Texas Standard Electronic Transactions

INTRODUCTION TO TX SET

Protocol Disclaimer

This presentation provides a general overview of Retail Transaction Processing and is not intended to be a substitute for the ERCOT Protocols, as amended from time to time. If any conflict exists between this presentation and the ERCOT Protocols, the ERCOT Protocols shall control in all respects.

For more information, please visit:

Protocols - Nodal (ercot.com)

Housekeeping

Restrooms

Refreshments

Attendance sheet

Questions



Please silence smart phones & other electronics

To avoid raising concerns about antitrust liability, participants in ERCOT activities should refrain from proposing any action or measure that would exceed ERCOT's authority under federal or state law. For additional information, stakeholders should consult the Statement of Position on Antitrust Issues for Members of ERCOT Committees, Subcommittees, and Working Groups, which is posted on the FRCOT website.

Course Objectives

What is TX SET?

Where do I find Tools/References?

How does TX SET work?

How is TX SET managed?

Agenda

- 1. Introduction
- 2. Governing Documents
- 3. TXSET Working Group
- 4. Transaction Overview
- 5. Transaction Process Flow
- 6. MIS Portal
- 7. TXSET Implementation Guides
- 8. Appendix

Introduction

What is TX SET?

- Texas Standard Electronic Transactions
- Set of ANSI EDI transaction guidelines
- Facilitates retail business processes
- Maintained by TX SET working group

Benefits of TX SET

- Standardization of automated processes
- Improves data quality and efficiency
- Greater transparency
- Improved security
- Allows reporting flexibility
- Increased cost savings

When are TX SET used?

To execute Retail market processes

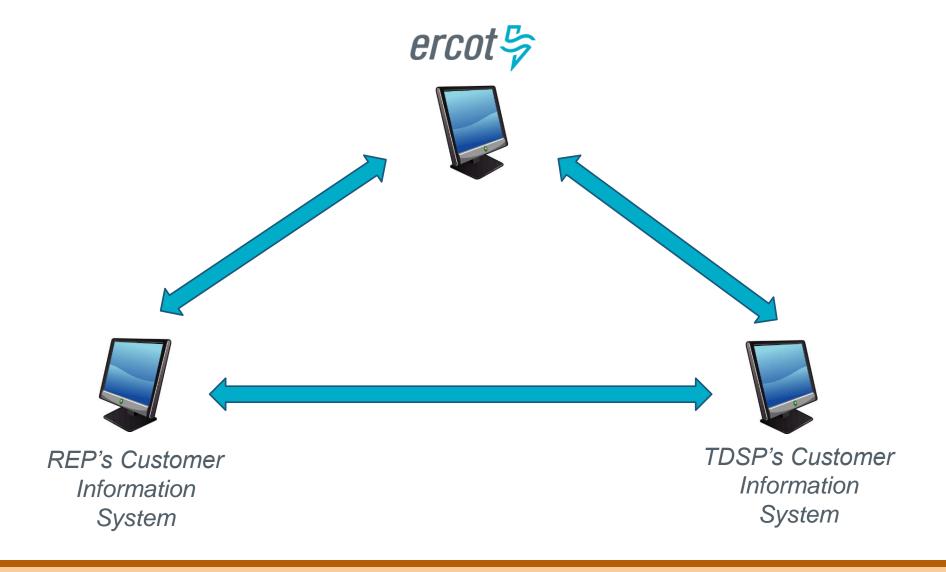
- Move In
- Move Out
- Switch
- Disconnects
- Reconnects
- Updates to premise information
- Updates to customer information

NAESB EDM v1.6

North American Energy Standards Board Electronic Delivery Mechanism

- Version 1.6 is a National Standard
- Secured computer to computer data protocol
- Modified to fit ERCOT Market

Transaction Flows



Acronyms

TX SET – Texas Standard Electronic Transactions

PURA – Public Utilities Regulatory Act

PUCT - Public Utility Commission of Texas

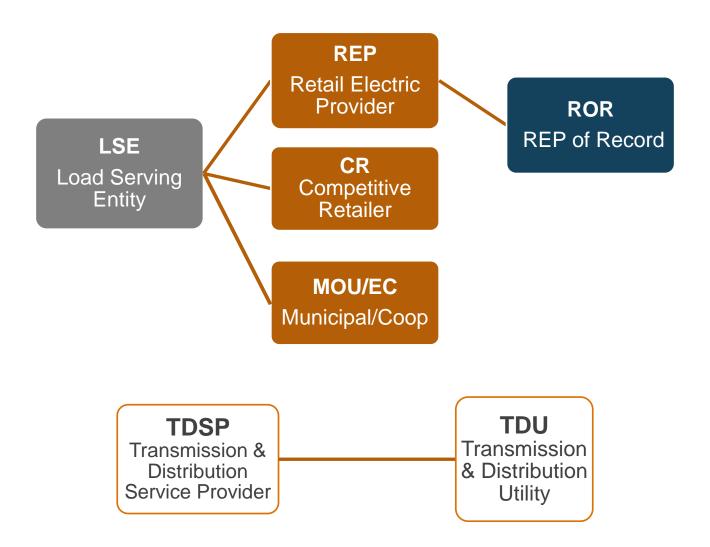
ERCOT – Electric Reliability Council of Texas

NAESB – North American Energy Standards Board

MP – Market Participant

ESI ID – Electric Service Identifier

Participants



Governing Documents

Hierarchy of Rules



Public Utility Regulatory Act (PURA)





PUCT Substantive Rules



ercot = ERCOT Protocols

Rules/Policies/Standards that govern the ERCOT market

- Created through collaborative efforts
- Define procedures used by ERCOT and Market Participants (MPs)
- MPs, ERCOT and Independent Market Monitor (IMM) bound by Protocols

ERCOT Protocols



About ERCOT

Services

Committees and Groups

Market Rules

Market Information

Grid Information

Market Participants

Home > Market Rules > Protocols - Nodal

Protocols - Nodal

The Protocols outline the procedures and processes used by ERCOT and Market Participants for the orderly functioning of the ERCOT system and nodal market. The current set of Protocols as well as requests for changes and clarification may be found in this section.

In This Section

Current Protocols - Nodal

The Nodal Protocols become effective upon Texas Nodal market implementation; the current set of Nodal Protocols are in this section.

NPRR Submission Process

Find the directions and forms to submit a Nodal Protocol revision request.

Protocol Interpretation Request Submission Process

Read about the process for submitting a PIR, and find the form.

Protocol Library - Nodal

Find the monthly versions of the complete Nodal Protocol set, including summaries of revisions.

Related Content

On this site

Protocol Revision Requests

Protocol Revision Subcommittee

Relevant ERCOT Protocol Sections

Section 2 – Definitions and Acronyms

Section 9 – Settlements and Billing

Section 10 – Metering

Section 12 – Market Information System

Section 15 – Customer Registration

Section 18 – Load Profiling

Section 19 – Texas Standard Electronic Transaction

Section 21 – Revision Request Process

Section 24 – Retail Point to Point Communications

Section 15 - Customer Registration

- ERCOT is the Registration Agent for the Retail Electric Market
- ERCOT maintains the Registration Database of all ESI IDs
- All Competitive Retailers operating in ERCOT register their customers via TX SET

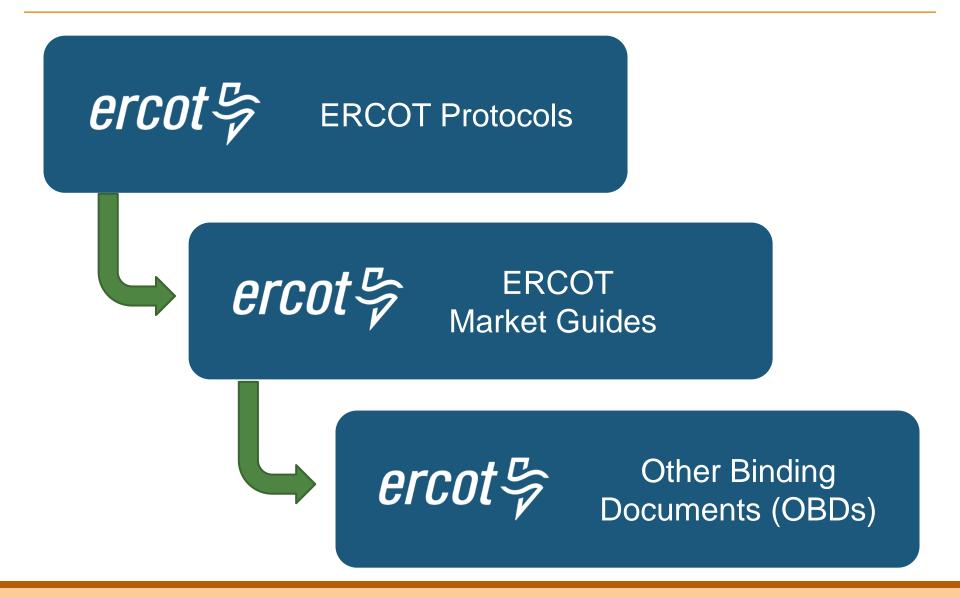
Section 19 – Texas Standard Electronic Transaction

- Transactions between Competitive Retailers (CRs), ERCOT, and Transmission and Distribution Service Providers (TDSPs)
- Validation process
- TX SET change control process
- Retail market testing process

Section 24 – Retail Point to Point Communications

- Transactions that do <u>not</u> flow through ERCOT
- Transactions that flow between CRs and TDSPs
 - Disconnect/Reconnect
 - Suspension of delivery
 - Remittance information
 - TDSP Invoice

ERCOT Market Guides



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ERCOT Market Guides



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Market Guides

Market Guides are based upon ERCOT Protocols and serve as detailed reference documents for Market Participants. The guides act as a mechanism for establishing and adjusting market and operating processes.

