# Utility Industry Group Implementation Standard

**For**

# Electronic Data Interchange

**TRANSACTION SET**

# 810

## Invoice

**Ver/Rel 004010**

**Outbound to Customer or Energy Service Provider**

June 7, 2000

# Summary of Changes

June 4, 1998

Initial release.

The differences between this Ver/Rel 004010 and Ver/Rel 003070 are as follows:

| Pos. | Ref Des | Data Element | Name | Attributes 3070 | Attributes 4010 |
|---|---|---|---|---|---|
| H020 | BIG01 | 373 | Date | M DT 6/6 | M DT 8/8 |
| H070 | N104 | 67 | Identification Code | X AN 2/20 | X AN 2/80 |
| H130 | ITD06 | 446 | Terms Net Due Date | O DT 6/6 | O DT 8/8 |
| H140 | | 1250 | Date Time Period Format Qualifier | DTM06 in 3070 | DTM05 in 4010 |
| Note: Ver 3070 provided qualifiers D6, D8, RD6, and RD8 in DTM06. Ver 4010 provides D8 and RD8 only in DTM05. | | | | | |
| H140 | | 1251 | Date Time Period | DTM07 in 3070 | DTM06 in 4010 |
| H212 | BAL02 | 522 | Amount Qualifier Code | M ID 1/2 | M ID 1/3 |
| H212 | BAL03 | 782 | Monetary Amount | M R 1/15 | M R 1/18 |
| H213 | INC05 | 782 | Monetary Amount | O R 1/15 | O R 1/18 |
| H214 | PAM08 | 373 | Date | X DT 6/6 | X DT 8/8 |
| D040 | TXI02 | 782 | Monetary Amount | X R 1/15 | X R 1/18 |
| D150 | | 1250 | Date Time Period Format Qualifier | DTM06 in 3070 | DTM05 in 4010 |
| Note: Ver 3070 provided qualifiers D6, D8, RD6, and RD8 in DTM06. Ver 4010 provides D8 and RD8 only in DTM05. | | | | | |
| D150 | | 1251 | Date Time Period | DTM07 in 3070 | DTM06 in 4010 |
| D237 | TXI02 | 782 | Monetary Amount | X R 1/15 | X R 1/18 |
| D240 | N104 | 67 | Identification Code | X AN 2/20 | X AN 2/80 |
| S020 | TXI02 | 782 | Monetary Amount | X R 1/15 | X R 1/18 |
| S050 | TXI02 | 782 | Monetary Amount | X R 1/15 | X R 1/18 |

July 1, 1998

Corrections made to reference codes to align the 810 with the 814:
Header REF01 - Added code BF, deleted code TZ
Detail REF01 - Added codes NH and TZ; revised the definition for code RB

October 20, 1998

Revised the Best Practice, syntax notes, and definitions concerning Elements SAC01 and SAC05 and added SAC13. See pages 5, 39 - 41, and 50 - 52,
BIG08 - Added code 05, revised the definition for code CO
Header REF Position 050 - Added codes 06, GK, and WF to REF01; revised the definitions at BF, BLT, and PC.
Header N1 - Added N106
Header REF Position 110 - Added REF03.
ITD - Added ITD03, ITD05, and ITD07.
Header DTM - Added qualifiers 186 and 187 to DTM01; noted that qualifiers 150 and 151 are not recommended for use.
IT1 - Added UNMET to IT109, added IT112 and IT113.
Detail TXI Position 040 and Position 237 - Added TXI08 and TXI09.
Detail MEA - Added qualifier CO to MEA02, added definition to T9 in C00101, and changed MEA06 to Recommended.
Detail REF Position 120 - Revised the Note, added qualifiers NH, PR, and TZ to REF01, added REF02 values for qualifier SU.
Detail N4 - Added N405 and N406.
Detail REF Position 280 - Added REF03.
Summary TXI Position 020 and Position 050 - Added TXI08 and TXI09.

May 2, 1999
BIG07 – Added codes BD (Statement of Balance Due) and RA (Request for Reimbursement).
Header REF Position 050 – Added code BE.
PAM07 – Added code 194 (Period End Date).
IT109 – Added code RATE.
Detail DTM Position 150 – Added codes DT and RDT to DTM05.

June 10, 1999
BIG07 – Added code SL (Summary Lease Schedule)
DTM02 – Added for optional use
IT109 – Code BILLDET added
MEA01 – Codes AN (work) and EN (environmental conditions) added
REF01 (REF 120 of Detail Section) – Code QQ added
REF01, 02 and 03 (REF 120 of Detail Section) – Notes for use of LU code modified/added
Note for SAC07 modified
SAC06 and 07 (SAC 040 of Summary Section) elements added

October 12, 1999

IT1, in Best Practices, added "/or"
Use of NTE in Document Specific Best Practices, changed to identify bill printing

| Pos. | Ref Des | Data Element | Name | Notes |
|---|---|---|---|---|
| H020 | BIG02 | 76 | Invoice Number | Removed reference to Utility |
| H020 | BIG07 | 640 | Transaction Type Code | Added gray box to code SL |
| H030 | NTE | | Notes | Clarified NTE for use in printing bill |
| H030 | NTE01 | 363 | Note Reference Code | Removed reference to Utility |
| H070 | N101 | 98 | Entity Identifier Code | Modified gray box for RE |
| H140 | DTM | | Comments | Clarified time information |
| H212 | BAL02 | 522 | Amount Qualifier Code | Added J9, clarified gray box for YB and J9 |
| D010 | IT109 | 234 | Product/Service Id | Added SUPCHG |
| D040 | TXI | | Notes | Clarified placement of taxes |
| D040 | TXI03 | 954 | Percent | Clarified use of percentage |
| D059 | MEA02 | 738 | Measurement Qualifier | Added gray box on use of meter multiplier |
| D059 | MEA07 | 935 | Measurement Significance Code | Added 76, 77, 78, 79 |
| D060 | PID | | Notes | Clarified use of NTE for bill print messages |
| D120 | REF | | Notes | Clarified use of account number information |
| D120 | REF01 | 128 | Reference Identification Qualifier | Added note for IX and LU in REF03. Added gray box for PRT |
| D120 | REF03 | 352 | Description | Added note for LU |
| D150 | DTM | | Comments | Clarified time |
| D150 | DTM01 | 374 | Date/Time Qualifier | Removed gray box for 150 and 151 |
| D230 | SAC13 | 230 | Reference Identification | Added note on printing the bill |

| | Pos. | Ref Des | Data Element | Name | Notes |
|---|---|---|---|---|---|
| | D237 | TXI | | Notes | Clarified placement of taxes |
| | S020 | TXI | | Notes | Clarified placement of taxes |
| | S040 | SAC13 | 230 | Reference Identification | Added note on use in printing the bill |
| | S070 | CTT02 | 347 | Hash Total | Removed CTT02 element |
| | | | | Best Practices | Clarified requirement of one invoice per customer account |
| February 7, 2000 | D020 | BIG01 | 373 | Beginning | Clarified gray box on transaction reference date |
| | 020 | BIG05 | 328 | Beginning | Clarified gray box on cross reference numbering |
| | 020 | BIG07 | 640 | Beginning | Added 13, AI, RP for Maintenance Request, Adjusted Invoice, Reporting, respectively |
| | 212 | BAL | 212 | Comment | Allow for use of negative numbers to represent payments received |
| | 120 | REF01 | 128 | Reference | Clarified IX to represent number of dials on meter |
| | 120 | REF02 | 127 | Reference | Clarify use of IX and QQ |
| | 150 | DTM05 | 1250 | Date/Time | Changed gray box recommend not using DT. Removed comments on RD8 and RDT |
| | 230 | SAC06 | 378 | Reference Identification | Added “9” to represents Late Payment Charge Base Amount |

| | Pos. | Ref Des | Data Element | Name | Notes |
|---|---|---|---|---|---|
| June 7, 2000 | 020 | BIG05 | 328 | Beginning Segment | Clarified graybox to indicate 820 cross-reference |
| | 070 | N101 | 98 | Name | Added codes AY, 48, 55, 85, and H8 in N101 |
| | 230<br>040 | SAC09 | 355 | Service Charge | Clarified graybox for codes BZ, HH, and TZ in all SAC09s |

# 810 Invoice

## Introduction

The function of the Utility Industry Group is

> To represent Electric, Gas, and Combination Utilities, their suppliers, their customers, and other interested parties as an Industry Action Group to the American National Standards Institute (ANSI) Accredited Standards Committee (ASC) X12, specifically in the standards-setting process, for their Electronic Data Interchange business needs.
>
> To encourage, promote, and establish conventions for the use of ASC X12 standards as the "recommended" method of EDI. To develop and coordinate, as required, implementation guidelines and tools to promote the growth and timely implementation of Electronic Commerce/EDI within the industry.
>
> To provide a forum for the exchange of ideas related to Electronic Commerce/EDI and its influence on the business needs of the industry.

The UIG will represent the Edison Electric Institute (EEI) and its members to facilitate implementation of Electronic Commerce/EDI in the Utility Industry.

## Purpose

This Utility Industry Group (UIG) Implementation Guideline contains the format and establishes the data contents of the Invoice Transaction Set (810) as adopted by the UIG for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide a detailed statement of charges due for utility services for a customer account.

## Notes

This Implementation Guideline was designed to provide the customary invoice from a local distribution utility (LDC) to the end use customer as well as to address the business processes that occur between a local distribution utility (LDC) and a third-party energy service provider (ESP) in a deregulated, alternative energy supply environment.

