**Usage History Inquiry Tool
API User Guide**

**Version 1.2**

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**Document History**

The most recent document history/version, document owner, and list of modifications are listed in the table below.

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| 1.0 | 6/29/2011 | Original document. |
| 1.1 | 5/16/2012 | Addition of Production Implementation Requirements |
| 1.2 | 11/13/2012 | Revise the Implementation Procedures |

**Business and Technical Contacts**

|  |  |  |
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|  |  |  |

TABLE OF CONTENTS

[1. Overview 4](#_Toc324932447)

[1.1 CNP Offers New “Usage History Inquiry” Tool 4](#_Toc324932448)

[1.2 Getting Started 4](#_Toc324932449)

[1.3 Summary of Inquiry/Callback Process 5](#_Toc324932450)

[1.4 Purpose 6](#_Toc324932451)

[1.5 Scope 6](#_Toc324932452)

[1.6 Terms and Definitions 6](#_Toc324932453)

[1.7 Acronyms and Definitions 8](#_Toc324932454)

[2. Procedures 9](#_Toc324932455)

[2.1 Requesting Authorization for B2B Communications 9](#_Toc324932456)

[2.2 Preparing to Use the API 9](#_Toc324932457)

[2.3 Production Implementation Requirements. 10](#_Toc324932458)

[3. Using the API Tool 10](#_Toc324932459)

[Appendix 12](#_Toc324932460)

[Usage History Inquiry Tool Interface Definition 12](#_Toc324932461)

[Usage History Inquiry Tool WSDL 12](#_Toc324932462)

[Usage History Inquiry WSDL Web Service 12](#_Toc324932463)

[Usage History Inquiry API – High Level Flow Diagram 13](#_Toc324932464)

# 1. Overview

## 1.1 CNP Offers New “Usage History Inquiry” Tool

CenterPoint Energy, Inc. (CNP) offers a new automated method for Third Parties and other Market Participants to request historical billing history and/or interval data recorder (IDR) usage. This automated method employs a new “Usage History Inquiry” tool, which utilizes an Application Programming Interface (API) that allows CNP and a Third Party to communicate with each other through a business-to-business (B2B) connection. Documentation required to use the tool is provided in the Appendix.

The Usage History Inquiry Tool is intended to be an alternative to the “paper” Letter of Authorization (“LOA”) process described in Section 7.5 of the [ERCOT Retail Market Guide (Current)](http://www.ercot.com/mktrules/guides/retail/current), and may be used by Retail Electric Providers (REPs), aggregators, and other Third Parties who have been authorized by customers to receive usage history information.

## 1.2 Getting Started

Initially, the Electric Market Relations (EMR) group at CNP will send out a **Market notice** to Third Parties that notifies them about CNP’s new automated Usage History Inquiry tool. The notification requests the Third Party to contact EMR for further details about the tool and provides the contact information. The Third Party must email EMR at CR.Support@CenterPointEnergy.com to:

* Notify CNP of their interest.
* Request authorization to use the tool.

### 1.2.1 Completing CNP’s “Request for Historical Usage Authorization” Form

To make an inquiry on “behalf of a customer,” the Third Party must first complete CNP’s “Usage History Inquiry Authorization” form. CNP will review, approve, and reply back to the Third Party with authorization to use the tool.

### 1.2.2 Customer Authorization

Parties requesting usage information via the Usage History Inquiry Tool are responsible for obtaining customer authorization for CNP to release usage data. While parties using the tool will not submit a “paper” LOA, parties will submit the same data contained in the LOA, including an indication that they have **received the customer’s authorization**.

## 1.3 Summary of Inquiry/Callback Process

The Third Party uses the API tool to send a “Usage History Inquiry” Web Service call to CNP. The Third Party must:

* Email EMR at CR.Support@CenterPointEnergy.com to obtain authorization to use the tool, **prior** to being granted access to the “Usage History Inquiry” tool and any Customer data.
* Submit an Electric Service Identifier (ESI-ID) per service address and customer authorization information in order to request billing and IDR data.

Some exceptions, restraints, and constrictions apply.

* The Third Party must submit customer authorization information for **each** ESI-ID requested.
* The Customer data will be delivered within 72 hours from the date and time the request is received.
* Business days are considered to be CNP business days starting at 8am Central Prevailing Time (CPT) and ending at 5pm CPT.
* Holidays are considered to be CNP company holidays.
* Email addresses must be valid.
* During the testing phase, all data returned by a submitted request is **TEST** data and **NOT** production or actual data.
* Usage history includes three (3) days to one (1) full year.
* CNP will reject submitted ESI‑IDs that are not located within CNP’s territory.
* CNP provides Customer Support during regular business hours. Contact the Recon Team by email at it-sd-tmh-recon-team@centerpointenergy.com or call 713‑207‑7472.