In This Section

Commercial Operations Market Guide

Find the reference guide for commercial operations; and locate or submit requests for revisions

Data Transport Guides

Read about ERCOT's standards for secure cata transport, including the North American Energy Standards Board Electronic Delivery Mechanism and ERCOT's alternative to FTP.

Inactive Market Guides

Find inactive Market Guides and related documents.

Load Profiling Guide

Find the responsibilities and processes associated with load profiling; and find or submit requests for changes.

Nodal Operating Guide

Find the nodal guide that describes how ERCOT will interact with qualified scheduling entities, transmission operators, resource entities and load serving entities in the nodal market; and find or submit request for revisions.

Operating Procedures

Locate ERCOT processes and procedures for reliable daily grid operation and emergency actions.

Planning Guide

View the guides that provide ERCOT stakeholders and market participants with information and documentation concerning the ERCOT transmission planning process.

Resource Registration Glossary

The Resource Registration Glossary provides the name, description and supporting information for any data field that may be required from a Resource as part of the Resource Registration process.

Retail Market Guide

Get the reference guide for the retail market's rules and structure; and find or submit requests for changes.

Settlement Metering Operating Guide

Locate the standards and procedures for ERCOT-polled settlement (EPS) metering; and find or submit requests for changes.

Texas Standard Electronic Transaction Guides

Find the implementation guides for the Texas standard Electronic Transaction procedures; proposed and adopted changes; and the business process lifecycle for retail transactions.

Verifiable Cost Manual

Locate the manual which describes the process for Resources to submit verifiable costs to ERCOT. View related forms for revision requests as well.

Related Content

On this site

User Guides

ERCOT Protocols

ERCOT Retail Market Guide

- Section 1 Purpose
- Section 2 Definitions and Acronyms
- Section 3 Retail Market Guide Revision Process
- Section 4 Public Utility Commission of Texas
- Section 5 Electric Reliability Council of Texas
- Section 6 Retail Market Subcommittee Working Group
- Section 7 Market Processes
- Section 8 Municipally Owned Utilities and Electric Cooperatives
- Section 9 Appendices
- Section 10 Competitive Metering
- Section 11 Solution to Stacking

Section 7 – Market Processes

- Section 7.3 *Inadvertent Gain Process*
- Section 7.4 Safety Nets
- Section 7.5 Standard Historical Usage Requests
- Section 7.6 Disconnect and Reconnect for Non-Payment Process
- Section 7.7 Transaction Timing Matrix
- Section 7.16 Business Processes and Communications Related to Meter Tampering
- Section 7.15 Advanced Meter Interval Data File Format and Submission
- Section 7.17 Business Processes and Communications for Switch

 Holds Related to Deferred Payment

Section 9 Appendix D1 – Transaction Timing Matrix

Transaction	Business Process	From	То	Timing/Business Rules	Protocol Reference Section
867_03, Monthly or Final Usage	Final	TDSP	ERCOT	Within three Business days of effectuating meter read	15.1.1.7, Completion of Switch Request and Effective switch Date
867_03, Monthly or final Usage	Monthly	TDSP	ERCOT	No later than three Retail Business Days after the scheduled meter read cycle or scheduled meter cycle by day of the month for a point of delivery	15.3, Monthly Meter Reads
867_04, Initial Meter Read	Initial	TDSP	ERCOT	Within three Retail Business Days of the effectuating meter read	15.1.1.7, Completion of Switch Request and Effective Switch Date

Appendices

Section 9 Appendix D3 – TDSP's Discretionary Service Timelines Matrix

Section 9 Appendix G – ERCOT Specified File Format for Submission of Interval Data for Advanced Metering Systems

Section 11- Solution to Stacking

Section 11.1 - Overview of Solution to Stacking

Section 11.2 - ERCOT Operating Rules

Section 11.2.2 - Cancellation Rules

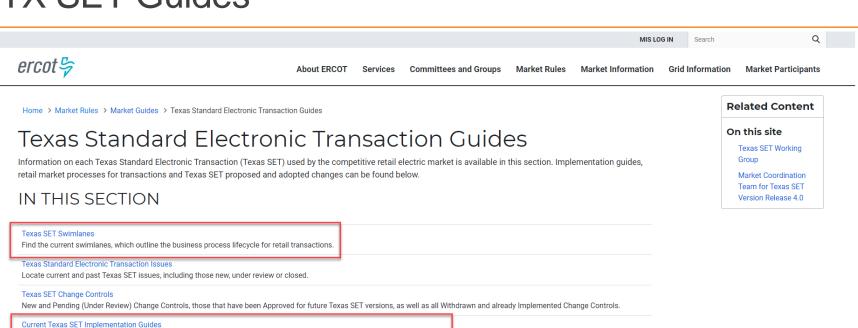
Section 11.2.3 - Concurrent Processing Rules

Section 11.2.4 - Pending Transaction Rules

Section 11.3 - Transmission and/or Distribution Service Provider Operating Rules

Section 11.4 - Retail Electric Provider Operating Rules

TX SET Guides



Key Documents

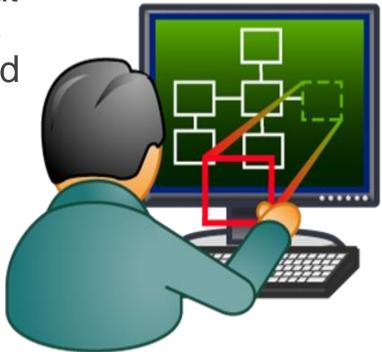
Change Control Log	Jan 18, 2023 - xlsx - 178.4 KB
This contains a log of all change controls submitted TXSET Change Control Dispute Form	Jul 23, 2015 - doc - 38.5 KB
Texas SET Change Control Form Form to be completed only by Texas SET Working Group	Feb 11, 2011 - doc - 36.5 KB
Texas SET Issue Form Form to submit a request regarding an issue to ERCOT	Sep 30, 2010 - doc - 43.5 KB
Transactions Names Inventory Transactions Names Inventory V4.0A	Feb 10, 2022 - xls - 63 KB

Find the latest Texas SET guides, which provide information on the electronic transactions in the Texas retail electric market.

Texas SET Swimlanes

Texas Standard Electronic Transaction (SET) swimlanes are reference documents that outline the business process lifecycle for transactions used in the competitive retail electric market in Texas.

https://www.ercot.com/mktrules/guides/txset/sw



TX SET Swimlanes



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MIS LOG IN

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Texas SET Swimlanes

Texas Standard Electronic Transaction (SET) swimlanes are reference documents that outline the business process lifecycle for transactions used in the competitive retail electric market in Texas.

Billing Scenarios Version February 2017	Feb 22, 2017 - zip - 41.6 KB
TX SET flow documentation for consolidated billing, remittance and dual billing	
Continuous Service Agreement Scenarios February 2017	Feb 22, 2017 - zip - 352.2 KB
TX SET flow documentation for beginning and ending continuous service agreements (CSAs)	
Customer Move In Scenarios June 2012	May 17, 2016 - zip - 188.3 KB
TX SET flow documentation for handling Move In changes and problems	
Customer Move Out Scenarios February 2017	Feb 22, 2017 - zip - 143.1 KB
TX SET flow documentation for handling Move Out changes and problems	
Customer Switch Scenarios June 2012	May 17, 2016 - pdf - 15.9 KB
TX SET flow documentation for handling customer switch request	
Disconnect Reconnect Non Pay Scenarios February 2017	Feb 22, 2017 - zip - 131.9 KB
TX SET flow documentation for Disconnect and Reconnect for NonPay	
Mass Transition / Acquisition Scenarios September 2018	Sep 25, 2018 - zip - 81.6 KB
TX SET flow documentation for customer dropped by competitive retailer (CR), reverted to AREP, disconnect for non-pay services request, and mass transition from defaulting CR to Provider of Last Resort (POLR)	
Switch Hold Scenarios June 2012	Feb 5, 2016 - zip - 113.3 KB
TX SET flow documentation for handling Switch Hold add and removal	
Unplanned Outages Scenarios June 2012	Feb 5, 2016 - zip - 52.9 KB
TX SET flow documentation of how to report unplanned outages	

Texas SET Implementation Guides (IG)

TX SET Implementation Guides provide technical details contained within the electronic transactions used in the competitive retail electric market in Texas.