In the customary, regulated environment, the principal parties involved in this Transaction Set 810 implementation are:

- The utility (Code 8S) which provides energy and services to the end use customer
- The end use customer (Code 8R or BT)

In the deregulated, alternative energy supply environment, the principal parties involved in this Transaction Set 810 implementation are:

- The utility (Code 8S) which provides services to the end use customer on behalf of the ESP
- The ESP (Code SJ) which supplies energy to the end use customer
- The end use customer (Code 8R)

The primary processes addressed by this Transaction Set 810 are:

- Billing the end use customer for energy and services provided by the utility or by the ESP
- Advising the ESP of metered consumption by the customer
- Advising the ESP of amounts billed by the utility on the ESP's behalf
- Billing the ESP for energy and services provided by the utility

# 810 Invoice

# Best Practices

## Global Best Practices

### Use of 810 as a Single Invoice

- The UIG recommends that this transaction set be used to represent a single invoice for a single account. One account may contain multiple meters.

### Use of Text Segments

- The UIG recommends that the note (NTE) segment be avoided because this segment is not machine-readable. Other text segments, such as MSG and PID, may be used if their use will lead to machine readable information in subsequent applications.

### Use of ZZ Qualifier

- The use of data fields to transmit uncoded or textual information should be avoided. This practice is usually associated with the use of the ZZ qualifier as a normal course of doing business.

### 997 - Functional Acknowledgment

- The purpose of the 997 is to verify receipt of a transmitted document only, not the acceptance of the document. For example, the acceptance of a purchase order (850) is accomplished through the use of the purchase order acknowledgment transaction (855).

### Interchange Control Number

- A unique and sequential interchange control number should be used on every envelope that is transmitted to a trading partner. This approach will allow the receiver to audit the interchange for any duplicate or missing transmissions.

### Use of Dun & Bradstreet (D-U-N-S) Number

- Dun & Bradstreet assigns a nine-digit identification number to every business entity. This number, known as the D-U-N-S number, should be used to identify the trading partners. A trading partner may append a four-digit suffix to the D-U-N-S number to uniquely identify a specific location within the entity; this number is referred to as a D-U-N-S + 4 number

### Banking Transactions

- Guidelines that outline the use of transactions relating to interactions between a sender and the sender's financial institution are available from the Bankers EDI Council and the NACHA EDI Council. Other publications that address the use of financial payment transactions include Technical Report 1 (TR1) and Technical Report 2 (TR2); both of these publications are available from DISA.

### Capitalization

- The use of all upper case (capital) letters is preferred over the use of mixed upper and lower case letters.

# Document-Specific Best Practices

## Use of The NTE Segment

- Although the UIG recommends that the NTE segment be avoided, there are occasions when the utility is required by law or regulation to include messages or notices in all invoices. Under these circumstances, the NTE segment should be used for notes and messages to be printed on the bill and the PID should be used for notes that apply directly to the IT1 .

## Use of The IT1 Segment

- An IT1 loop is used to accumulate all consumption and/or charge detail for a single meter or service. Each meter or service will be detailed in a separate IT1 loop.

## Use of the MEA Segment

- The MEA segment is used to convey consumption readings for one metering period. Transaction Set 867 should be used if interval meter readings are required.

## UIG Definitions for MEA07 Measurement Significance Codes

- The metering characteristics of the utility industry require measurement definitions in addition to those found in Data Element 935, *Measurement Significance Code*. The UIG has submitted data maintenance (DM) requests to have these additional definitions added to DE 935 in a future version of the X12 standards. In order to provide these measurement definitions for version 4010 implementations, the UIG has provided UIG-specific definitions for valid DE 935 codes. To assist application developers, who may wish to include the requested future codes in their application logic, the list of non-standard definitions found in MEA07 includes references to the requested codes.

## Use of the PID Segment

- The PID segment is used to convey required messages that apply to a particular service only .

## Use of the Detail IT1/REF Segment, Position 120

- This segment is used only when the IT1 loop is used to present account information. Trading partners using the meter model (where an IT1 conveys meter charges and usage) should provide the account reference information in the Header REF, position 050.

## Use of the SLN Segment

- The IT1/SLN segment is used to overcome the limitation on the number of IT1/SAC loops. In some environments, more than 25 separate charges or allowances are associated with one IT1. Use of the SLN segment provides for a maximum of 1,000 individual SAC and TXI iterations. If and when the 810 is revised to permit more than 25 IT1/SAC loops, this 810 Guideline will be revised to remove the SLN segment.

## Values in Elements SAC01 and SAC05

- Previous editions of this guideline stated that the amount shown in SAC05 will always be positive and that the code used in SAC01 will indicate whether to add or subtract the SAC05 amount to or from the TDS. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect; future versions of the UIG guidelines will no longer contain the above statement. The code used in SAC01 does not indicate the sign of the amount in SAC05. The amount shown in SAC05 may be either positive or negative; if negative, the minus sign, " - ", must be transmitted. Trading partners who implemented the former guidance regarding SAC01 and SAC05 may continue to follow that guidance or may elect to revise their implementation to conform to the current guidance. New implementations should follow the guidance contained herein.

# 810 Invoice

**Functional Group ID=IN**

## Heading

| | Pos. No. | Seg. ID | Name | Req. Des. | Max. Use | Loop Repeat | Notes and Comments |
|---|---|---|---|---|---|---|---|
| Must Use | 010 | ST | Transaction Set Header | M | 1 | | |
| Must Use | 020 | BIG | Beginning Segment for Invoice | M | 1 | | |
| | 030 | NTE | Note/Special Instruction | O | 100 | | |
| | 040 | CUR | Currency | O | 1 | | |
| | 050 | REF | Reference Identification | O | 12 | | |
| | | | LOOP ID - N1 | | | 200 | |
| | 070 | N1 | Name | O | 1 | | |
| | 080 | N2 | Additional Name Information | O | 2 | | |
| | 090 | N3 | Address Information | O | 2 | | |
| | 100 | N4 | Geographic Location | O | 1 | | |
| | 110 | REF | Reference Identification | O | 12 | | |
| | 120 | PER | Administrative Communications Contact | O | 3 | | |
| | 130 | ITD | Terms of Sale/Deferred Terms of Sale | O | >1 | | |
| | 140 | DTM | Date/Time Reference | O | 10 | | |
| | 212 | BAL | Balance Detail | O | >1 | | |
| | 213 | INC | Installment Information | O | 1 | | |
| | 214 | PAM | Period Amount | O | >1 | | |

## Detail

| | Pos. No. | Seg. ID | Name | Req. Des. | Max. Use | Loop Repeat | Notes and Comments |
|---|---|---|---|---|---|---|---|
| | | | LOOP ID - IT1 | | | 200000 | |
| | 010 | IT1 | Baseline Item Data (Invoice) | O | 1 | | |
| | 040 | TXI | Tax Information | O | 10 | | |
| | 059 | MEA | Measurements | O | 40 | | |
| | | | LOOP ID - PID | | | 1000 | |
| | 060 | PID | Product/Item Description | O | 1 | | |
| | 120 | REF | Reference Identification | O | >1 | | |
| Must Use | 150 | DTM | Date/Time Reference | O | 10 | | |
| | | | LOOP ID - SLN | | | 1000 | |
| | 200 | SLN | Subline Item Detail | O | 1 | | |
| | 230 | SAC | Service, Promotion, Allowance, or Charge Information | O | 25 | | |
| | 237 | TXI | Tax Information | O | 10 | | |
| | | | LOOP ID - N1 | | | 200 | |
| | 240 | N1 | Name | O | 1 | | |
| | 250 | N2 | Additional Name Information | O | 2 | | |
| | 260 | N3 | Address Information | O | 2 | | |
| | 270 | N4 | Geographic Location | O | 1 | | |
| | 280 | REF | Reference Identification | O | 12 | | |

## Summary

| | Pos. No. | Seg. ID | Name | Req. Des. | Max. Use | Loop Repeat | Notes and Comments |
|---|---|---|---|---|---|---|---|
| Must Use | 010 | TDS | Total Monetary Value Summary | M | 1 | | |
| | 020 | TXI | Tax Information | O | 10 | | |
| | | | LOOP ID - SAC | | | 25 | |
| | 040 | SAC | Service, Promotion, Allowance, or Charge Information | O | 1 | | |
| | 050 | TXI | Tax Information | O | 10 | | |
| | 070 | CTT | Transaction Totals | O | 1 | | n1 |
| Must Use | 080 | SE | Transaction Set Trailer | M | 1 | | |

## Transaction Set Notes

**1.** Number of line items (CTT01) is the accumulation of the number of IT1 segments. If used, hash total (CTT02) is the sum of the value of quantities invoiced (IT102) for each IT1 segment.

