, an e-mail vote will be requested of RMS to address the exception request.

As part of on-cycle releases and system changes, ERCOT may schedule changes during business hours that have limited impact on production systems (i.e. security patch or minor configuration change). These changes will be communicated via Market Notice in a "Notes" section.

Note: Should you have any specific questions, please contact your ERCOT Account Manager or the ERCOT HelpDesk for clarifications at (512) 248-6800 or hdesk@ercot.com. A ticket will be generated by ERCOT and the issue will be tracked to completion.

Availability Breakdown:
Service availability will be measured as a percentage of minutes that the service is available compared to the total number of minutes, excluding planned maintenance outage window time.

ERCOT will report SLA availability metrics for both core hours (99.9%) and non-core hours (99%).

Core Hours: Gross minutes per year at 99.9% = **187,200** (7am-7pm, 5 days/week, 52 weeks/year)

99.9% availability = **187.2** unplanned outage minutes per year, or **3.12 hours**

Non-core Hours: Gross minutes per year at 99% = **338,400**

- Reserved maintenance outage minutes per year = **39,240**
- 338,400 – 39,240= **299,160** net availability minutes per year

99% availability = **2,992** unplanned outage minutes per year, or **49.86 hours**

2.1.3 Market Notification and Reporting

ERCOT will measure and report monthly retail transaction processing service availability and track annual service availability for each calendar year. These results will be reported monthly through the ERCOT governance process that includes the Texas Data Transport and MarkeTrak Systems Working Group, the Retail Market Subcommittee, Technical Advisory Committee, and ERCOT Board of Directors.

ERCOT will maintain a log containing retail transaction processing incidents that will be updated monthly and made available on the ERCOT Service Level

Agreement website (http://www.ercot.com/services/sla/). This log will include service availability and detailed information regarding each incident related to retail transaction processing. ERCOT IT Management will make initial classification of each incident, based on criteria in Appendix A. Upon review through the stakeholder process, this classification may be changed.

2.2 MarkeTrak

2.2.1 Service Scope

The MarkeTrak tool is a web-based application used to track, manage, and store data utilized by ERCOT and Market Participants (MPs). This tool is the supported method to track ERCOT Retail market issue management and data discrepancies in the market.

Included in the scope of the MarkeTrak service are the user interfaces that MPs use to create, contribute to, and resolve issues. These are the API (application programmatic interface) and the GUI (graphical user interface).

2.2.2 Service Availability

ERCOT targets MarkeTrak and its user interfaces, both the GUI and API, to be available 99% of the time from 7:00am – 7:00pm during business days and Saturday 8:00am – 12:00pm. ERCOT intends for MarkeTrak and its user interfaces to be available outside of this time frame, however this time will not be included in the service availability metric for MarkeTrak.

Outages of any duration that occur within the operating window specified above will be counted against the MarkeTrak service availability metric. Market Notices will only be sent for outages lasting more than 30 minutes.

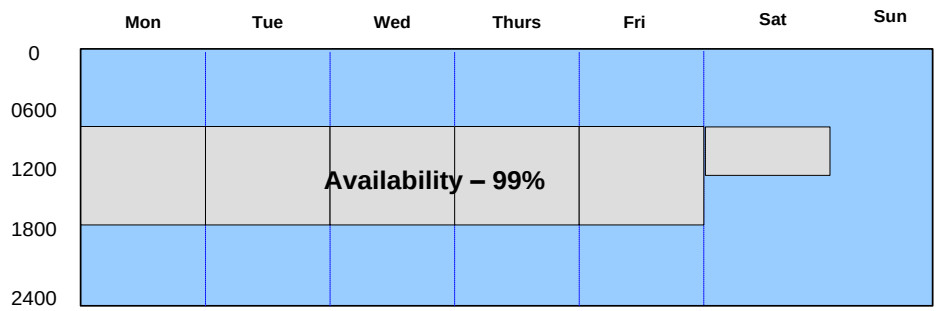
Performance Monitoring

ERCOT will track average response times for API Query List, Query Detail, Update, and also the GUI. Average response times will be extracted from ERCOT's integration application for the API, and from synthetic transactions for the GUI. Benchmark performance service level objectives (SLO) for the API and GUI are determined by the TDTMS and approved by RMS, and may be reviewed periodically. ERCOT reports on the performance of the API and GUI, monthly, and the target service level objectives are defined per the following chart.

MarkeTrak				
	Availability (%)	Response Time (seconds)		SLO (seconds)
		Monthly Average	12 Month Average	
API QueryDetail	100.000	0.19	0.19	0.75
API QueryList	100.000	11.66	12.43	20
API Update	99.888	8.64	7.94	15
GUI	99.772	8.428		15
Average	**99.915**			

Example of monthly MarkeTrak API and GUI performance reporting

Maintenance:
Maintenance can be performed anytime outside of the availability timeframe (7:00am -7:00pm business days and Saturday 8:00am – 12:00pm). Market notices will be sent prior to performing any planned maintenance.



Availability Monitoring:
Availability for MarkeTrak is monitored through synthetic transactions which execute scripts against the IT applications at 5 minute intervals. Upon returning a valid response, and not exceeding the timeout threshold, the IT application will be considered available. If this method cannot be used due to issues with the monitor, the availability may be calculated by application or hardware uptime, and outage detection through operational monitoring tools.