Current Version 4.0A supports PUCT Substantive Rules and market process revisions

https://www.ercot.com/mktrules/guides/txset/version

Market Coordination Team (MCT)

MCT is a Retail Market Subcommittee (RMS) Taskforce that is responsible for coordinating the ERCOT Retail Market's successful implementation of the next TX SET production version.

https://www.ercot.com/committees/rms/mct

TX SET v5.0:

What Retail functionality will be delivered?

When is the Market Flight Testing?

When is the Migration and Implementation scheduled?

TX SET v5.0 Functionality:

Creates **new** *IA* (Inadvertent) and *CR* (Customer Rescission) Move-In Transactional Solutions and **modifies MarkeTrak Processes** that supports the transactional solution.

"County" name added as part of the ESI ID Service Address

Creates 44 new "Metered Service Type (MSL)" descriptions

Adds Continuous Service Agreement "(CSA) Start and End Dates" that may minimize incorrect CSA CRs' financial liability

Creates new "CHP" status code for "TDSP Construction Hold"

Replaces "A13 Other" with "Specific Reject Reason" codes

MarkeTrak Enhancements include new Subtypes, Smarter Validations and adds Complete Unexecutable Drop-down lists.

v5.0 Flight Testing and Implementation Schedule

ERCOT and Market Participants are currently conducting their internal Requirements gathering and System Design sessions.

Y2023 – Y2024: Estimated 12 -18 months for ERCOT and Market Participants Development, User Acceptance Testing (UAT), Training and Documentation.

Flight 0924 Required for All MPs for TX SET v5.0 Certification:

Sign-Up Deadline : July 31, 2024

Transactions Day 1: September 23, 2024

Flight Concludes: October 18, 2024

Flight Contingency: October 24, 2024

TX SET v5.0 Migration Weekend and Production Go-Live Plans:

Migration Weekend: November 8, 2024 – November 10, 2024

Production Go-Live: Monday, November 11, 2024

Contingency Migration: November 15, 2024 – November 17, 2024

Contingency Go-Live: Monday, November 18, 2024

TX SET Working Group

TX SET Working Group

Texas Standard Electronic Transaction (TX SET) Working Group:

Reports to the Retail Market Subcommittee (RMS)

Analyzes the need for new or modifications to existing electronic transactions

Recommends changes to retail market processes

Works with the ERCOT Flight Administrator to ensure that testing processes and procedures are defined and administered

Maintains the Texas SET Implementation Guides and the Texas Market Test Plan Guide

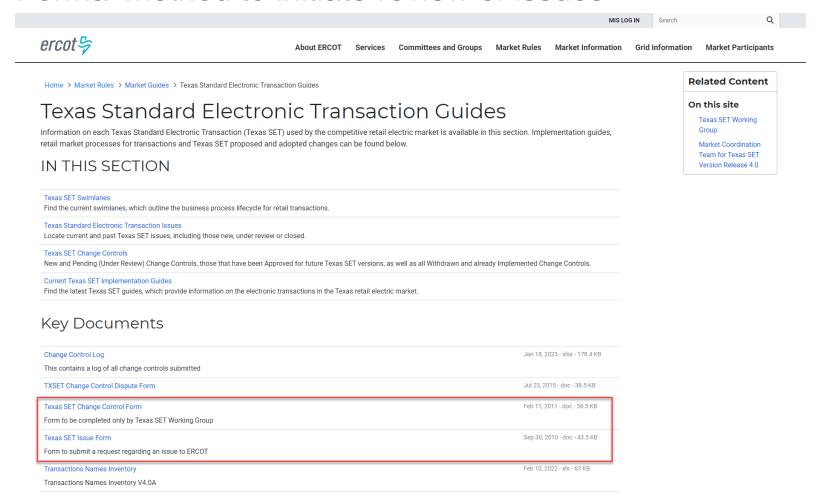
Collaborates with other Working Groups and Taskforces as directed by RMS

https://www.ercot.com/committees/rms/txset



TX SET Issue Submission Process

Formal method to initiate review of issues



Retail Market Testing

Flight Testing:

- All retail Market Participants are required to test for ERCOT certification
- Three Market flights per year
- End to End test scripts (i.e. connectivity, penny test)

Retail Market Testing

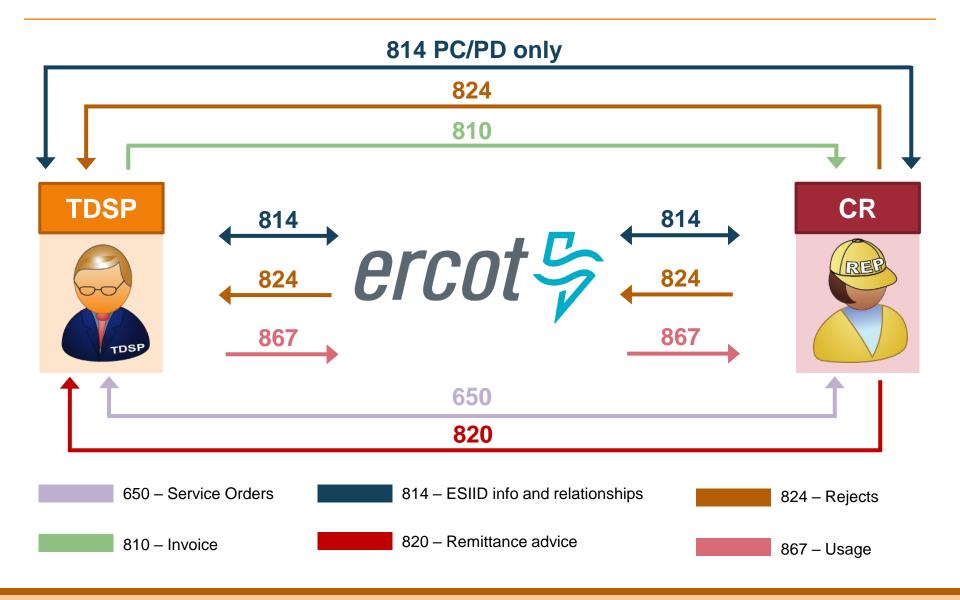
Governed by Texas Market Test Plan:

- Maintained by TX SET Working Group
- Outlines testing processes and requirements

All retail Market Participants must participate in and successfully complete testing as described in Protocol Section 19.8, Retail Market Testing, prior to commencing operations with ERCOT.

Transactions

Overview of transaction flow



Texas Standard Electronic Transactions (TX SET)

Many transactions involve ERCOT

Transaction Type	Use
814 –ESI ID info and Relationships (Many flavors)	Enrollments; Switch requests; Move-Ins; Move-Outs; ESI ID Maintenance
867 – Premise Usage	Initial Meter Read; Historical/Monthly Usage; Final Usage
824 – Reject Notification	Invoice or Usage Reject Notification

Texas Standard Electronic Transactions (TX SET)

Some transactions may not involve ERCOT

Transaction Type	Use
810 – Invoice	Bills for Charges between Market Participants
820 – Payments	Payments between Market Participants
650 –Service Order Requests	Disconnects for Non-Pay; Reconnects; Switch Hold and Switch Hold Removal; Planned Outage Notification
824 - Reject Notification	Invoice or Usage Reject Notification

These are called Point-to-Point transactions and flow between TDSPs and REPs

Transaction Names

TX SET Version 4.0A – Transaction Names Inventory

- Refer to handout
- Defines the transaction name for each transaction
- Describes how the transaction flows
- Found on the ERCOT website at <u>http://www.ercot.com/mktrules/guides/tx</u>
 set

014-1	Request, Response, Maintenance for Enro Switches, Maintenance & Request Cons	ollments, Drops, sumption
Tix	Definition	Flow
814_PC	Maintain Customer Information Request	CR⇒TDSP MOU/EC TDSP⇒CR
814_PD	Maintain Customer Information Response	TDSP⇔CR CR⇔MOU/EC TDSP
814_01	Switch Request	CR=>ERCOT
814_02	Switch Reject Response	ERCOT=>CR
814_03	Enrollment Notification Request	ERCOT=>TDSP
814_04	Enrollment Notification Response	TDSP=>ERCOT
814_05	CR Enrollment Notification Response	ERCOT=>CR
814_06	Loss Notification	ERCOT=>CR
814_08	Cancel Request	CR⇒ERCOT ERCOT⇒CR ERCOT⇒TDSP
814_09	Cancel Response	TDSP=>ERCOT ERCOT=>CR
814_11	Drop Response	ERCOT=>CR
814_12	Date Change Request	CR=>ERCOT ERCOT=>CR ERCOT=>TDSP
814_13	Date Change Response	TDSP=>ERCOT ERCOT=>CR
814_14	Drop Enrollment Request	ERCOT=>POLR
814_16	Move In Request	CR=>ERCOT
814_17	Move In Reject Response	ERCOT=>CR
814_18	Establish/Delete CSA Request	CR=+ERCOT ERCOT=+MOU/EC TDS
814_19	Establish/Delete CSA Response	ERCOT=+CR MOU/EC TDSP=+ERCO
814_20	ESI ID Maintenance Request	TDSP=>ERCOT ERCOT=>CR
814_21	ESI ID Maintenance Response	ERCOT=>TDSP
814_22 814_24	CSA CR Move In Request Move Out Request	ERCOT⇒CR CR⇒ERCOT ERCOT⇒TDSP
814_25	Move Out Response	TDSP=>ERCOT ERCOT=>CR
814_26	Historical Usage Request	CR⇒ERCOT ERCOT⇒TDSP
814_27	Historical Usage Response	TDSP=>ERCOT ERCOT=>CR
814_28	Complete Unexecutable or Permit Required	TDSP=>ERCOT