**Segment:** **ST** **Transaction Set Header**
**Position:** 010
**Loop:**
**Level:** Heading:
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To indicate the start of a transaction set and to assign a control number
**Syntax Notes:**
**Semantic Notes:** **1** The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).
**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | ST01 | 143 | **Transaction Set Identifier Code**<br>Code uniquely identifying a Transaction Set<br>810 Invoice | M | ID 3/3 |
| Must Use | ST02 | 329 | **Transaction Set Control Number**<br>Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | M | AN 4/9 |

**Segment:** **BIG** **Beginning Segment for Invoice**
**Position:** 020
**Loop:**
**Level:** Heading:
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To indicate the beginning of an invoice transaction set and to transmit identifying numbers and dates
**Syntax Notes:**
**Semantic Notes:** **1** BIG01 is the invoice issue date.
**Comments:** **1** BIG07 is used only to further define the type of invoice when needed.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **BIG01** | **373** | **Date** | **M DT 8/8** |
| | | | Date expressed as CCYYMMDD<br>The transaction creation date. This is the date that the transaction was created by the sender's application system | |
| **Must Use** | **BIG02** | **76** | **Invoice Number**<br>Identifying number assigned by issuer<br>Unique invoice number identifying this bill. | **M AN 1/22** |
| | **BIG04** | **324** | **Purchase Order Number**<br>Identifying number for Purchase Order assigned by the orderer/purchaser | **O AN 1/22** |
| | **BIG05** | **328** | **Release Number** | **O AN1/30** |
| | | | Cross Reference Number originally sent in the BPT02 segment of the 867, used to tie the usage and billing transactions together. This same number may also appear in the REF~6O element of the 820. The need for this code came about due to the cancel/re-bill scenarios where usage can be sent multiple times for the same billing period. Use of this cross reference number eliminates confusion as to which billing transaction goes with which usage transaction | |
| Recomm | **BIG07** | **640** | **Transaction Type Code**<br>Code specifying the type of transaction | **O ID 2/2** |

| Code | Description |
|---|---|
| 13 | Maintenance Request<br>Used when ESP requests Utility to remove some of the charges on a customer bill |
| AI | Adjusted Invoice<br>Used when this is an adjusted invoice |
| BD | Statement of Balance Due<br>In the alternative energy supply environment, used to identify bills that are for balance only; no readings or charge details will be included (no IT1 Loops will be populated). |
| CI | Consolidated Invoice |
| FB | Final Bill |
| FE | Memorandum, Final Bill<br>The final (last) bill for a non-payable invoice (memo) |
| ME | Memorandum |
| PR | Product (or Service) |
| RA | Request for Reimbursement |
| RP | Reporting (Standard Offer Accounts) |

| | | | | | |
|---|---|---|---|---|---|
| | | | SL | Summary Lease Bill<br>**Indicates summary bill.**<br><br>An 810 is designed to show invoice information for one customer. The use of the SL code is not meant to imply that the 810 should be used as a summary of bills for more than one customer which would rightly be the 811 Transaction Set. | |
| Recomm | **BIG08** | **353** | **Transaction Set Purpose Code**<br>Code identifying purpose of transaction set | | **O** **ID 2/2** |
| | | | 00 | Original | |
| | | | 01 | Cancellation<br>Cancels an entire invoice. | |
| | | | 05 | Replace<br>Reissue of an entire invoice, with the intent that the previous invoice be ignored. | |
| | | | 07 | Duplicate | |
| | | | CO | Corrected<br>Reissue of an entire invoice.<br>This definition of this code will change for future versions of the UIG guidelines. A reissue of an entire invoice should be coded 05 – Replace. When an invoice is corrected with a back out and re-bill, it is “corrected” and code CO is appropriate. | |

**Segment:** **NTE** **Note/Special Instruction**
**Position:** 030
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** 100
**Purpose:** To transmit information in a free-form format, if necessary, for comment or special instruction
**Syntax Notes:**
**Semantic Notes:**
**Comments:** **1** The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the NTE segment should therefore be avoided, if at all possible, in an automated environment.

**Notes:** 1. Used for required messages and notices that are to be printed on the invoice. The PID at detail position 060 should be used to provide additional information about the IT1.

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**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| | **NTE01** | **363** | **Note Reference Code**<br>Code identifying the functional area or purpose for which the note applies<br>ADD Additional Information<br>Originator messages and notices<br>OTH Other Instructions<br>Regulatory-required messages or notices. | **O** | **ID 3/3** |
| **Must Use** | **NTE02** | **352** | **Description**<br>A free-form description to clarify the related data elements and their content | **M** | **AN 1/80** |

**Segment:** **CUR** **Currency**
**Position:** 040
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify the currency (dollars, pounds, francs, etc.) used in a transaction
**Syntax Notes:**
**Semantic Notes:**
**Comments:** **1** See Figures Appendix for examples detailing the use of the CUR segment.

**Notes:** Amounts are specified in the currency of the party that bills the end use customer.

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| Must Use | CUR01 | 98 | **Entity Identifier Code**<br>Code identifying an organizational entity, a physical location, property or an individual<br>85 Billing Provider | M ID 2/3 |
| Must Use | CUR02 | 100 | **Currency Code**<br>Code (Standard ISO) for country in whose currency the charges are specified | M ID 3/3 |

**Segment:** **REF** **Reference Identification**
**Position:** 050
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** 12
**Purpose:** To specify identifying information
**Syntax Notes:** **1** At least one of REF02 or REF03 is required.
**Semantic Notes:**
**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| Must Use | REF01 | 128 | **Reference Identification Qualifier**<br>Code qualifying the Reference Identification | M ID 2/3 |

| Code | Description |
|---|---|
| 06 | System Number<br>When a utility uses logical account numbers (those that change when a meter route is changed, etc.), the utility can assign a System Number as a permanent key for the account. The customer account number may be used for the initial Request transaction (enrollment), but the System Number will be passed to the Service Provider during confirmation and will be used for all future transactions. |
| 11 | Account Number<br>Energy Service Provider-assigned account number for the end use customer. |
| 12 | Billing Account<br>Utility-assigned account number for the end use customer. |
| 14 | Master Account Number<br>Account number used when BIG07 = CI to represent individual billing accounts which have been consolidated and/or summarized |
| 45 | Old Account Number<br>Utility's previous account number for the end use customer. |
| 4B | Shipment Origin Code<br>Premise code for the end use customer premise. |
| 5B | Supplemental Account Number<br>Energy Service Provider-assigned account number for the Utility. |
| AA | Accounts Receivable Statement Number<br>Remit-to reference number. |
| AJ | Accounts Receivable Customer Account<br>Utility-assigned account number for the Energy Service Provider. |
| BE | Business Activity<br>Indicates the characteristics of the usage or usage and billing being reported to the Supplier. |
| BF | Billing Center Identification<br>Billing cycle. Cycle number when the billing will be rendered. |

| | |
|---|---|
| BLT | Billing Type<br>Identifies whether the LDC or ESP consolidates the bill or whether each party will render their own bill. See REF02 for valid values. |
| CT | Contract Number |
| GK | Third Party Reference Number<br>Former/departing ESP's account number for the end use customer. |
| OI | Original Invoice Number<br>Sent when BIG08 = 01 or CO. |
| PC | Production Code<br>Identifies the party that calculates the bill. See REF02 for valid values. |
| WF | Locally Assigned Control Number<br>ESP's previous account number for the end use customer. |

**REF02** **127** **Reference Identification** **X** **AN 1/30**

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

When REF01 is BLT, valid values for REF02 are:
- LDC - The Utility bills the customer
- ESP - The ESP bills the customer
- DUAL - Each party bills the customer

When REF01 is PC, valid values for REF02 are:
- LDC - The Utility calculates the charges on the bill
- ESP - The ESP calculates the charges on the bill
- DUAL - Each party calculates its portion of the bill

**REF03** **352** **Description** **X** **AN 1/80**

A free-form description to clarify the related data elements and their content

**Segment:** **N1** **Name**
**Position:** 070
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To identify a party by type of organization, name, and code
**Syntax Notes:**
**1** At least one of N102 or N103 is required.
**2** If either N103 or N104 is present, then the other is required.
**Semantic Notes:**
**Comments:**
**1** This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **N101** | **98** | **Entity Identifier Code**<br>Code identifying an organizational entity, a physical location, property or an individual | **M ID 2/3** |

| Code | Definition |
|---|---|
| 48 | In-service Source<br>Used to identify the party that reads the meter, often referred to as the meter reading service provider (MRSP). |
| 55 | Service Manager<br>Used to identify the party that manages the meter data on behalf of another, often referred to as the Meter Data Management Agent (MDMA). |
| 85 | Billing Provider.<br>Used to identify the party that will present the bill to the end use customer, often referred to as the billing agent (BA). |
| H8 | Servicing Agent<br>Used to identify the party that services and maintains the meter, often referred to as the Meter Service Provider (MSP). |
| AY | Clearinghouse<br>A centralized entity that sends, processes, and/or receives data to/from multiple sources. |
| 8R | Consumer Service Provider (CSP) Customer<br>End use Customer |
| 8S | Consumer Service Provider (CSP)<br>Utility |
| AG | Agent/Agency<br>Billing agent |
| BT | Bill To Party<br>Used when directly billing the end use customer |
| RE | Party to receive commercial invoice remittance<br>Remit-to party |
| SJ | Service Provider<br>Energy Service Provider |

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| | **N102** | **93** | **Name**<br>Free-form name | **X AN 1/60** |
| | **N103** | **66** | **Identification Code Qualifier**<br>Code designating the system/method of code structure used for Identification Code (67) | **X ID 1/2** |

| Code | Definition |
|---|---|
| 1 | D-U-N-S Number, Dun & Bradstreet |

| | | | | |
|---|---|---|---|---|
| | | 9 | D-U-N-S+4, D-U-N-S Number with Four Character Suffix | |
| | | 24 | Employer's Identification Number | |
| | | 91 | Assigned by Seller or Seller's Agent<br>An identifier assigned by the billing party | |
| | | 92 | Assigned by Buyer or Buyer's Agent<br>An identifier assigned by the receiving party | |

| | | | | |
|---|---|---|---|---|
| **N104** | **67** | **Identification Code**<br>Code identifying a party or other code | **X** | **AN 2/80** |
| **N106** | **98** | **Entity Identifier Code**<br>Code identifying an organizational entity, a physical location, property or an individual.<br>Used in addition to the N103 and N104 to identify the transaction sender and receiver when more than two parties are identified by N1 loops. | **O** | **ID 2/3** |

| | |
|---|---|
| 40 | Receiver<br>Entity to accept transmission |
| 41 | Submitter<br>Entity transmitting transaction set |

**Segment:** **N2** **Additional Name Information**
**Position:** 080
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 2
**Purpose:** To specify additional names or those longer than 60 characters in length
**Syntax Notes:**
**Semantic Notes:**
**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **N201** | **93** | **Name**<br>Free-form name | **M** | **AN 1/60** |
| | **N202** | **93** | **Name**<br>Free-form name | **O** | **AN 1/60** |

**Segment:** **N3** **Address Information**
**Position:** 090
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 2
**Purpose:** To specify the location of the named party
**Syntax Notes:**
**Semantic Notes:**
**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | N301 | 166 | **Address Information**<br>Address information | M | AN 1/55 |
| | N302 | 166 | **Address Information**<br>Address information | O | AN 1/55 |

**Segment:** **N4 Geographic Location**
**Position:** 100
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify the geographic place of the named party
**Syntax Notes:**
**Semantic Notes:**
**Comments:**
**1** A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
**2** N402 is required only if city name (N401) is in the U.S. or Canada.