2.2.3 Market Notification and Reporting

ERCOT will measure and report monthly MarkeTrak user interface service availability and performance and track annual service availability and performance for each calendar year. These results will be reported through the ERCOT governance process and includes the Texas Data Transport and MarkeTrak Systems Working Group, the Retail Market Subcommittee, the Technical Advisory Committee, and the ERCOT Board of Directors.

ERCOT will maintain a log containing incidents that will be updated monthly and made available on the ERCOT Service Level Agreement website (http://www.ercot.com/services/sla/). This log will include service availability and performance metrics and detailed information regarding each incident related to MarkeTrak.

3. Retail Market IT Services Reporting

Service availability and impacting events related to the Retail Market IT services described in this document will be reported monthly to the Texas Data Transport and MarkeTrak Systems Working Group, the Technical Advisory Committee and the Retail Market Subcommittee. The availability metrics and detailed market notice log will be updated monthly and posted to the Retail Market Subcommittee website on www.ercot.com.

Elements included in the detailed report are:

- Incident date
- Date of initial Market Notice (if applicable)
- Market Notice ID tag (if applicable)
- Incident start and end times and duration
- Application(s) affected
- Issue description
- Identification method – the way that ERCOT learned of the incident (i.e.…monitoring, notification from market participant, etc…)
- Impact to the affected service
- Market impact – total out of protocol for SWI, MVI, MESI, PMVI, and MVO
- Resolution status
- Root cause when identified
- Date of any identified fix to be implemented
- Additional comments or notes

The report also summarizes the market notice data by type in monthly and annual breakdowns.

Market Participants may provide data and information regarding the impacts of an incident to ERCOT to be included in the monthly report detailed above. Information provided to ERCOT for the purposes of inclusion in the incident log will be treated as confidential and may be submitted to: **ERCOTRetailIncidentLog@ercot.com**.

4. Browser Compatibility

Configuration settings for the web browsers that ERCOT currently supports are located in the User Guides section (under Public Data) at the following location: http://www.ercot.com/services/mdt/userguides/

5. Service Availability Renegotiations and Change Control Process

Renegotiations of ERCOT retail market IT services can be initiated by either Market Participants or ERCOT management by making a request to the Retail Market Subcommittee.

Version control in the form of document version numbering will be maintained in this document as a means of providing a change control process.

6. Annual Review Process

ERCOT is committed to providing IT services to the competitive electric market in Texas. ERCOT intends that the IT services described in this document align with market participant requirements to the extent that is operationally feasible. To maintain alignment between the requirements of the market participants and the retail market IT services delivered by ERCOT, the service availability targets defined in this document will be reviewed at least annually.

7. Approvals

Area of Responsibility	Name	Reviewed / Approved	Date
Manager, ERCOT IT Support Services	Dave Pagliai		
Manager, ERCOT Retail Operations			
Business Sponsor – RMS Chair			

Appendix A: Definitions

This section contains definitions of the systems referred to in this document and of the commonly used acronyms.

- **Availability:** The ability of a component or IT service to perform its required function over a stated period of time
- **Core Hours:** 7am to 7pm Monday through Friday excluding ERCOT holidays
- **Degradation:** An event that causes the availability of ERCOT IT systems to be impacted while still allowing for processing of or access to these systems
- **Extended Unplanned Outage:** Outage greater than 1 hour during core hours (7am to 7pm Monday-Friday) and Saturday 7am to 7pm
- **Electronic Data Interchange (EDI):** the transfer of data electronically
- **Gross minutes** - total minutes in a month
- **Incident**: Any event that causes the agreed levels of service of ERCOT IT systems to be impacted
- **Integration:** The creation of links between previously separate computer systems, applications, services or processes
- **NAESB:** The North American Energy Standards Board (NAESB) serves as an industry forum for the development and promotion of standards which will lead to a seamless marketplace for wholesale and retail natural gas and electricity. The Texas electric market has implemented NAESB EDM v1.6 as the required data transport mechanism.
- **Net minutes:** gross minutes minus planned outage minutes
- **Outage :** a temporary period where ERCOT IT systems are unavailable
    - **Planned Outage:** a planned change in ERCOT IT systems that leads to them being unavailable
    - **Unplanned Outage:** any incident resulting in the unexpected failure of a computer or network hardware system or software application causing ERCOT IT systems to be unavailable. In determining if an incident is classified as an unplanned outage or a degradation, ERCOT may use the following benchmark:
        - **Retail Processing**: an unplanned outage would be declared if an incident leads to over 15% of transactions being out of protocol during the period the incident occurred
- **Planned outage minutes**: minutes used by ERCOT during the maintenance and release windows
- **Proxy Server:** a server which services the requests of its clients by forwarding requests to other servers
- **Registration Application:** ERCOT's customer relationship management system (excluding eService application for Wholesale Settlement disputes)
- **Retail Transactions:**
    - 814 – Enrollment transaction used for registration in the retail market
    - 867 – Usage transaction used for reporting consumption or generation of electricity
    - 824 – Application advice transaction used for responding to errors on 867 usage transactions

- 997 – Acknowledgement transaction

- **Service availability percent**: the percent of time that retail transaction processing services were available, not including planned outage minutes
- **Unplanned Outage minutes:** minutes retail transaction processing services were not available that are outside of the planned use of the maintenance and release windows

Appendix B: COPS Market Guide, Section 5: ERCOT Market Notice Communication Process, Table 2: E-mail Notification Subscription Lists

COPS Market Guide:
http://www.ercot.com/mktrules/guides/commercialops/current
Section 5, Table 2: E-mail Notification Subscription Lists

Subscribe at:
http://lists.ercot.com