650°	Maintenance Service Order - Work Or Details, Outage Notifice	ders, Meter Conf ation
Tix	Definition	Flow
650_01	Service Order Request	CR=>TDSP
650_02	Service Order Response	TDSP=>CR
650_04	Planned or Unplanned Outage Notification	TDSP=>CR
	810 - Statement, Settlement, Wire Charge I	nvolces
810_02	TDSP Invoice	TDSP=>CR
810_03	MOU/EC TDSP Invoice	CR=>MOU/EC TD
	820 - Payment and Advice through Bar	<u>ķ</u>
820_02	CR Remittance Advice	CR=>TDSP
820_03	MOU/EC TDSP Remittance Advice	MOU/EC TDSP=>0
	824 - Reject Response to 810 or 867 Data	
824	Invoice or Usage Reject Notification	CR=>TDSP CR=>ERCOT ERCOT=>TDSP
867-Intervi	al, Non Interval, Reads & Consumption Data Hi Activity	
867_02	Historical Usage	TDSP=>ERCOT ERCOT=>CR
867_03	Monthly or Final Usage	TDSP=>ERCOT ERCOT=>CR
867_04	Initial Meter Read	TDSP=>ERCOT ERCOT=>CR
	T Series	
T0	Option 1 Outages: Outage Status Request	CR=>TDSP
T1	Option 1 Outages: Trouble Reporting Request	CR=>TDSP
T2	Option 1 Outages: Trouble Report Acknowledgement	TDSP=>CR
T3	Option 1 Outages: Status Response	TDSP=>CR
T4	Option 1 Outages: Trouble Completion Report	TDSP=>CR

Transaction Names – 650_01 Service Orders

The following Purpose Codes can only be used when requesting the associated Transaction Type Code as noted below:

Purpose Codes Beginning With:

```
DC use only when BGN07 = 72 Disconnect
     use only when BGN07 = XZ Facilities Investigation
FI
     use only when BGN07 = AN Lighting
GL
SL
     use only when BGN07 = AN Lighting
RC use only when BGN07 = 79
                              Reconnect
ME use only when BGN07 = KH Meter Exchange
MT use only when BGN07 = 38 Meter Test
MM use only when BGN07 = 13 Meter Maintenance
     use only when BGN07 = RD Read (Out of Cycle)
RD
    use only when BGN07 = SH Switch Hold Indicator
SH
     use only when BGN07 = IN Technical Environmental
TE
```

Required on all 650_01 Service Request, if CR does not provide a Purpose Code TDSP will reject the transaction

From 650_01 Implementation guide.

There are 80 REF segments to identify the purpose of the 650 Service Order based on the above 11 codes

Option 1 vs Option 3 REP

REPs will designate Option 1, 2, or 3 on their Delivery Service Agreement with each TDSP on the following:

OPTION	REPORTING OF OUTAGES OR SERVICE REQUESTS
1	REP directs customers to contact REP, REP contacts TDSP via transaction
2	REP directs customers to contact REP, REP forwards calls to TDSP
3	REP directs customers to contact TDSP, REP provides TDSP phone number to customers

Move-In vs Switch - Differences

	Move In - 814_16	Switch – 814_01
Definition	Customer requesting service connected in their name at either a new or an existing premise.	The process by which the current Customer makes a request to change their REP of Record for their ESI ID(s).
Timing & Costs	Move In fees and potential delays could be encountered	No fees (Standard Switch, if applicable) Allows for same day request and completion
Rescission	Not applicable	Customer has the right to rescind their decision within 3 Federal business days
Occupant Permit	Required for some municipalities/cities	Not required
Critical Care and Chronic Condition	Designation will be terminated due to New Customer MVI Critical Care and Chronic Condition status' are associated to the Customer and not the Premise	No change to status
Billing Demand Reset	Demand Ratchet resets	No impact to Billing Demand
4CP (Coincident Peak)	4CP demand resets	No change to 4CP demand
Non-standard Metering Premise	Meter is replaced with Standard meter and additional charge(s) to Customer if requested to re-install non-standard meter	No change
Smart Meter Texas (SMT)	Customer's Enrollment associated to Service Address and ESI ID is disabled. Customer will be required to reapply only with the assistance of SMT Help Desk	No change to SMT Enrollment status

Transactions Initiating Business Process Instance

Initiating Business Process Instance (BPI)

- Move In 814_16
- Switch 814_01
- Move Out 814_24

The business processes listed above will start or end a REP's relationship with their customer.

Transactions Initiating Business Process Instance

Business process instances may be closed as Completed or Cancelled.

Cancelled transactions may be a result of:

- Cancel Request 814_08
- Complete Unexecutable 814_28 CU

814_28 Complete Unexecutable or Permit Required

Permit Required (PR)

- TDSP notifies CR via ERCOT
- Permit is required in order to complete enrollment
- TDSP typically will <u>not</u> send an 814_04 scheduling response until permit is received
- ERCOT holds enrollment for up to 20 Retail Business Days

Complete Unexecutable (CU)

TDSP unexecutes the initiating transaction with the appropriate code

- construction
- miscellaneous/unsafe
- transactional process

Sample 814_28 CU codes

T017	Customer Requested Clearance - Unable to do work on date requested
T018	Other
	Requires explanation in REF03
T019	Tampering
T021	Competitive Retailer in Default
T022	Force Majeure Event
T023	Move-Out transaction (814_24) was treated as a force off since (814_03) Move-In transaction received by the TDSP was scheduled for the same date.
T024	Switch or Move-In Request cannot be completed due to Switch Hold recently applied to this ESI ID
T025	Competing Transaction Scheduled for Same Date

Monthly or Final Usage and TDSP Invoice

867_03 Monthly or Final Usage	810_02 TDSP Invoice
TDSP to ERCOT to CR	Point to point transaction
 Monthly or Final usage Only the 867_03F will appear in MIS Meter consumption data for invoicing Start / End dates Starting / Ending Register Reads Summary KWh for NIDR meters (AMS meters) Interval KWh for IDR meters kW / kVAR values, if applicable 	 Invoice from TDSP to CR Start / End dates Rate Classification Code Line item delivery charges SAC04 code Billing determinant (rate) Explanation of charge Non-discretionary charges - TCRF, Customer charge, etc. Discretionary service charges -
Actual or estimatedDistributed generation loop	MVI, DNP fees, etc.

867_03 and 810_02 are usually paired to trigger CR customer billing

Checkpoint Questions

True or False: Response transactions can only be Rejects.

True or False: A point-to-point transaction is sent only to ERCOT.

Checkpoint Questions

What transaction is used to determine the actual start date for a customer?

- a) 814_04
- b) 814_16
- c) 867_04
- d) 814_01

Checkpoint Question

Which transaction changes the meter and/or meter information?

- a) 814_09
- b) 814_18
- c) 814_26
- d) 814_20

Transaction Process Flow

Move In (MVI) – Reject





Move In – Accept







Move In w/ Permit Required – New Installation







Move In w/ Permit Not Received







Move In w/ Cancel







Move In w/ Date Change









Checkpoint Questions

Yes or No: If a MVI order is submitted and an 814_28 PR is received, does it cancel the original MVI order if the permit is received within 20 Retail Business days?

Yes or No: If a MVI order is submitted and an 814_28 PR is received and then later an 814_08 is received, should the CR receive an 867_04?

Yes or No: Based on the scenario in the previous question, should the CR expect this customer to be with the submitting CR?

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Switch - Rejected









Switch – Accept









Switch Hold – Add – Deferred Payment Plan (DPP)







Switch Hold – Add - Tampering







Switch Hold – Remove – DPP / Tampering







Switch w/ Switch Hold







Checkpoint Questions

What transaction does the TDSP receive when an 814_01 or 814_16 is initiated?

- a) 867_04
- b) 814_03
- c) 867_03
- d) 814_04

A Customer Loss (814_06) transaction is sent to which entity?

- a) Current REP of Record
- b) TDSP
- c) ERCOT
- d) New CR

Move Out (MVO) – Reject





TDSP

Move Out – Accept





TDSP

True or False: If a Switch Hold exists on an ESIID, a MVO transaction (814_24) will automatically reject.