## 1.4 Purpose

The purpose of this CNP Usage History Inquiry API User Guide is to provide the Third Party and Market Participant end users:

* An overview of the Usage History Inquiry API tool.
* A description of the basic system requirements, setup configuration, and any exceptions, constraints, or restrictions.
* An explanation of the Usage History Inquiry process and a summary of the steps to complete the inquiry/callback process.

## 1.5 Scope

This CNP Usage History Inquiry API User Guide applies to:

* Third Party and Market Participant end users of the tool and their IT technical contact who will be responsible for configuring and implementing the tool.
* CNP’s Electric Market Relations group.
* CNP’s Enterprise Application Integration (EAI) group and technical IT contact, which provide technical support for the tool.

## 1.6 Terms and Definitions

| **Terms** | **Definitions** |
| --- | --- |
| Application Programming Interface (API) | An automated interface that allows CNP and a Third Party to communicate with each other through a business-to-business (B2B) connection. |
| Authentication ID | The "authentication identifier" used to uniquely identify the requester when submitting the Usage History InquiryAPI request.* For REPs, the DUNS number will be the Authentication ID.
* For Third Parties, a unique identifier such as the “Company Name” or “Tax ID” may be used as the Authentication ID.
 |
| Business-to-Business (B2B) | A “computer to computer” connection established so that data and other information can be exchanged between two companies. |
| Customer | Authorizing Party of the premise. |
| DUNS Number | A nine-digit number issued by Dun & Bradstreet that is assigned to each business location in the D&B database having a unique, separate, and distinct operation for the purpose of identifying them. The DUNS number is random and the digits have no apparent significance. |
| ERCOT | The Electric Reliability Council of Texas manages the flow of electric power to Texas customers. As the independent system operator for the region, ERCOT schedules power on an electric grid that connects transmission lines and generation units, and administers customer switching for competitive choice areas. |
| ESI-ID | An ESI ID is a unique number that identifies a Customer’s electric service location. ESI stands for "electric service identifier." This is **not** the same as a Customer’s account number with the electric service provider that bills them. |
| Interval Data Recorder | A Customer’s energy data recorded in specific time “intervals.” |
| Letter of Authorization | Letter of agreement between the customer and Third Party granting them authorization to request historical usage information. |
| Retail Electric Provider | A company that sells electricity to consumers in the state of Texas. |
| Secure Socket Layer Certificate | A method used to authenticate the server to a caller, known as SSL, typically by having the server use a certificate signed by a well-known public authority such as Verisign or Entrust. |
| Third Party  | The Company making Usage History Inquiry requests on behalf of the Customer. |
| Usage History Inquiry Form | Third Party must complete this form and send to CNP before they can make a Usage History Inquiry on behalf of the Customer. The form contains contact and other information. |
| Usage History Inquiry Tool | A tool that provides an automated method for Third Parties and other Market Participants to request billing history and interval data recorder (IDR) usage. |
| Web Service Call | Web services typically use HTTP to provide communication between a client and a server (where the web service resides). HTTP is a *request-response protocol* where each operation consists of a request-response pair: (1) a request message sent from the client to a server followed by (2) a response message returned from the server to the client. |

## 1.7 Acronyms and Definitions

|  |  |
| --- | --- |
| **Acronyms** | **Definitions** |
| API | Application Programming Interface |
| B2B | Business-to-Business |
| CNP | CenterPoint Energy, Inc.  |
| CPT | Central Prevailing Time |
| EAI | Enterprise Application Integration |
| EMR | Electric Market Relations |
| ERCOT | Electric Reliability Council of Texas |
| ESI | Electric Service Identifier |
| HTTP | Hypertext Transfer Protocol |
| ID | Identifier |
| IDR | Interval Data Recorder |
| LOA | Letter of Authorization |
| REP | Retail Electric Provider |
| SSL | Secure Socket Layer |
| UHIT | Usage History Inquiry Tool |
| URL | Uniform Resource Locator |
| WSDL | Web Service Definition Language |

# 2. Procedures

## 2.1 Requesting Authorization for B2B Communications

1. The Third Party initiates a request for B2B communications by emailing EMR at CR.Support@CenterPointEnergy.com to obtain authorization to use the Usage History Inquiry tool. CNP’s confirmation is required before the Third Party may continue.
2. Once confirmed to use the tool, CNP provides the Third Party their IT contact information.