### Data Element Summary

| Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|
| **N401** | **19** | **City Name**<br>Free-form text for city name | **O** | **AN 2/30** |
| **N402** | **156** | **State or Province Code**<br>Code (Standard State/Province) as defined by appropriate government agency | **O** | **ID 2/2** |
| **N403** | **116** | **Postal Code**<br>Code defining international postal zone code excluding punctuation and blanks (zip code for United States) | **O** | **ID 3/15** |
| **N404** | **26** | **Country Code**<br>Code identifying the country | **O** | **ID 2/3** |

**Segment:** **REF** **Reference Identification**
**Position:** 110
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 12
**Purpose:** To specify identifying information
**Syntax Notes:** **1** At least one of REF02 or REF03 is required.
**Semantic Notes:**
**Comments:**
**Notes:** Used to further identify any customer-required identification numbers, e.g., accounting distribution.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | REF01 | 128 | **Reference Identification Qualifier**<br>Code qualifying the Reference Identification<br>Use any valid Data Element 128 code qualifiers, as mutually agreed between the trading partners. | M | ID 2/3 |
| | REF02 | 127 | **Reference Identification**<br>Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier | X | AN 1/30 |
| | REF03 | 352 | **Description**<br>A free-form description to clarify the related data elements and their content | X | AN 1/80 |

**Segment:** **PER** **Administrative Communications Contact**
**Position:** 120
**Loop:** N1
**Level:** Heading:
**Usage:** Optional
**Max Use:** 3
**Purpose:** To identify a person or office to whom administrative communications should be directed
**Syntax Notes:**
**1** If either PER03 or PER04 is present, then the other is required.
**2** If either PER05 or PER06 is present, then the other is required.
**3** If either PER07 or PER08 is present, then the other is required.
**Semantic Notes:**
**Comments:**

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **PER01** | **366** | **Contact Function Code**<br>Code identifying the major duty or responsibility of the person or group named<br>CR Customer Relations<br>IC Information Contact | **M** | **ID 2/2** |
| | **PER02** | **93** | **Name**<br>Free-form name | **O** | **AN 1/60** |
| | **PER03** | **365** | **Communication Number Qualifier**<br>Code identifying the type of communication number<br>EM Electronic Mail<br>FX Facsimile<br>TE Telephone | **X** | **ID 2/2** |
| | **PER04** | **364** | **Communication Number**<br>Complete communications number including country or area code when applicable | **X** | **AN 1/80** |
| | **PER05** | **365** | **Communication Number Qualifier**<br>Code identifying the type of communication number<br>EM Electronic Mail<br>FX Facsimile<br>TE Telephone | **X** | **ID 2/2** |
| | **PER06** | **364** | **Communication Number**<br>Complete communications number including country or area code when applicable | **X** | **AN 1/80** |
| | **PER07** | **365** | **Communication Number Qualifier**<br>Code identifying the type of communication number<br>EM Electronic Mail<br>FX Facsimile<br>TE Telephone | **X** | **ID 2/2** |
| | **PER08** | **364** | **Communication Number**<br>Complete communications number including country or area code when applicable | **X** | **AN 1/80** |

**Segment:** **ITD** **Terms of Sale/Deferred Terms of Sale**
**Position:** 130
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** >1
**Purpose:** To specify terms of sale
**Syntax Notes:** **1** If ITD03 is present, then at least one of ITD04 ITD05 or ITD13 is required.
**Semantic Notes:**
**Comments:**

**Data Element Summary**

| Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|
| **ITD03** | **338** | **Terms Discount Percent**<br>Terms discount percentage, expressed as a percent, available to the purchaser if an invoice is paid on or before the Terms Discount Due Date | **O** | **R 1/6** |
| **ITD05** | **351** | **Terms Discount Days Due**<br>Number of days in the terms discount period by which payment is due if terms discount is earned | **X** | **N0 1/3** |
| **ITD06** | **446** | **Terms Net Due Date**<br>Date when total invoice amount becomes due, expressed in format CCYYMMDD<br>Payment due date (if applicable). | **O** | **DT 8/8** |
| **ITD07** | **386** | **Terms Net Days**<br>Number of days until total invoice amount is due (discount not applicable) | **O** | **N0 1/3** |

**Segment:** **DTM** **Date/Time Reference**
**Position:** 140
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** 10
**Purpose:** To specify pertinent dates and times
**Syntax Notes:**
**1** At least one of DTM02 DTM03 or DTM06 is required.
**2** If either DTM06 or DTM07 is present, then the other is required.
**Semantic Notes:**
**Comments:** Time is expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = Minutes (00-59), S = Integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = Hundredths (00-99).

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **DTM01** | **374** | **Date/Time Qualifier**<br>Code specifying type of date or time, or both date and time<br>135 Booking<br>150 Service Period Start<br>This code is no longer recommended and will be removed in future versions of the UIG guidelines. Code 186 should be used instead.<br>151 Service Period End<br>This code is no longer recommended and will be removed in future versions of the UIG guidelines. Code 187 should be used instead.<br>186 Invoice Period Start<br>187 Invoice Period End<br>221 Penalty Begin<br>Date on which late payment charges begin.<br>266 Base<br>434 Statement<br>Date on which billing document was created<br>733 Date of Last Payment Received<br>Date of last payment by the end use customer.<br>MRR Meter Reading | **M ID 3/3** |
| | **DTM02** | **373** | **Date**<br>Date expressed as CCYYMMDD<br>Use of DTM02/03 allows the translator to validate date and time. | **X DT 8/8** |
| | **DTM05** | **1250** | **Date Time Period Format Qualifier**<br>Code indicating the date format, time format, or date and time format<br>D8 Date Expressed in Format CCYYMMDD<br>RD8 Range of Dates Expressed in Format CCYYMMDD-CCYYMMDD<br>A range of dates expressed in the format CCYYMMDD-CCYYMMDD where CCYY is the numerical expression of the century CC and year YY, MM is the numerical expression of the month within the year, and DD is the numerical expression of the day within the year; the first occurrence of CCYYMMDD is the beginning date and the second occurrence is the ending date | **X ID 2/3** |

| | | | | |
|---|---|---|---|---|
| **DTM06** | **1251** | **Date Time Period**<br>Expression of a date, a time, or range of dates, times or dates and times | **X** | **AN 1/35** |

**Segment:** **BAL** **Balance Detail**
**Position:** 212
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** >1
**Purpose:** To identify the specific monetary balances associated with a particular account
**Syntax Notes:**
**Semantic Notes:**
**Comments:** Negative amounts are allowed to represent payments received

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **BAL01** | **951** | **Balance Type Code**<br>Code indicating the type of balance | **M ID 1/2** |
| | | | M — Current Month<br>Billed, payment, and balance amounts shown in BAL03 are in this billing period. | |
| | | | P — Previous Month<br>Balance of previous period charges prior to applying payments and adjustments for the previous period billing<br>Billed, payment and balance amounts shown in BAL03 are for the period prior to this billing period. | |
| | | | Y — Year to Date<br>Deferred plan balance. | |
| **Must Use** | **BAL02** | **522** | **Amount Qualifier Code**<br>Code to qualify amount | **M ID 1/3** |
| | | | PB — Billed Amount<br>Total amount due on the period bill | |
| | | | TP — Total Payment Amount | |
| | | | YB — Actual Unpaid Principal Balance<br>BAL*P*YB is used to display the amount the customer owed as a result of the previous bill, prior to applying payments and adjustments for the previous billing period.<br><br>BAL*M*YB is used to display the customer's total outstanding balance. This is what the customer owes from previous billing periods plus the current billing charges.<br><br>BAL*Y*YB is used to display the customer's current outstanding budget balance. | |
| | | | J9 — Beginning Balance<br>BAL*M*J9 is used to display the amount the customer owed prior to the current billing with payments and adjustments applied. | |
| **Must Use** | **BAL03** | **782** | **Monetary Amount**<br>Monetary amount | **M R 1/18** |

**Segment:** **INC** **Installment Information**
**Position:** 213
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify installment-billing arrangement
**Syntax Notes:**
**Semantic Notes:**
**1** INC02 is the installment period (e.g., months).
**2** INC03 is the total number of installments.
**3** INC04 is the number of the current installment.
**4** INC05 is the installment balance after the current installment is applied.