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A date change transaction (814_12) is sent to change the date for which transactions? Select all that apply.

- a) 814_01
- b) 814_05
- c) 814_08
- d) 814_16
- e) 814_18
- f) 814_24

Solution to Stacking – RMG Section 11.1

Solution to Stacking, provides the processes and guidelines for Market Participants operating in the Texas retail market to handle multiple non-sequential Texas Standard Electronic Transactions (TX SETs) on a single Electric Service Identifier (ESI ID)

These include:

- ERCOT Operating Rules
- TDSP Operating Rules
- REP Operating Rules

ERCOT Rejection Operating Rules

Scheduled	New Transaction	Rejected for Not First In
Move in	Move in	Yes
Move in	Self-selected switch	Yes
Move in	Move out	No
Move in	Standard switch	No
Move out	Move in	No
Move out	Self-selected switch	Yes
Move out	Move out	Yes
Move out	Standard switch	No
Switch	Move in	No
Switch	Self-selected switch	Yes
Switch	Move out	No
Switch	Standard switch	No
Mass Transition drop	Move in	No
Mass Transition drop	Self-selected switch	No
Mass Transition drop	Move out	No
Mass Transition drop	Standard switch	No
Acquisition Transfer	Move in	No
Acquisition Transfer	Self-selected switch	No
Acquisition Transfer	Move out	No
Acquisition Transfer	Standard switch	No

ERCOT Operating Rule Examples

Cancellation Rules -

- MVI / MVO trumps SWI (Rule 7)
- MVI trumps MVO w/ same date (Rule 8)

Concurrent Processing Rules -

- Multiple MVIs w/ different dates (Rule 12)
- Multiple SWI w/ different dates (Rule 13)

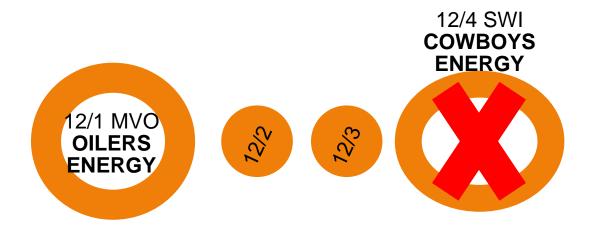
Pending Transactions -

- 814_06 Loss Notification (Rule 15)
- 814_22 CSA upon receipt of MVO, enrollment will be sent to CSA holder (Rule 17)

ERCOT Operating Rule 4

MVO trumps SWI

ERCOT will reject a Switch Request if the ESI ID is scheduled to be De-energized at ERCOT on the Requested Date.



COWBOYS ENERGY will need to submit a MVI (814_16) in order to enroll their customer.

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TDSP and REP Operating Rule Examples

TDSP Operating Rule 8 –

 Non-coordinated (not previously communicated) Back-dated MVIs will be rejected – TDSP must be "ready to receive"

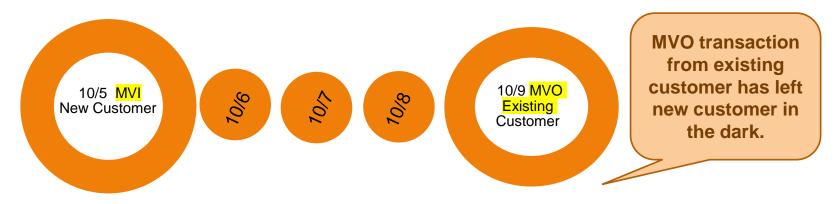
REP Operating Rule 13 –

 CSA Bypass Code – '2W' only to be used by CSA holder on a MVO request

REP Operating Rules

RMG 11.4.1 REP Operating Rule 1: Cancel Move Out

REPs who have a Pending move out and submit a move in (same REP) with an earlier Requested Date are responsible for canceling the Pending move out if that is what the Customer requires (REP manages Customer expectations). If the REP does not cancel the move out, the move out will be allowed to effectuate.



If a REP enrolls a new customer at the same premise and an existing customer has a future dated MVO, if the REP fails to cancel the future dated MVO, the MVO will be executed leaving the new customer in the dark

A MVI is submitted and scheduled by OILERS ENERGY and then another MVI is submitted later by COWBOYS ENERGY requesting the same day. Which entity would receive an 814_17 Not First In (NFI) reject?

- a) TDSP
- b) ERCOT
- c) OIILERS ENERGY
- d) COWBOYS ENERGY

Which entity is responsible for sending an 814_08 cancel when there is a MVO for Customer A pending for 5/5 and a MVI for Customer B pending for 5/1, both with the current REP?

- a) TDSP
- b) ERCOT
- c) Current REP
- d) Another REP

Which entity is responsible for sending an 814_08 cancel when there is a MVO for Customer A pending for 5/5 and a MVI for Customer B pending for 5/5 both with different REPs?

- a) TDSP
- b) ERCOT
- c) REP for Customer A
- d) REP for Customer B

What transaction is used to determine the actual end date of a customer?

- a) 814_24
- b) 814_01
- c) 867_03F
- d) 814_22

Move Out to Continuous Service Agreement (CSA)









What does CSA mean?

- a) Continuous Service Arrangement
- b) Continued Service Arrangement
- c) Continuous Service Agreement
- d) Country Served Agreement

If there is a Continuous Service Agreement and the customer moves out what transaction places the service back with the CSA?

- a) 867_04
- b) 814_18
- c) 814_01
- d) 814_22

Disconnect for Non-Pay (DNP)*

Current CR

ERCOT

TDSP

* Does not apply to MOU/EC

Reconnect after DNP*

Current CR

ERCOT

TDSP

* Does not apply to MOU/EC

What transaction is necessary in order to re-connect a customer after a disconnect for non-payment or cancel a pending disconnect for non-payment?

- a) 650_02
- b) 814_08
- c) 650_01
- d) 814_16

Acquisition Transfer vs. Mass Transition Process

What is Acquisition Transfer ("AQ")?

Is the transfer of ESI IDs from the Current CR to another CR(s) as a result of an acquisition pursuant to **P.U.C. SUBST. RULE 25.493**.

- Example: CR selling some or all ESI IDs to another CR and ERCOT is requested to initiate this process. CR selling may continue to be Certified in the Retail Market.
- Note: Not all mergers and acquisitions will utilize this process.

What is a Mass Transition ("TS")?

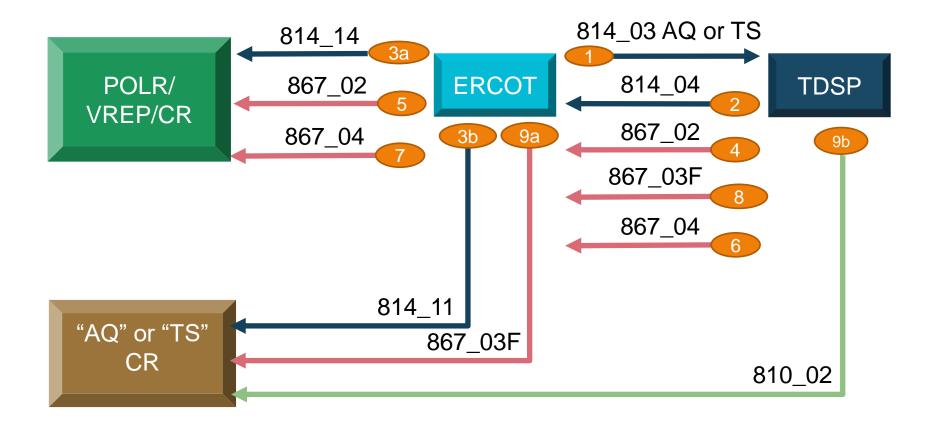
Is the expeditious transfer large numbers of ESI IDs from one Market Participant (MP) to another pursuant to **P.U.C. SUBST. RULE 25.43**.

• Examples: Voluntary or Involuntary Decertification, Bankruptcy, or CR Defaulted on their Financial Obligations to ERCOT. CR is Decertified or no longer Active MP!

Both the "AQ" or "TS" processes:

- Utilizes TX SET 814_03 either "AQ" or "TS" transaction initiated by ERCOT;
- Transfers REP of Records' responsibilities for affected ESI IDs in a manner that protects the continuity of service to Customers;
- Allows for the honoring of Customer's Choice to Switch (814_01) to their chosen Competitive Retailer.

Acquisition Transfer ("AQ") or Mass Transition ("TS") Transaction Flow Process



MIS Portal

Market Information System



ercot ♥ Market Information System

Data Products

Applications

Notices

Certified

Certified

Certified

Application Library

These are the applications available based on your Digital Certificate's permissions.



Create Enrollment

Used by Competitive Retailers (CRs) to begin a non-EDI transa...



Delete CSA

Used by Competitive Retailers (CRs) to submit a non-EDI trans...



Create Move In

Used by Competitive Retailers (CRs) to begin a non-EDI transa...



Establish CSA

Used by New Competitive Retailers (CRs) to submit a non-EDI t...



