**ERCOT Nodal Protocols**

**Section 18: Load Profiling**

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# Load Profiling

18.1 Overview

(1) The ERCOT retail market requires a 15-minute Settlement Interval. Load Profiling provides a cost-effective way of estimating and allocating 15-minute Load for Electric Service Identifiers (ESI IDs). This Section details how Load Profiling will be implemented in ERCOT when ERCOT does not receive 15-minute Settlement Interval consumption data and enables the accounting of energy usage in the market Settlement process.

18.2 Methodology

(1) A Load Profiling Methodology was the fundamental basis on which Load Profiles were created. The implementation of a Load Profiling Methodology may require statistical Sampling, engineering methods, econometric modeling, or other approaches. All Load Profiles shall conform to the ERCOT-defined Settlement Interval length.

(2) ERCOT has developed Load Profiles for:

(a) Non-interval metered Loads;

(b) Non-Metered Loads; and

(c) Interval Data Recorders (IDRs) including:

(i) Advanced Meters; and

(ii) IDR Meters.

(3) The following Load Profiling Methodologies are used:

|  |  |
| --- | --- |
| **Type of Load** | **Load Profiling Methodology** |
| Non-interval metered | Adjusted Static Models |
| Non-interval metered with Distributed Generation (DG) | Adjusted Static Models and engineering estimates |
| Non-metered | Engineering estimates |

18.2.2 Load Profiles for Non-Interval Metered Loads

**18.2.2.1 Load Profiles for Non-Interval Metered Loads Without Distributed Generation**

(1) Load Profiles for non-interval metered Loads were created using statistical models developed from appropriate Load research sample data. These models are referred to as adjusted static. These model equations relate daily Settlement Interval Load patterns to relevant weather descriptors such as maximum and minimum dry-bulb temperature and humidity. Other daily characteristics such as day-of-the-week and sunrise/sunset times were also employed.

18.2.3 Load Profiles for Non-Metered Loads

(1) Load Profiles for Non-Metered Loads, e.g. streetlights, traffic signals, security lighting, billboards, and parking lots are created using engineering estimates based on known criteria, such as hours of operation, with appropriate variation in sunrise/sunset times. Transmission Service Providers (TSPs) and/or Distribution Service Providers (DSPs) are responsible for providing monthly consumption (kWh) for non-metered Electric Service Identifiers (ESI IDs).

18.2.4 Default Load Profiles for Interval Data Recorders

(1) Default Load Profiles for IDRs will only be used when no historic Customer-specific interval data is available for Settlements. The Adjusted Static Model methodology will be used to create these Load Profiles.

(2) For details on the method to estimate IDR data for Settlement purposes, refer to Section 11, Data Acquisition and Aggregation.

18.2.5 Identification of Weather Zones and Load Profile Types

(1) ERCOT, in coordination with the appropriate Technical Advisory Committee (TAC) subcommittee, will identify Weather Zones and Load Profile Types based on an analysis of Load data, weather data, and sunrise/sunset data.

18.2.9 ERCOT Responsibilities in Support of Load Profiling

(1) ERCOT is responsible for the maintenance of Load Profiles used in the ERCOT market. ERCOT shall follow the Load Profiling and Load research rules and procedures as specified in the Public Utility Commission of Texas (PUCT) rules.

18.3 Posting

(1) ERCOT will make available to Market Participants the following information in a timely manner, subject to confidentiality agreements, proprietary arrangements, and Public Utility Commission of Texas (PUCT) rules.

18.3.1 Methodology Information

(1) Upon request, ERCOT will provide a complete description of all supporting Load Profile Models, documentation and data used in preparation of Load Profiles, including:

(a) The historic Load data used to create the Load Profiles;

(b) Average interval accuracy of each Load Profile Model;

(c) Weather information;

(d) Sunrise/sunset information; and

(e) Any other data used for Load Profile development.

18.3.2 Load Profiling Models

(1) ERCOT will make available the Load Profile Models used to produce the forecast and backcast profiles for the Settlement process. The Load Profile Models shall be accessible via the ERCOT website in a downloadable format.

18.4 Assignment of Load Profile ID

(1) Each Electric Service Identifier (ESI ID) is required to be associated with an appropriate Load Profile ID. This Section details the process of assigning a Load Profile ID to each ESI ID.

18.4.1 Development of Load Profile ID Assignment Table

(1) ERCOT shall develop a cross-reference table of all Load Profile IDs used in the ERCOT market. The table shall clearly state class relationship to Load Profile Type. This information shall be made accessible on the ERCOT website. The cross-reference information shall be compiled and expressed in clear, unambiguous language, and in a manner that will minimize Load Profile ID assignment disputes.