**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **INC01** | **336** | **Terms Type Code**<br>Code identifying type of payment terms<br>04 Deferred or Installment<br>32 Lease Agreement<br>36 Contract Basis<br>Terms are based on a contract with the customer. | **M ID 2/2** |
| **Must Use** | **INC02** | **355** | **Unit or Basis for Measurement Code**<br>Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken<br>MO Months | **M ID 2/2** |
| **Must Use** | **INC03** | **380** | **Quantity**<br>Numeric value of quantity | **M R 1/15** |
| **Must Use** | **INC04** | **380** | **Quantity**<br>Numeric value of quantity | **M R 1/15** |
| | **INC05** | **782** | **Monetary Amount**<br>Monetary amount | **O R 1/18** |

**Segment:** **PAM** **Period Amount**
**Position:** 214
**Loop:**
**Level:** Heading:
**Usage:** Optional
**Max Use:** >1
**Purpose:** To indicate a quantity, and/or amount for an identified period
**Syntax Notes:**
**1** If any of PAM01 PAM02 or PAM03 is present, then all are required.
**2** At least one of PAM02 PAM05 or PAM14 is required.
**3** If either PAM06 or PAM07 is present, then the other is required.
**4** If PAM07 is present, then at least one of PAM08 or PAM09 is required.
**5** If PAM07 is present, then PAM06 is required.
**6** If PAM08 is present, then PAM07 is required.
**Semantic Notes:**
**Comments:**
**Notes:** This segment is used when historical consumption data must accompany the invoice.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| | **PAM01** | **673** | **Quantity Qualifier**<br>Code specifying the type of quantity<br>99 — Quantity Used<br>Quantity of units used<br>CP — Current Period Imbalance<br>Used for imbalance notice<br>KA — Estimated<br>The quantity shown is an estimated quantity | **X ID 2/2** |
| | **PAM02** | **380** | **Quantity**<br>Numeric value of quantity | **X R 1/15** |
| **Must Use** | **PAM03** | **355** | **Unit or Basis for Measurement Code**<br>Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken<br>2I — British Thermal Units (BTUs) Per Hour<br>99 — Watt<br>BY — British Thermal Unit (BTU)<br>BZ — Million BTU's<br>CF — Cubic Feet<br>DA — Days<br>EA — Each<br>GA — Gallon<br>HH — Hundred Cubic Feet<br>HJ — Horsepower<br>K1 — Kilowatt Demand<br>Represents potential power load measured at predetermined intervals<br>K2 — Kilovolt Amperes Reactive Demand<br>Reactive power that must be supplied for specific types of customer's equipment; billable when kilowatt demand usage meets or exceeds a defined parameter<br>K3 — Kilovolt Amperes Reactive Hour<br>Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters | **M ID 2/2** |

| | | | | |
|---|---|---|---|---|
| | | K4 | Kilovolt Amperes | |
| | | K5 | Kilovolt Amperes Reactive | |
| | | K7 | Kilowatt | |
| | | KH | Kilowatt Hour | |
| | | LB | Pound | |
| | | MO | Months | |
| | | T9 | Thousand Kilowatt Hours | |
| | | | Megawatt Hours | |
| | | TD | Therms | |
| | | TH | Thousand | |
| | | TZ | Thousand Cubic Feet | |
| | | UN | Unit | |
| | | WK | Week | |
| | | YR | Years | |
| **PAM06** | **344** | **Unit of Time Period or Interval** | **X** | **ID 2/2** |
| | | Code indicating the time period or interval | | |
| | | AD | Average Daily | |
| | | AM | Average Monthly | |
| | | AN | Annual | |
| | | AY | Average Year | |
| | | CC | Cycles | |
| | | DY | Day | |
| | | HR | Hours | |
| | | MO | Month | |
| | | PM | Preceding 12 Months | |
| | | YD | Year to Date | |
| **PAM07** | **374** | **Date/Time Qualifier** | **X** | **ID 3/3** |
| | | Code specifying type of date or time, or both date and time | | |
| | | 194 | Period End Date | |
| | | 221 | Penalty Begin | |
| | | | Penalty begin date for imbalance notification | |
| | | MRR | Meter Reading | |
| **PAM08** | **373** | **Date** | **X** | **DT 8/8** |
| | | Date expressed as CCYYMMDD | | |

**Segment:** **IT1** **Baseline Item Data (Invoice)**
**Position:** 010
**Loop:** IT1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify the basic and most frequently used line item data for the invoice and related transactions

**Syntax Notes:**
**1** If any of IT102 IT103 or IT104 is present, then all are required.
**2** If either IT106 or IT107 is present, then the other is required.
**3** if either IT108 or IT109 is present, then the other is required.
**4** If either IT110 or IT111 is present, then the other is required.

**Semantic Notes:**
**1** IT101 is the purchase order line item identification.

**Comments:**
**1** Element 235/234 combinations should be interpreted to include products and/or services. See the Data Dictionary for a complete list of IDs.
**2** IT106 through IT125 provide for ten different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

**Notes:**
**1** The typical usage of the IT1 entails including all usage and charges attributed to one meter; in this case, the IT1 loop is qualified with "METER" in the IT108/IT109 pair. In the case where some charges are not attributed to a specific meter, for example, basic customer charge or late payment charge the IT1 loop is qualified with "ACCOUNT" in the IT108/IT109 pair. An 810 invoice may contain both "METER" and "ACCOUNT" IT1 loops.

**2** A Meter IT1 loop can be mapped differently, depending on whether Time-of-Use (TOU) or straight meter measurement is employed. With a TOU measurement, multiple MEA segments will convey the usage, with the MEA07 in each MEA providing the TOU classification. The IT1 loop for a non-TOU or straight meter measurement will contain a single MEA segment with no MEA07.

**Data Element Summary**

| Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|
| **IT101** | **350** | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set<br>Line item counter | **O AN 1/20** |
| **IT106** | **235** | **Product/Service ID Qualifier**<br>Code identifying the type/source of the descriptive number used in Product/Service ID (234)<br>SV Service Rendered | **X ID 2/2** |
| **IT107** | **234** | **Product/Service ID**<br>Identifying number for a product or service<br>Examples: ELECTRIC<br>GAS<br>WATER<br>SEWER<br>REFUSE | **X AN 1/48** |
| **IT108** | **235** | **Product/Service ID Qualifier**<br>Code identifying the type/source of the descriptive number used in Product/Service ID (234)<br>C3 Classification | **X ID 2/2** |

**IT109** **234** **Product/Service ID** **X** **AN 1/48**
Identifying number for a product or service
Examples: ACCOUNT
METER
RATE
UNMET (To designate Unmetered Services)
BILLDET
SUPCHG (To show supplemental charges)

**IT110** **235** **Product/Service ID Qualifier** **X** **ID 2/2**
Code identifying the type/source of the descriptive number used in Product/Service ID (234)
IT110 and IT111 are used only if IT109 = METER
MB Measurement Type Code

**IT111** **234** **Product/Service ID** **X** **AN 1/48**
Identifying number for a product or service
Examples: NT - Non-TOU Measurement
TOU - Time of Use Measurement

**IT112** **235** **Product/Service ID Qualifier** **X** **ID 2/2**
Code identifying the type/source of the descriptive number used in Product/Service ID (234)
IT112 and IT113 are used to indicate that consumption will be provided but the actual meter readings will not be provided.
EQ Equipment Type

**IT113** **234** **Product/Service ID** **X** **AN 1/48**
Identifying number for a product or service
NR = No reads will be presented

**Segment:** **TXI** **Tax Information**
**Position:** 040
**Loop:** IT1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 10
**Purpose:** To specify tax information
**Syntax Notes:** **1** At least one of TXI02 TXI03 or TXI06 is required.

**Semantic Notes:**
**1** TXI02 is the monetary amount of the tax.
**2** TXI03 is the tax percent expressed as a decimal.
**3** TXI07 is a code indicating the relationship of the price or amount to the associated segment.

**Comments:**
**Notes:** Taxes that apply to the entire IT1 segment, are shown in detail position 040. Taxes that do not apply to the entire IT1 segment, but do apply to a specific line charge are shown in TXI position 237, directly following the SAC charge in position 230. Taxes that apply to the entire invoice are considered Account level taxes and are shown in summary position 020. If an IT1 Account loop is used, account level taxes may appear within that loop.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | TXI01 | 963 | **Tax Type Code**<br>Code specifying the type of tax<br>Use any valid Data Element 963 codes as mutually agreed between the trading partners. | M | ID 2/2 |
| | TXI02 | 782 | **Monetary Amount**<br>Monetary amount | X | R 1/18 |
| | TXI03 | 954 | **Percent**<br>Percentage expressed as a decimal<br>This is the tax rate that is applied to the bill. Present as **a decimal**, e.g., 6% should be expressed as .06 | X | R 1/10 |
| | TXI06 | 441 | **Tax Exempt Code**<br>Code identifying exemption status from sales and use tax<br>1 Yes (Tax Exempt)<br>2 No (Not Tax Exempt) | X | ID 1/1 |
| | TXI07 | 662 | **Relationship Code**<br>Code indicating the relationship between entities<br>A Add<br>The amount in the TXI02 should be added when summing the invoice total.<br>O Information Only<br>The amount in the TXI02 should be ignored when summing the invoice total. | O | ID 1/1 |
| | TXI08 | 828 | **Dollar Basis for Percent**<br>Dollar basis to be used in the percent calculation of the allowance, charge or tax | O | R 1/9 |
| | TXI10 | 350 | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set | O | AN 1/20 |

**Segment:** **MEA** **Measurements**
**Position:** 059
**Loop:** IT1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 40
**Purpose:** To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)

**Syntax Notes:**
**1** At least one of MEA03 MEA05 MEA06 or MEA08 is required.
**2** If MEA05 is present, then MEA04 is required.
**3** If MEA06 is present, then MEA04 is required.
**4** If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
**5** Only one of MEA08 or MEA03 may be present.

**Semantic Notes:**
**1** MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.

**Comments:**
**1** When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.

**Notes:** The MEA segment conveys metering data for one period. The 867 transaction should be used to provide interval meter measurements data.