Find ESIID

Find Electric Service Identifier (ESI ID) information.



Find Transactions

Find business process transactions by Electric Service Identi...



Secure

Certified

Certified

Market Data Transparency Web Services

Self-service data request access for a subset of AMS, Service...



Renewable Energy Credits

Link to Texas Renewable Energy Credits (REC) website.



Create Move Out

Used by Competitive Retailers (CRs) to submit a non-EDI trans...



Certified

Certified

Extract Subscriber

Subscribe/unsubscribe to/from specific certified retail and s...

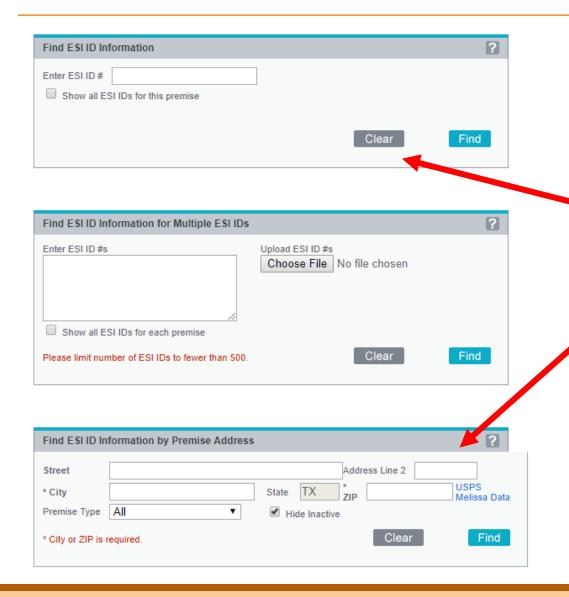


MarkeTrak

MarkeTrak tracks, manages, and stores data for ERCOT Market P...



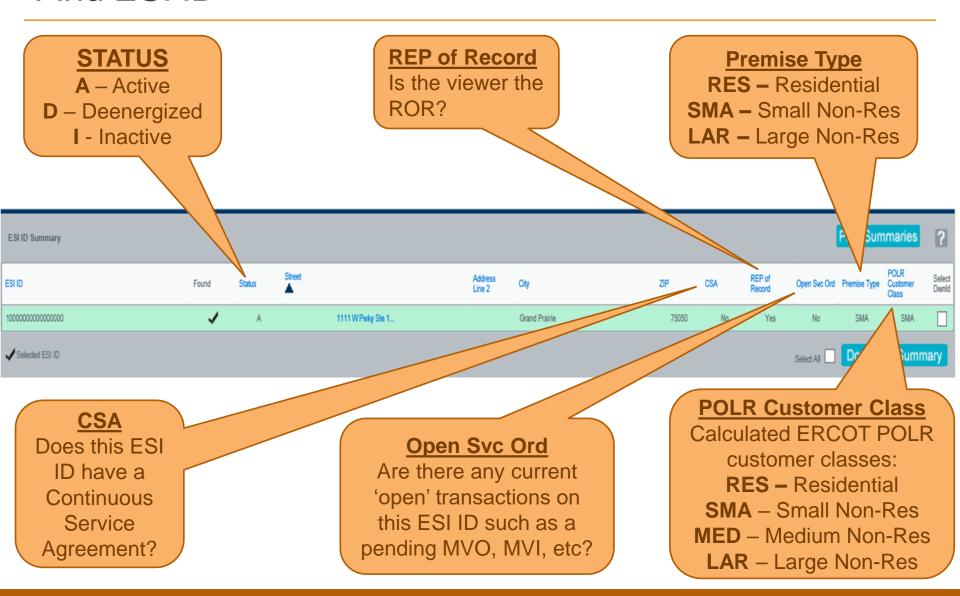
Find ESI ID



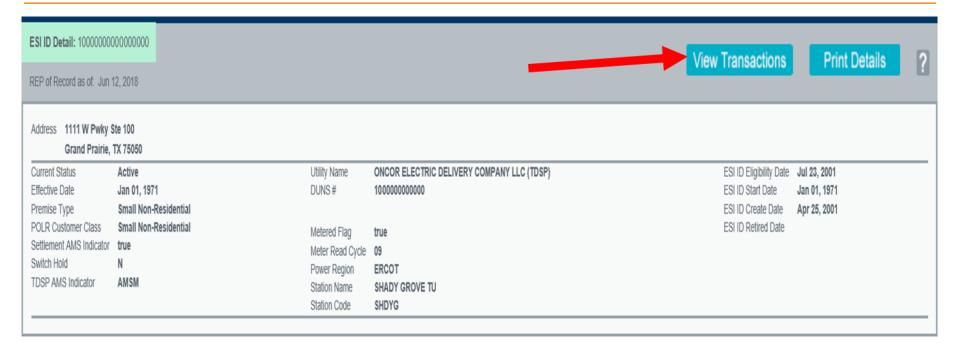
Additional information is accessed via an ESI ID #
Or
An address can be used to find the ESI ID number serving that premise

An asterisk (*) serves as a wildcard for address search

Find ESI ID



Find ESI ID – Additional information



Settlement AMS Indicator – 'true' if AMS meter has been provisioned and ERCOT is settling on AMS interval data vs deemed profile data

TDSP AMS Indicator – indicates if AMS meter is remote or manual; if NULL, it either unmetered, NIDR, or a true IDR meter

Metered Flag – 'true' if metered premise, 'false' if unmetered premise

ESI ID Dates

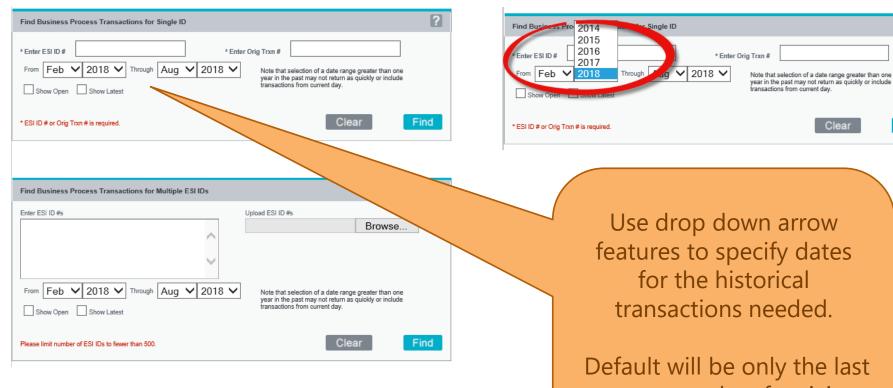
Eligibility Date – first possible date a Switch can be initiated

Start Date – Date CR became Rep of Record, won't appear for non-ROR ESIs

Create Date – Date ESI ID was created

Retired Date – Date ESI ID was retired

Find Transactions

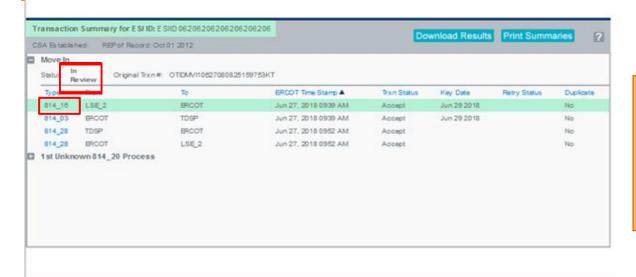


Use drop down arrow features to specify dates for the historical

Default will be only the last seven months of activity and maximum of 5 years.

Find

Find Transactions – MVI w/ permit required

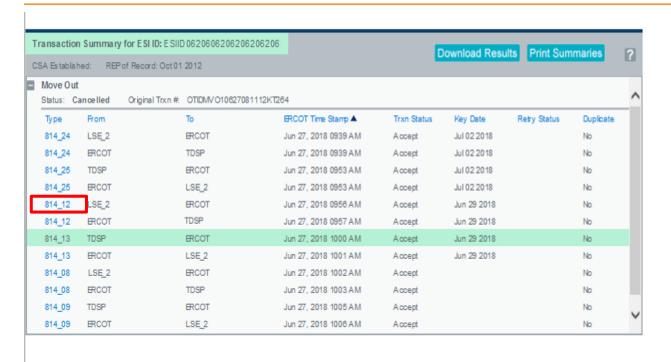


Status will remain *In*Review until TDSP
sends 814_04 to
ERCOT scheduling
the order



Customer information is contact information – not necessarily premise address

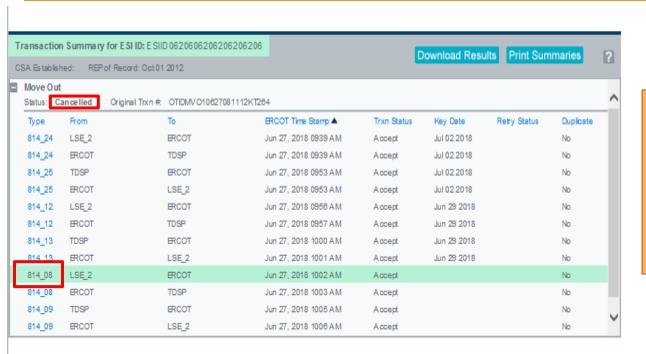
Find Transactions – MVO w/ date change & cancel



Customer requests to change the MVO date from 7/2 to 6/29 on 6/27. Both ERCOT & TDSP accept the change.