18.4.2 Load Profile ID Assignment

(1) All Load Profile ID assignments shall conform with the valid combinations within the Load Profiling Guide Appendix D, Profile Decision Tree.

(2) Should there be any change in Load Profile ID assignment to any ESI ID, it will be the responsibility of the Transmission Service Provider (TSP) and/or Distribution Service Provider (DSP) to submit those changes to ERCOT.

(3) Competitive Retailers (CRs) may dispute a Load Profile ID assignment through the process described in Load Profiling Guide Section 14, Load Profile ID Dispute Procedure.

(4) TSPs and/or DSPs shall change the assignment of a Load Profile ID based on a dispute outcome finding in favor of a CR. If required to change an assignment, TSPs and/or DSPs must correct the assignment in their system and the ERCOT Customer registration system within three Business Days.

**18.4.3.2 Correction Procedure**

(1) TSPs and/or DSPs are responsible for investigating each ESI ID identified by ERCOT or a Market Participant as having a potentially incorrect Load Profile ID assignment. Market Participants may dispute an assignment of a Load Profile ID as described in Load Profiling Guide Section 14, Load Profile ID Dispute Procedure.

18.4.4 Assignment of Weather Zones to Electric Service Identifiers

(1) TSPs and /or DSPs will assign each ESI ID to a Weather Zone, based on service address ZIP code.

(2) ERCOT will post to the ERCOT website a mapping of a Weather Zone to appropriate Customer registration element used in assigning Weather Zones.

18.5 Additional Responsibilities

(1) This Section addresses responsibilities for Load Profiling not specified in other sections of the Protocols.

18.5.1 ERCOT Responsibilities

(1) ERCOT will, administer and maintain Load Profiles in accordance with these Protocols. There may be extenuating circumstances including, but not limited to, prolonged widespread power outages that may necessitate ERCOT’s discretion for adjusting non-Interval Data Recorder (IDR) backcasted Load Profiles. If an event requires ERCOT to utilize this discretion, ERCOT shall send a Market Notice within three Business Days of making the adjustments and report its action(s) and reason(s) for doing so to the next meeting of the appropriate Technical Advisory Committee (TAC) subcommittee.

(2) Any disputes related to the accuracy, appropriateness, or adjustment of Load Profiles shall be handled in accordance with Section 9.14, Settlement and Billing Dispute Process.

18.5.2 Market Participant Responsibilities

(2) Competitive Retailers (CRs) shall be responsible for reviewing any assignment of Load Profiles to Electric Service Identifiers (ESI IDs) they represent.

**18.6 Installation and Use of Interval Data Recorders**

***18.6.1 Interval Data Recorder Mandatory Installation Requirements***

(1) Interval Data Recorders (IDRs) are required and shall be installed and utilized for Settlement of Premises having either:

(a) A peak Demand greater than 700 kW (or 700 kVA in CenterPoint Energy’s service territory); or

(b) Service provided at transmission voltage (above 60 kV).

(2) All non-metered Loads such as street lighting, regardless of the aggregation level, shall not be required to install IDRs under the IDR Mandatory Installation Requirements. These Loads shall be settled using Load Profiles.

(3) Municipally Owned Utilities (MOUs) and Electric Cooperatives (ECs) that opt-in to Customer Choice must install IDRs at all Premises subject to the IDR Mandatory Installation Requirements for metering prior to the effective date of their participation in the testing and integration requirements of ERCOT systems for Customer Choice.

**18.7 Transition of Interval Data Recorder Meter to AMS Profile Type**

(1) At a Transmission and/or Distribution Service Provider’s (TDSP’s) discretion, or upon a Customer’s request and TDSP’s approval, a TDSP shall:

(a) Utilize a provisioned Advanced Meter or similarly functional meter for Customer’s Premise;

(b) Assign the appropriate Load Profile, other than one with a BUSIDRRQ Profile Type Code, to Premise’s Electric Service Identifier (ESI ID);

(c) Submit Settlement Quality Meter Data, which will be used for Settlement, using the ERCOT specified file format for the interval data only in accordance with Retail Market Guide Section 7.15, Advanced Meter Interval Data File Format and Submission;

(d) If the ESI ID will be transitioning to an Advanced Metering System (AMS) Profile Type other than BUSLRG or BUSLRGDG, submit a MarkeTrak issue to notify ERCOT; and

(e) Submit the appropriate Texas Standard Electronic Transaction (TX SET) transaction notifying the Competitive Retailer (CR) of the Load Profile change.