## 2.2 Preparing to Use the API

The process below provides the necessary steps for the Third-Party IT contact and CNP’s IT contact to prepare to use the API. The Third Party must set up a system to invoke the Usage History Inquiry Web Service, which will:

1. Receive the call-back Web Service.

2. Invoke the Web Service.

**Note:** The Appendix provides Usage History Inquiry Tool (UHIT) links to a **WSDL document** and an **Excel document** that provide instructions for the interface description located on the following public website: <http://www.centerpointenergy.com/services/electricity/competitiveretailers/>.

### 2.2.1 Configuring the Third Party for Connectivity

1. EMR will email the Usage History Inquiry form to CNP’s EAI group, which provides the contact information for the technical person who will coordinate setup and connectivity testing.

1. CNP’s EAI group contacts the Third Party’s IT group requesting the:
* **Distinguished Name** in the **Secure Socket Layer** **(SSL) Certificate**.
* **Authentication ID** that will be used when submitting requests.

### 2.2.2 Testing Connectivity

1. CNP’s EAI group configures the above information, allowing Web Service requests to be accepted with this information.
2. The Third Party will attempt to test “Request for Historical Usage” to confirm that Web Service calls going to CNP and Web Service calls going to the Third Party are both working successfully.
3. Third Party sends a “Request for Historical Usage” Web Service call to CNP with a **predetermined ESI-ID**.

## 2.3 Production Implementation Requirements

1. When a Third Party believes it is ready to be moved from the Test system into the Production system, the Third Party should send an E-mail to CR.Support@CenterPointEnergy.com requesting to be moved to the Production system.
2. CR Relations will review SharePoint to verify whether the Third Party has already completed and signed the UHIT License agreement. If the UHIT License agreement has not been completed and signed then CR Relations forwards to the Third Party to be reviewed and signed. The Third-Party is informed that they cannot move into Production until the UHIT License agreement has been executed, signed and received by CR Relations.
3. Upon receipt of the executed User Agreement, and confirmation from IT, CR Relations will E-mail the EMO Business Analyst. The EMO Business Analyst will request IT to move the Third Party into the Production system.
4. IT will respond with confirmation once the Third Party has been transferred to the Production system.
5. CR Relations will respond by email to the Third Party that they have been moved to the Production system.

# 3. Using the API Tool

The process below lists the steps for Third Parties and Marketing Participants to use in requesting usage through the automated Usage History Inquiry Request.

1. In the XML form under the “Authorization” section, the Third Party inputs all required fields, including confirmation that they **authorization** from the Customer to obtain the Customer’s historical usage information.

2. The Third Party submits a **Usage History Inquiry** request through the API, requesting **data for one or more customers for historical billing information and/or interval usage information** based on the LOA completed between the Third Party and the Customer.

3a. CNP validates the request and responds with either a positive or negative response, stating if requested data will be sent later.

3b. If all mandatory information (refer to the WSDL and other documentation in the Appendix for details) for requesting data through the API has been met, CNP sends the Third Party a **confirmation** through the Web Service Call that the request is being processed.

3c. CNP sends the Third Party a **validation** through the Web Service Call that the Third Party’s request has been **validated and is in process**, or has **failed validation** and the **data requested will not be sent.**

4a. The Third Party receives CNP’s **validation** and sends a **confirmation response** back to CNP through the Web Service Call.

4b. CNP gathers the data and sends it back to the Third Party through the Web Service Call.

4c. The Third Party responds back with an acknowledgement to CNP confirming they received all of the data through the same Web Service API.

5. End of process for this particular request.

# Appendix

## [Usage History Inquiry Tool Interface Definition](http://www.centerpointenergy.com/services/electricity/competitiveretailers/)

Click on the **link** above to open the Excel file. It contains the technical information such as fields, ESI ID requirements, and other data needed by the Third Party’s IT Contact to set up the API tool.

## [Usage History Inquiry Tool WSDL](http://www.centerpointenergy.com/services/electricity/competitiveretailers/)

Click on the **link** above to open the ZIP file. It provides a description of the interface to the Web Service; exceptions are included.

## [Usage History Inquiry WSDL Web Service](http://cws.centerpointenergy.com/Staging/Partner/Electric/UsageHistory.Request?wsdl)

## Usage History Inquiry API – High Level Flow Diagram

 

Response: OK (ACK)

Third Party initiates request for B2B communications.

Request to provide data for
1-to-many customers.

Request received and is in process. (ACK)

Response: OK (ACK)

Request data gathered to be sent.

(Functional Rsp)

Customer requests information.

Request has validated and is being processed. (Function Res)