Find Transactions – MVO w/ date change & cancel – cont.

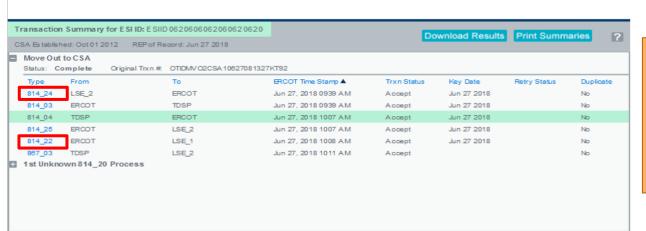


Customer now requests to cancel the MVO scheduled for 6/29 on 6/27. Both ERCOT & TDSP accept the cancellation.

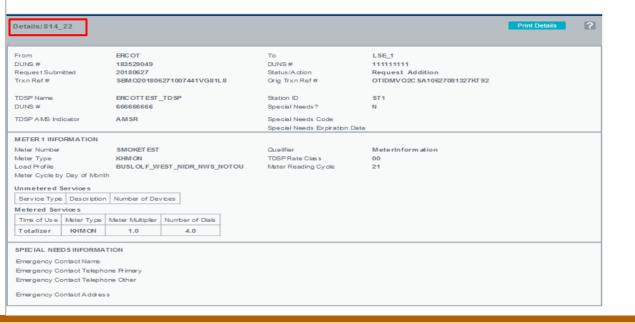


Reason for cancellation can be found in the hyperlink.

Find Transactions – MVO to CSA

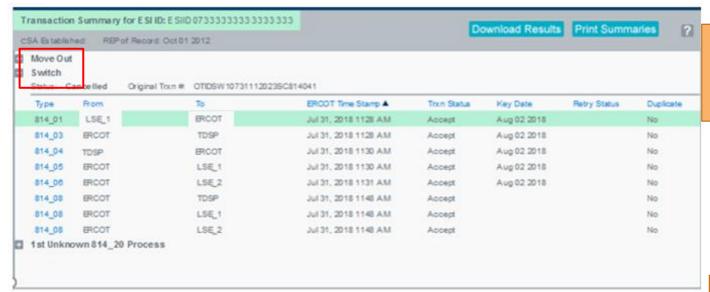


Customer at premise issues a MVO which activates the CSA.
Notification is sent to CSA holder (814_22).



Premise information is provided in the 814_04 and 814_22 including load profile, meter cycle, TDSP Rate Class, and meter information.

Find Transactions – MVO trumps SWI

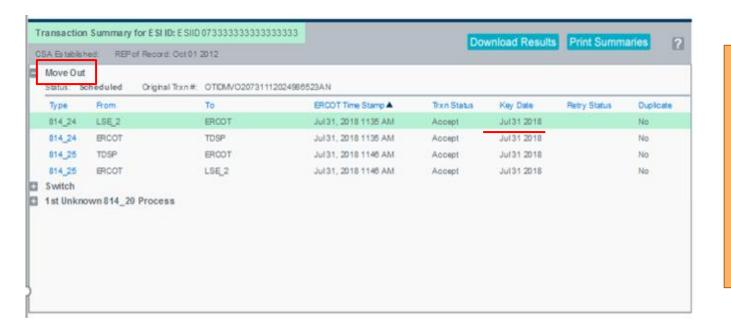


Customer issues a SWI on 7/31 for 8/2.



a loss notification to the Losing REP - an 814_06 with a CHA indicating 'customer changed to another CR'

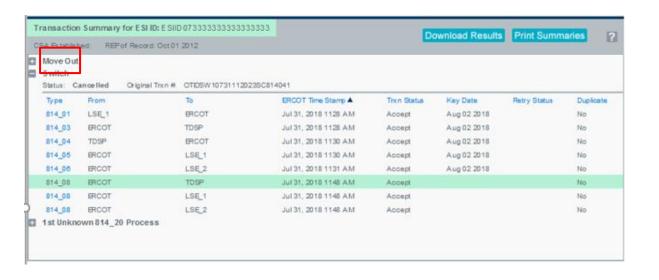
Find Transactions – MVO trumps SWI



Existing REP issues MVO for customer – customer possibly indicated they wanted to "cancel their service" with their current REP.

ERCOT will review any pending transactions two retail business days prior to the effectuating date.

Find Transactions – MVO trumps SWI



With the submittal of the 814_24 MVO, ERCOT proceeds to cancel the 814_01 SWI with an 814_08

814_08 is coded CCE -Cancelled due to Move Out

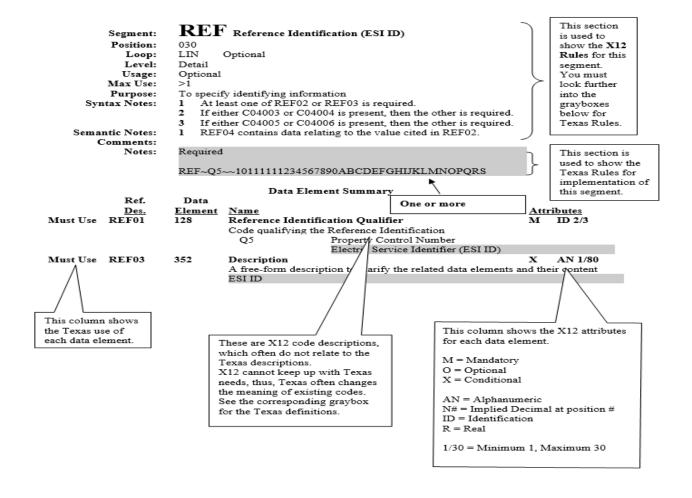
The REP will now have to submit an 814_16 MVI to energize the premise.



TX SET Implementation Guides

TX SET Implementation Guides w/ Examples

814_20 EDI transaction guide



TX SET Implementation Guides w/ Examples

814_20 EDI transaction example – meter exchange

June 11, 2012 T814_20: ESI ID Maintenance Request Version 4.0

814 20 Example #2 of 10

Maintain ESI ID Notification Request - ERCOT to Current CR

IVIAII	Maintain ESI ID Notification Request – ERCOT to Current CK					
ERCOT forwards meter exchange data the Current CR Example includes a meter exchange to an AMS meter with remote disconnect / reconnect capabilities and a change in Load Profile as a result of the Meter Exchange ERCOT stores the Load Profile change and forwards the all information to CR						
ST~814~000000001 Transaction Type, Transaction SET Control Number						
	V~13~200805101201001~20090701~~~2008 01956534~~20	Request, Unique Transaction Number, Transaction Date, Original Transaction ID, SET Transaction Number				
N1^	'8S^TDSP NAME~1~009876543	TDSP Name and DUNS Number				
N1^	'AY~ERCOT~1~183529049~~41	ERCOT Name and DUNS Number, Sender				
N1^	'SJ~CR NAME~1~987654321~~40	CR Name and DUNS Number, Receiver				
LIN	~1~SH~EL~SH~MP	Maintenance Request				
	ASI~7~001	Request to Change ESI ID Information				
REF~MR~AMSR		AMS Indicator				
REF~Q5~~12345678910111231		ESI ID				
REF~TD~REFMR		Reason for Change, AMS Indicator				
	DTM~152~20120629	Effective Date of Change				
	NM1~MX~3~~~~32~MTR012345	Meter Exchange, New Meter Number				
	REF~46~MTR987654	Old Meter Number				
	REF~LO~RESLOWR_WEST_IDR_WS_NO TOU	Load Profile				
	REF~MT~KHMON	Meter Type				
REF~Q2~0~KHMON~TU>51		Start Meter Read				
REF~Q3~6896~KHMON~TU>51		End Meter Read				
REF~4P~1~KHMON~TU>51		Meter Multiplier, Total				
REF~IX~5~KHMON~TU>51		Number of Dials, Total				
	REF~TD~REFLO	Reason for Change, Load Profile				
SE~	21~00000001	Number of Segments, Transaction SET Control Number				

Electronic Data Interface (EDI) Transactions

```
*00*
                                                                       *001201*0030*U*00401*830163719*0*P*^~
ISA*00*
                                *01*666666666
                                                   *01*183529049
G5*GE*666666666*183529049*20180830*0840*30163719*X*004010~
ST*814*0000000021~
BGN*13*OTID81420M00830163718MC5YFMK1*20180830*****20~
N1*85*TDSP*1*666666666**41~
N1*AY*ERCOT*1*183529049**40~
LIN*1*SH*EL*SH*MP~
ASI*7*001~
REF*05**ESIID0830132731KJSMCPDN~
REF*MR*AMSR~
REF*TD*REFMR~
DTM*152*20180830~
NM1*MX*3******32*GE8926487~
REF*46*AB8569742~
REF*4P*10*KHMON*TU451~
REF*LO*BUSMEDLF_EAST_NIDR_NWS_NOTOU~
REF*O2*O*KHMON*TU451~
REF*Q3*6896*KHMON*TU451~
REF*IX*5*KHMON*TU451~
REF*MT*KHMON~
REF*TD*REFLO~
SE*20*000000021~
GE*1*30163719~
IEA*1*830163719~
```

EDI code is translated by each Market Participant's system into a readable format.