**Data Element Summary**

| Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|
| **MEA01** | **737** | **Measurement Reference ID Code** | **O ID 2/2** |

Code identifying the broad category to which a measurement applies

| | |
|---|---|
| AA | Meter reading-beginning actual/ending actual |
| AB | Average Balance<br>Average or contract demand |
| AE | Meter reading-beginning actual/ending estimated |
| AF | Actual Total |
| AN | Work<br>Period actual |
| BC | Billed Actual |
| BN | Billed Minimum |
| BO | Meter Reading as Billed<br>Used when billing charges are based on contractual agreements or pre-established usage and not on actual usage |
| BR | Billed History |
| CF | Conversion Factor |
| DT | Dimensional Tolerance |
| EA | Meter reading-beginning estimated/ending actual |
| EE | Meter reading-beginning estimated/ending estimated |
| EN | Environmental Conditions<br>Period Estimated |
| R1 | Opening Reading |
| TI | Time |

| Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|
| **MEA02** | **738** | **Measurement Qualifier** | **O ID 1/3** |

Code identifying a specific product or process characteristic to which a measurement applies

| | |
|---|---|
| CJ | Cycle Time |
| CO | Core Loss<br>Transformer Loss Multiplier. Used when a |

| | | | | |
|---|---|---|---|---|
| | | | | customer owns a transformer and the transformer loss is not measured by the meter. |
| | | | LN | Length |
| | | | MU | Multiplier |
| | | | | It was generally agreed that the meter multiplier should be shown in its own MEA segment. |
| | | | MX | Maximum |
| | | | PU | Pressure Base |
| | | | RUD | Usage Deviation (Applies to Kilowatt Hours, Kilowatt Demand and Reactive Demand) |
| | | | TC | Temperature |
| | | | VO | Voltage |
| | | | | Meter voltage |
| | | | ZA | Power Factor |
| | | | | Relationship between watts and volt - amperes necessary to supply electric load |
| | | | ZD | Load Factor |
| | | | | Relationship between watt hours and watt demand necessary to supply electric load |

**MEA03** **739** **Measurement Value** **X** **R 1/20**
The value of the measurement

**MEA04** **C001** **Composite Unit of Measure**
To identify a composite unit of measure (See Figures Appendix for examples of use).

**Must Use** **C00101** **355** **Unit or Basis for Measurement Code** **M** **ID 2/2**
Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

| | |
|---|---|
| 2I | British Thermal Units (BTUs) Per Hour |
| 99 | Watt |
| BL | Block |
| | Baseline usage for a predetermined period of time |
| BY | British Thermal Unit (BTU) |
| BZ | Million BTU's |
| CF | Cubic Feet |
| DA | Days |
| EA | Each |
| GA | Gallon |
| HH | Hundred Cubic Feet |
| HJ | Horsepower |
| K1 | Kilowatt Demand |
| | Represents potential power load measured at predetermined intervals |
| K2 | Kilovolt Amperes Reactive Demand |
| | Reactive power that must be supplied for specific types of customer's equipment; billable when kilowatt demand usage meets or exceeds a defined parameter |
| K3 | Kilovolt Amperes Reactive Hour |
| | Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters |
| K4 | Kilovolt Amperes |
| K5 | Kilovolt Amperes Reactive |
| K7 | Kilowatt |
| KH | Kilowatt Hour |
| LB | Pound |
| MO | Months |

| | | | | | |
|---|---|---|---|---|---|
| | | T1 Thousand pounds gross | | | |
| | | T9 Thousand Kilowatt Hours | | | |
| | | Megawatt Hours | | | |
| | | TD Therms | | | |
| | | TH Thousand | | | |
| | | TZ Thousand Cubic Feet | | | |
| | | UN Unit | | | |
| | | WK Week | | | |
| | | YR Years | | | |
| C00102 | 1018 | **Exponent**<br>Power to which a unit is raised | O | ID 2/2 | |
| C00103 | 649 | **Multiplier**<br>Value to be used as a multiplier to obtain a new value | O | ID 2/2 | |
| C00104 | 355 | **Unit or Basis for Measurement Code**<br>Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken<br>ZZ Mutually Defined<br>Represents gas heating or billing factor | O | ID 2/2 | |
| C00105 | 1018 | **Exponent**<br>Power to which a unit is raised | O | ID 2/2 | |
| C00106 | 649 | **Multiplier**<br>Value to be used as a multiplier to obtain a new value | O | ID 2/2 | |

| | | | | | |
|---|---|---|---|---|---|
| **Recomm** | **MEA05** | **740** | **Range Minimum**<br>The value specifying the minimum of the measurement range<br>Beginning reading | **X** | **R 1/20** |
| **Recomm** | **MEA06** | **741** | **Range Maximum**<br>The value specifying the maximum of the measurement range<br>Ending reading or single reading (e.g., demand). | **X** | **R 1/20** |
| | **MEA07** | **935** | **Measurement Significance Code**<br>Code used to benchmark, qualify or further define a measurement value | **O** | **ID 2/2** |

| Code | Definition |
|---|---|
| 10 | Not equal to |
| 22 | Actual |
| 31 | Calculated |
| 34 | Ratchet<br>Highest previously attained value |
| 39 | Corrected |
| 40 | Uncorrected |
| 41 | Off Peak |
| 42 | On Peak |
| 43 | Intermediate |
| 44 | Average |
| 46 | Estimated |
| 51 | Total<br>Totalizer |
| 62 | Current |
| 68 | As Is<br>Indicates that the data is raw, no validation has been performed |
| 88 | Adjusted |
| 93 | Previous |

The UIG has made Data Maintenance Requests (DMs) for several additional codes. A new version of the 810 Guideline will be issued when the DMs are approved. Until then, the following non-standard definitions for the 4010 codes will be used.

| Non-Standard 4010 Code Definitions | DM-Requested Codes |
|---|---|
| 45 = Summer On Peak | AA |
| 49 = Winter On Peak | AF |
| 50 = Winter Mid Peak | AG |
| 52 = Winter Super Off Peak | AJ |
| 53 = Summer Day | AK |
| 54 = Summer Night | AL |
| 55 = Winter Day | AM |
| 56 = Winter Night | AN |
| 57 = Summer | AO |
| 58 = Winter | AP |
| 59 = Day | AQ |
| 60 = Night | AR |
| 63 = Peak-2 | AS |
| 64 = Peak-3 | AT |
| 65 = Peak-4 | AU |
| 66 = Shoulder | AV |
| 67 = Non Time-Related Demand | AW |
| 71 = Summer Super On Peak | AD |
| 72 = Summer Super Off Peak | AE |
| 73 = Summer Off Peak | AC |
| 74 = Summer Mid Peak | AB |
| 75 = Winter Off Peak | AH |
| 76 = Summer On Peak-2 | |
| 77 = Winter On Peak-2 | |
| 78 = Summer Mid Peak-2 | |
| 79 = Winter Mid Peak-2 | |

**Segment:** **PID** **Product/Item Description**
**Position:** 060
**Loop:** PID
**Level:** Detail:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To describe a product or process in coded or free form format
**Syntax Notes:** **1** At least one of PID04 or PID05 is required.
**Semantic Notes:**
**Comments:** **1** If PID01 equals "F", then PID05 is used.

**Notes:** 2. Used to provide required IT1 level bill print messages. NTE position 030 is for bill print messages that apply to the entire invoice.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **PID01** | **349** | **Item Description Type**<br>Code indicating the format of a description<br>F Free-form | **M** | **ID 1/1** |
| | **PID05** | **352** | **Description**<br>A free-form description to clarify the related data elements and their content | **X** | **AN 1/80** |

**Segment:** **REF** **Reference Identification**
**Position:** 120
**Loop:** IT1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 12
**Purpose:** To specify identifying information
**Syntax Notes:** **1** At least one of REF02 or REF03 is required.
**Semantic Notes:**
**Comments:**

**Notes:** Used to provide account number information when the IT1 loop is used to present account information (i.e., the IT109 = ACCOUNT).
Trading partners using the meter model (where an IT1 conveys meter charges and usage) should reference the account number information in the Header REF, position 050.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | | Attributes |
|---|---|---|---|---|---|
| Must Use | REF01 | 128 | **Reference Identification Qualifier**<br>Code qualifying the Reference Identification | | M ID 2/3 |
| | | | 11 | Account Number<br>Energy Service Provider-assigned account number for end use customer. | |
| | | | 12 | Billing Account<br>Utility-assigned account number for end use customer. | |
| | | | 45 | Old Account Number<br>Identifies accounts being changed<br>Utility’s previous account number for the end use customer. | |
| | | | 46 | Old Meter Number<br>Identifies meters being removed | |
| | | | 4B | Shipment Origin Code | |
| | | | 5B | Supplemental Account Number<br>Energy Service Provider-assigned account number for the Utility. | |
| | | | AA | Accounts Receivable Statement Number<br>Remit-to reference number. | |
| | | | AJ | Accounts Receivable Customer Account<br>Utility-assigned account number for the Energy Service Provider. | |
| | | | BE | Business Activity | |
| | | | CT | Contract Number | |
| | | | CZ | Contract Rider Number (Used in conjunction with contract number) | |
| | | | IX | Item Number<br>Number of dials on meter. See REF02 for valid values. | |
| | | | LO | Load Planning Number<br>Load profile | |
| | | | LU | Location Number<br>Service Delivery Point (SDP) Identification number for the point where service is delivered to the customer.(See REF03 for values) | |
| | | | MG | Meter Number | |

| | |
|---|---|
| NH | Rate Card Number<br>Identifies a utility rate class or tariff |
| PD | Promotion/Deal Number |
| PR | Price Quote Number<br>Identifies a unit pricing category under a rate code |
| PRT | Product Type<br>Identifies the type of service; e.g., yard light, water heater, etc. |
| PT | Purchase Option Agreement |
| QQ | Unit Number<br>Signifies number of non-metered units |
| QY | Service Performed Code |
| RB | Rate code number<br>Identifies an Energy Service Provider rate class |
| SU | Special Processing Code<br>Life support equipment verification.  See REF02 for valid values. |
| SV | Service Charge Number |
| TZ | Total Cycle Number<br>Meter Cycle.  Cycle number when the meter will be read. |
| UP | Upstream Shipper Contract Number |

**REF02** **127** **Reference Identification** **X** **AN 1/30**

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

When REF01 is SU, valid values for REF02 are:
- Y - Life Support Required
- N - Life Support Not Required
- I - Investigating whether Life Support is Required

When REF01 is LU, REF02 is not used (see REF03)

When REF01 is QQ, valid values for REF02 are:
- L – Light
- U – Un-metered

When REF01 is IX, REF02 is the number of dials on the meter.