One does not have to know the code to understand the transaction

TX SET Training Group Exercise

Group Exercise – Part 1

Provide each transaction number.

Who the transaction is from and who it is going to.

Who is the REP of Record for the scenario listed below?

Customer is moving and calls COWBOYS ENERGY to start service at a new address and OILERS ENERGY is the current REP of Record at that premise ...

*Hint – some lines can have up to 4 dots

Group Exercise – Part 1: TX SET Process Flows

		From			То				
Transaction Type	Trans #	ERCOT	TDSP	OILERS ENERGY	COWBOYS ENERGY	ERCOT	TDSP	OILERS ENERGY	COWBOYS ENERGY
Move In									
Enrollment Notification Request									
Enrollment Notification Response									
CR Enrollment Notification Response									
Historical Usage (If requested by REP)									
Loss Notification									

Continuing from Scenario 1 Group Exercise – Part 2:

Provide each transaction number.

Who the transaction is from and who it is going to.

Who is the REP of Record for the scenario listed below?

Customer calls COWBOYS ENERGY to cancel the Move in the day before the scheduled date...

*Hint – some lines can have up to 4 dots

Group Exercise - Part 2: TX SET Process Flow

Continuing from Scenario 1: Customer calls COWBOYS ENERGY to cancel the move in the day before the scheduled date...

		From			То				
Transaction Type	Trans #	ERCOT	TDSP	OILERS ENERGY	COWBOYS ENERGY	ERCOT	TDSP	OILERS ENERGY	COWBOYS ENERGY
Cancel Request – on day before MVI schedule									
Cancel Response - Accept									
Cancel Request – Response to Cancel Accept									

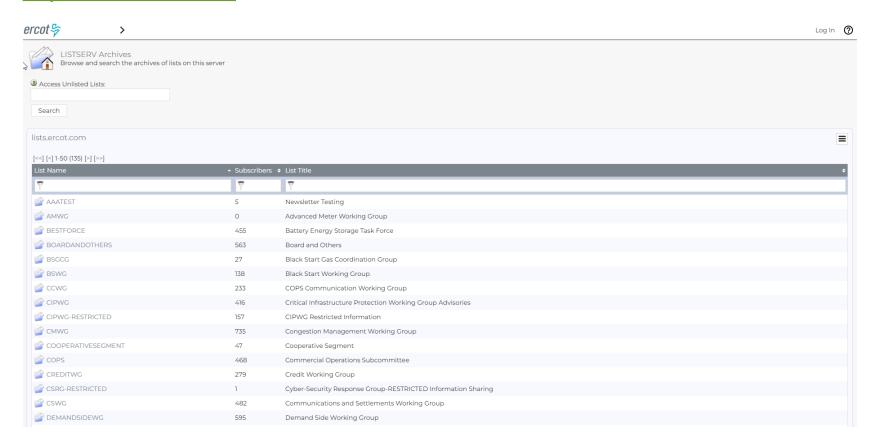
Group Exercise - Part 3: TX SET Bonus Questions

If the Cancel is Rejected in Exercise – Part 2, who is the REP of Record?

If the Cancel is Rejected in Exercise – Part 2, what PROCESS should be initiated?

Listserv

http://lists.ercot.com



Additional resources

ERCOT Client Services

Clientservices@ercot.com

ERCOT Mailing Lists http://lists.ercot.com/

ERCOT Nodal Market Protocols
http://www.ercot.com/mktrules/nprotocols/

ERCOT Training http://www.ercot.com/services/training/

Market Education Contact Training@ercot.com

Scan this QR code to take the course survey!

https://www.surveymonkey.com/r/ERCOTILT



Appendix

Texas SET Swimlanes

Texas SET Swimlanes Scenarios					
Description	File Name and Web Link to Documentation				
TX SET flow documentation for consolidated billing, remittance and dual billing	Billing Scenarios Version February 2017				
TX SET flow documentation for beginning and ending continuous service agreements (CSAs)	Continuous Service Agreement Scenarios February 2017				
TX SET flow documentation for handling Move In changes and problems	Customer Move In Scenarios June 2012				
TX SET flow documentation for handling Move Out changes and problems	Customer Move Out Scenarios February 2017				
TX SET flow documentation for handling customer switch request	Customer Switch Scenarios June 2012				

Texas SET Swimlanes

Texas SET Swimlanes Scenarios

Description	File Name and Web Link to Documentation
TX SET flow documentation for Disconnect and Reconnect for Non-Pay	Disconnect Reconnect Non Pay Scenarios February 2017
TX SET flow documentation for customer dropped by Competitive Retailer (CR), disconnect for non-pay services request and Mass Transition from defaulting CR to Provider of Last Resort (POLR)	Mass Transition / Acquisition Scenarios September 2018
TX SET flow documentation for handling Switch Hold add and removal	Switch Hold Scenarios June 2012
TX SET flow documentation of how to report unplanned outages	Unplanned Outages Scenarios June 2012

TX SET Implementation Guides (IG)

The Texas Standard Electronic Transaction (SET) Implementation Guides provide details of information contained within the electronic transactions used in the competitive retail electric market in Texas.

The current Version 4.0A of the Texas SET Implementation Guides contains updates to retail transactions to support the following:

- PUCT Substantive Rule §25.493 Acquisition and Transfer of Customers from one Retail Electric Provider to Another
- PUCT Substantive Rule §25.480 Bill Payment and Adjustments
- PUCT Substantive Rule §25.483 Disconnection of Service
- PUCT Substantive Rule §25.497 Critical Care Customers
- PUCT Substantive Rule §25.126 Amendments Due to Non-Compliant Meters and Meter Tampering in Areas Where Customer Choice Has Been Introduced
- PUCT PROJECT 34610 Implementation Project Relating to Advanced Metering
- Outstanding Change Controls identified and recommended by the Texas SET Working Group
- https://www.ercot.com/mktrules/guides/txset/version

Texas SET Implementation Guides

Service Orders, Invoice and Remittance Transactions					
Transaction and Version	Web Link to Documentation				
Texas SET V4.0A 650 Service Orders Point to Point	<u>Guides</u> <u>Examples</u>				
Texas SET V4.0A 810 TDSP's Invoice Point to Point	Guides Examples SAC04				
Texas SET V4.0A 820 Remittance Advice Point to Point	<u>Guides</u> <u>Examples</u>				

Texas SET Implementation Guides

Enrollments, Reje	ects and Usage	Transactions
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Transaction and Version	Web Link to Documentation
Texas SET V4.0A 814 Enrollments, MVI, MVO, Create/Maintenance/Retire, Maintain Customer Information	<u>Guides</u> <u>Examples</u>
Texas SET V4.0A 824 Invoice or Usage Reject Notification	<u>Guides</u> <u>Examples</u>
Texas SET V4.0A 867 Monthly and Final Usage, Historical Usage	Guides Examples

Texas SET Implementation Guides

Functional Acknowledgement and CR Option 1 Outage Transactions

Transaction and Version	Web Link to Documentation
Texas SET V4.0A 997 Functional Acknowledgement	<u>Guides</u>
Texas SET V4.0A T-Series CR Option 1 Outage Transactions	<u>Guides</u>

Registration and Qualification/Certification

Registration

 Register with ERCOT as a CR (a REP or an opt-in entity) or a NOIE with the form below.

Qualification/Certification

- CRs must be certified by ERCOT. Please read more about <u>Texas Retail</u> <u>Market Testing and the latest test flight</u>.
- REPs must also be certified by the Public Utility Commission of Texas (PUCT). More information on that certification process may be found on the PUCT website at <u>Retail Electric Providers Certification and</u> <u>Reporting</u>.
- Contact ERCOT Client Services for a full list of requirements

Retail Market Testing

Key Documents					
Description	File Name & Web Link to Documentation				
The ERCOT Retail Testing Website is used by Market Participants to become certified in conducting retail market processes within the ERCOT market.	Texas Retail Testing				
Retail Market Testing Orientation Weblink	Retail Market Testing Orientation				
Retail Market Test Environment User Guide	Retail Market Test Environment User Guide				
Retail Market Testing Environment ESI IDs	Retail Market Testing Environment ESI IDs				

Retail Market Testing

Key Documents					
Description	File Name & Web Link to Documentation				
Flight Test Scripts Workbook and Testing Requirements Matrix	<u>Scripts</u>				
Retail Market Testing Frequently Asked Questions	<u>FAQ</u>				
Testing to Production Checklist	Checklist				