Where meter dials have decimal values, the following usage is recommended:

The notation X.Y means that the meter has X dials to the left of the decimal point, and Y dials to the right. REF02 is then given the value X.Y

**REF03** **352** **Description** **X** **AN 1/80**

A free-form description to clarify the related data elements and their content

When REF01 is “LU”, REF03 is used to describe the SDP Code assigned by the utility (LDC) because some descriptions are longer than 30 characters allowed in REF02.

Where meter dials have decimal values, the following usage is recommended:
The notation X.Y means that the meter has X dials to the left of the decimal point, and Y dials to the right. REF03 is then given in the value X.Y.

**Segment:** **DTM** **Date/Time Reference**
**Position:** 150
**Loop:** IT1
**Level:** Detail:
**Usage:** Required
**Max Use:** 10
**Purpose:** To specify pertinent dates and times
**Syntax Notes:**
**1** At least one of DTM02 DTM03 or DTM05 is required.
**2** If either DTM05 or DTM06 is present, then the other is required.

**Semantic Notes:**
**Comments:** Time is expressed in 24-hour clock time as follows: HHMM, or HHMMSS, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M = Minutes (00-59), S = Integer seconds (00-59) and DD = decimal seconds; decimal seconds are expressed as follows: D = tenths (0-9) and DD = Hundredths (00-99).

**Notes:** This segment is required for all services

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **DTM01** | **374** | **Date/Time Qualifier**<br>Code specifying type of date or time, or both date and time<br>150 Service Period Start<br>151 Service Period End<br>319 Failed<br>Meter failure date<br>514 Transferred<br>Exchanged meter read date<br>634 Next Review Date<br>Next meter read date<br>730 Reporting Cycle Date<br>Period | **M ID 3/3** |
| | **DTM02** | **373** | **Date**<br>Date expressed as CCYYMMDD<br>Use of DTM02/03 allows the translator to validate date and time. | **X DT 8/8** |
| | **DTM05** | **1250** | **Date Time Period Format Qualifier**<br>Code indicating the date format, time format, or date and time format<br>D8 Date Expressed in Format CCYYMMDD<br>DT Date and Time Expressed in Format CCYYMMDDHHMM<br>UIG recommends that DT not be used because there is no reason to use time at this location of the transaction. It will be removed in future versions.<br>RD8 Range of Dates Expressed in Format CCYYMMDD-CCYYMMDD | **X ID 2/3** |

| | | | | |
|---|---|---|---|---|
| | | RDT | Range of Date and Time, Expressed in Format CCYYMMDDHHMM-CCYYMMDDHHMM<br>UIG recommends that RDT not be used because there is no reason to use time at this location of the transaction. It will be removed in future versions. | |
| **DTM06** | **1251** | **Date Time Period**<br>Expression of a date, a time, or range of dates, times or dates and times | **X** | **AN 1/35** |

**Segment:** **SLN Subline Item Detail**
**Position:** 200
**Loop:** SLN
**Level:** Detail:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify product subline detail item data
**Syntax Notes:**
**Semantic Notes:**
**1** SLN01 is the identifying number for the subline item.
**2** SLN03 is the configuration code indicating the relationship of the subline item to the baseline item.

**Comments:**
**1** See the Data Element Dictionary for a complete list of IDs.
**2** SLN01 is related to (but not necessarily equivalent to) the baseline item number. Example: 1.1 or 1A might be used as a subline number to relate to baseline number 1.

**Notes:** The IT1/SLN segment is used to overcome the limitation on the number of IT1/SAC loops.

Each SLN loop will contain only one SAC and TXI. Multiple charges/allowances require multiple SLN loops.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | **SLN01** | **350** | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set<br>Used as a loop counter | **M** | **AN 1/20** |
| Must Use | **SLN03** | **662** | **Relationship Code**<br>Code indicating the relationship between entities<br>A Add | **M** | **ID 1/1** |

| | |
|---|---|
| **Segment:** | **SAC Service, Promotion, Allowance, or Charge Information** |
| **Position:** | 230 |
| **Loop:** | SLN |
| **Level:** | Detail: |
| **Usage:** | Optional |
| **Max Use:** | 25 |
| **Purpose:** | To request or identify a service, promotion, allowance, or charge; to specify the amount or percentage for the service, promotion, allowance, or charge |
| **Syntax Notes:** | **1** At least one of SAC02 or SAC03 is required.<br>**2** If either SAC03 or SAC04 is present, then the other is required.<br>**3** If either SAC06 or SAC07 is present, then the other is required.<br>**4** If either SAC09 or SAC10 is present, then the other is required. |
| **Semantic Notes:** | **1** If SAC01 is "A" or "C", then at least one of SAC05, SAC07, or SAC08 is required. The value of the SAC01 indicator is not to be used to indicate the sign of the amount in SAC05.<br>**2** SAC05 is the total amount for the service, promotion, allowance, or charge. If SAC05 is present with SAC07 or SAC08, then SAC05 takes precedence.<br>**3** SAC08 is the allowance or charge rate per unit.<br>**4** SAC10 and SAC11 are the quantity basis when the allowance or charge quantity is different from the purchase order or invoice quantity. SAC10 and SAC11 used together indicate a quantity range, which could be a dollar amount, that is applicable to service, promotion, allowance, or charge. |
| **Comments:** | **1** SAC04 may be used to uniquely identify the service, promotion, allowance, or charge. In addition, it may be used in conjunction to further the code in SAC02. |
| **Notes:** | Each SLN loop will contain only one SAC and TXI. Multiple charges/allowances require multiple SLN loops.<br>Previous editions of this guideline stated that the amount shown in SAC05 will always be positive and that the code used in SAC01 will indicate whether to add or subtract the SAC05 amount to or from the TDS. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect; future versions of the UIG guidelines will no longer contain the above statement. |

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **SAC01** | **248** | **Allowance or Charge Indicator**<br>Code which indicates an allowance or charge for the service specified | **M ID 1/1** |

| Code | Description |
|---|---|
| A | Allowance<br>Previous editions of this guideline stated that this code indicated that the amount in SAC05 should be subtracted when summing the invoice total. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect. Future versions of the UIG guidelines will no longer contain the above statement. |
| C | Charge<br>Previous editions of this guideline stated that this code indicated that the amount in SAC05 should be added when summing the invoice total. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect. Future versions of the UIG guidelines will no longer contain the above statement. |

N — No Allowance or Charge
The amount in the SAC05 should be ignored when summing the invoice total.

**SAC03 559 Agency Qualifier Code X ID 2/2**
Code identifying the agency assigning the code values
EU — Electric Utilities
Use this code until the DM for code UT to indicate the UIG is approved.

**SAC04 1301 Agency Service, Promotion, Allowance, or Charge Code X AN 1/10**
Agency maintained code identifying the service, promotion, allowance, or charge
The Utility Industry Group maintains this code list. See the UIG web site at http://www.uig.org or contact a UIG member for implementation details. The most current listing of codes will be available on the web site.

**SAC05 610 Amount O N2 1/15**
Monetary amount
Previous editions of this guideline stated that this amount will always be positive and that the SAC01 will indicate whether to add to or subtract from the TDS. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect; future versions of the UIG guidelines will no longer contain the above statement. The code used in SAC01 does not indicate the sign of the amount in SAC05. The amount shown in SAC05 may be either positive or negative; if negative, the minus sign, " - ", must be transmitted.

**SAC06 378 Allowance/Charge Percent Qualifier X ID 1/1**
Code indicating on what basis allowance or charge percent is calculated

Z — Mutually Defined
Used for percent participation.
9 — Late Payment Charge Base Amount
Used to indicate a late charge percentage

**SAC07 332 Percent X R 1/6**
Percent expressed as a percent
Used to express the percentage of the total load that is being supplied by the ESP. This is the multiplication of two fields that are on the 814 transaction, AMT*7N (Participating Interest) and AMT*QY (Eligible Load). Present as a percent: e.g. 75% should be expressed as 75, or, 67.67% should be expressed as 67.67.

**SAC08 118 Rate O R 1/9**
Rate expressed in the standard monetary denomination for the currency specified

**SAC09 355 Unit or Basis for Measurement Code X ID 2/2**
Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken
2I — British Thermal Units (BTUs) Per Hour
99 — Watt
BL — Block
Baseline usage for a predetermined period of time
BY — British Thermal Unit (BTU)
BZ — Million BTU’s
MMBtu for gas or MBtu for electricity or Decatherms.
CF — Cubic Feet
DA — Days
EA — Each
GA — Gallon

| | |
|---|---|
| HH | Hundred Cubic Feet |
| | Ccf |
| HJ | Horsepower |
| K1 | Kilowatt Demand |
| | Represents potential power load measured at predetermined intervals |
| K2 | Kilovolt Amperes Reactive Demand |
| | Reactive power that must be supplied for specific types of customer’s equipment; billable when kilowatt demand usage meets or exceeds a defined parameter |
| K3 | Kilovolt Amperes Reactive Hour |
| | Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters |
| K4 | Kilovolt Amperes |
| K5 | Kilovolt Amperes Reactive |
| K7 | Kilowatt |
| KH | Kilowatt Hour |
| LB | Pound |
| MO | Months |
| T1 | Thousand pounds gross |
| T9 | Thousand Kilowatt Hours |
| TD | Therms |
| TH | Thousand |
| TZ | Thousand Cubic Feet |
| | Mcf |
| UN | Unit |
| WK | Week |
| YR | Years |

**SAC10** **380** **Quantity** **X** **R 1/15**

Numeric value of quantity

**SAC13** **230** **Reference Identification** **X** **AN 1/30**

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

Used as a sequencing number for the non-billing party to sequence bill line items for printing the bill.

**SAC15** **352** **Description** **X** **AN 1/80**

A free-form description to clarify the related data elements and their content

**Segment:** **TXI** **Tax Information**
**Position:** 237
**Loop:** SLN
**Level:** Detail:
**Usage:** Optional
**Max Use:** 10
**Purpose:** To specify tax information
**Syntax Notes:**
**1** At least one of TXI02 TXI03 or TXI06 is required.

**Semantic Notes:**
**1** TXI02 is the monetary amount of the tax.
**2** TXI03 is the tax percent expressed as a decimal.
**3** TXI07 is a code indicating the relationship of the price or amount to the associated segment.

**Comments:**

**Notes:** Taxes that apply to the entire IT1 segment, are shown in detail position 040. Taxes that do not apply to the entire IT1 segment, but do apply to a specific line charge are shown in TXI position 237, directly following the SAC charge in position 230. Taxes that apply to the entire invoice are considered Account level taxes and are shown in summary position 020. If an IT1 Account loop is used, account level taxes may appear within that loop.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **TXI01** | **963** | **Tax Type Code**<br>Code specifying the type of tax<br>Use any valid Data Element 963 codes as mutually agreed between the trading partners. | **M** | **ID 2/2** |
| | **TXI02** | **782** | **Monetary Amount**<br>Monetary amount | **X** | **R 1/18** |
| | **TXI03** | **954** | **Percent**<br>Percentage expressed as a decimal<br>Present as **a decimal**, e.g., 75% should be expressed as .75 | **X** | **R 1/10** |
| | **TXI06** | **441** | **Tax Exempt Code**<br>Code identifying exemption status from sales and use tax<br>1 Yes (Tax Exempt)<br>2 No (Not Tax Exempt) | **X** | **ID 1/1** |
| | **TXI07** | **662** | **Relationship Code**<br>Code indicating the relationship between entities<br>A Add<br>The amount in the TXI02 should be added when summing the invoice total.<br>O Information Only<br>The amount in the TXI02 should be ignored when summing the invoice total. | **O** | **ID 1/1** |
| | **TXI08** | **828** | **Dollar Basis for Percent**<br>Dollar basis to be used in the percent calculation of the allowance, charge or tax | **O** | **R 1/9** |
| | **TXI10** | **350** | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set | **O** | **AN 1/20** |

**Segment:** **N1** **Name**
**Position:** 240
**Loop:** N1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To identify a party by type of organization, name, and code
**Syntax Notes:**
**1** At least one of N102 or N103 is required.
**2** If either N103 or N104 is present, then the other is required.
**Semantic Notes:**
**Comments:**
**1** This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

### Data Element Summary

| | Ref. Des. | Data Element | Name | | Attributes | |
|---|---|---|---|---|---|---|
| **Must Use** | **N101** | **98** | **Entity Identifier Code**<br>Code identifying an organizational entity, a physical location, property or an individual<br>MQ Metering Location | **M** | **ID 2/3** |
| | **N102** | **93** | **Name**<br>Free-form name | **X** | **AN 1/60** |
| | **N103** | **66** | **Identification Code Qualifier**<br>Code designating the system/method of code structure used for Identification Code (67)<br>92 Assigned by Buyer or Buyer's Agent<br>Customer-assigned number | **X** | **ID 1/2** |
| | **N104** | **67** | **Identification Code**<br>Code identifying a party or other code<br>Identifying number meaningful to the customer | **X** | **AN 2/80** |

**Segment:** **N2** **Additional Name Information**
**Position:** 250
**Loop:** N1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 2
**Purpose:** To specify additional names or those longer than 60 characters in length
**Syntax Notes:**
**Semantic Notes:**
**Comments:**

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **N201** | **93** | **Name**<br>Free-form name | **M** | **AN 1/60** |
| | **N202** | **93** | **Name**<br>Free-form name | **O** | **AN 1/60** |

**Segment:** **N3** **Address Information**
**Position:** 260
**Loop:** N1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 2
**Purpose:** To specify the location of the named party
**Syntax Notes:**
**Semantic Notes:**
**Comments:**
**Notes:** Service Address

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **N301** | **166** | **Address Information**<br>Address information | **M** | **AN 1/55** |
| | **N302** | **166** | **Address Information**<br>Address information | **O** | **AN 1/55** |

**Segment:** **N4** **Geographic Location**
**Position:** 270
**Loop:** N1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To specify the geographic place of the named party
**Syntax Notes:** **1** If N406 is present, then N405 is required.
**Semantic Notes:**
**Comments:**
**1** A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
**2** N402 is required only if city name (N401) is in the U.S. or Canada.

**Notes:** Service address

### Data Element Summary

| Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|
| **N401** | **19** | **City Name**<br>Free-form text for city name | **O** | **AN 2/30** |
| **N402** | **156** | **State or Province Code**<br>Code (Standard State/Province) as defined by appropriate government agency | **O** | **ID 2/2** |
| **N403** | **116** | **Postal Code**<br>Code defining international postal zone code excluding punctuation and blanks (zip code for United States) | **O** | **ID 3/15** |
| **N404** | **26** | **Country Code**<br>Code identifying the country | **O** | **ID 2/3** |
| **N405** | **309** | **Location Qualifier**<br>Code identifying type of location<br>CO County/Parish and State | **X** | **ID 1/2** |
| **N406** | **310** | **Location Identifier**<br>Code which identifies a specific location | **O** | **AN 1/30** |

**Segment:** **REF** **Reference Identification**
**Position:** 280
**Loop:** N1
**Level:** Detail:
**Usage:** Optional
**Max Use:** 12
**Purpose:** To specify identifying information
**Syntax Notes:** **1** At least one of REF02 or REF03 is required.

**Semantic Notes:** **1** REF04 contains data relating to the value cited in REF02.
**Comments:**
**Notes:** Used to further identify any customer-required identification numbers, e.g., accounting distribution.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| Must Use | **REF01** | **128** | **Reference Identification Qualifier**<br>Code qualifying the Reference Identification<br>Use any valid Data Element 128 code qualifiers, as mutually agreed between the trading partners. | **M** | **ID 2/3** |
| | **REF02** | **127** | **Reference Identification**<br>Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier | **X** | **AN 1/30** |
| | **REF03** | **352** | **Description**<br>A free-form description to clarify the related data elements and their content | **X** | **AN 1/80** |

**Segment:** **TDS** **Total Monetary Value Summary**
**Position:** 010
**Loop:**
**Level:** Summary:
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To specify the total invoice discounts and amounts
**Syntax Notes:**
**Semantic Notes:** **1** TDS01 is the total amount of invoice (including charges, less allowances) before terms discount (if discount is applicable).
**Comments:**
**Notes:** TDS01 is the total amount due for this invoice and must equal the algebraic sum of the amounts in the TXI02 and SAC05 segments. If this amount is negative, send the minus sign.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **TDS01** | **610** | **Amount**<br>Monetary amount | **M N2 1/15** |

**Segment:** **TXI** **Tax Information**
**Position:** 020
**Loop:**
**Level:** Summary:
**Usage:** Optional
**Max Use:** 10
**Purpose:** To specify tax information
**Syntax Notes:**
**1** At least one of TXI02 TXI03 or TXI06 is required.
**2** If either TXI04 or TXI05 is present, then the other is required.
**3** If TXI08 is present, then TXI03 is required.
**Semantic Notes:**
**1** TXI02 is the monetary amount of the tax.
**2** TXI03 is the tax percent expressed as a decimal.
**3** TXI07 is a code indicating the relationship of the price or amount to the associated segment.
**Comments:**
**Notes:** Taxes that apply to the entire IT1 segment, are shown in detail position 040. Taxes that do not apply to the entire IT1 segment, but do apply to a specific line charge are shown in TXI position 237, directly following the SAC charge in position 230. Taxes that apply to the entire invoice are considered Account level taxes and are shown in summary position 020. If an IT1 Account loop is used, account level taxes may appear within that loop.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **TXI01** | **963** | **Tax Type Code**<br>Code specifying the type of tax<br>Use any valid Data Element 963 codes as mutually agreed between the trading partners. | **M ID 2/2** |
| | **TXI02** | **782** | **Monetary Amount**<br>Monetary amount | **X R 1/18** |
| | **TXI03** | **954** | **Percent**<br>Percentage expressed as a decimal<br>Present as **a decimal**, e.g., 75% should be expressed as .75 | **X R 1/10** |
| | **TXI06** | **441** | **Tax Exempt Code**<br>Code identifying exemption status from sales and use tax<br>1 Yes (Tax Exempt)<br>2 No (Not Tax Exempt) | **X ID 1/1** |
| | **TXI07** | **662** | **Relationship Code**<br>Code indicating the relationship between entities<br>A Add<br>The amount in the TXI02 should be added when summing the invoice total.<br>O Information Only<br>The amount in the TXI02 should be ignored when summing the invoice total. | **O ID 1/1** |
| | **TXI08** | **828** | **Dollar Basis for Percent**<br>Dollar basis to be used in the percent calculation of the allowance, charge or tax | **O R 1/9** |
| | **TXI10** | **350** | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set | **O AN 1/20** |

**Segment:** **SAC** **Service, Promotion, Allowance, or Charge Information**
**Position:** 040
**Loop:** SAC
**Level:** Summary:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To request or identify a service, promotion, allowance, or charge; to specify the amount or percentage for the service, promotion, allowance, or charge

**Syntax Notes:**
**1** At least one of SAC02 or SAC03 is required.
**2** If either SAC03 or SAC04 is present, then the other is required.
**3** If either SAC06 or SAC07 is present, then the other is required.
**4** If either SAC09 or SAC10 is present, then the other is required.

**Semantic Notes:**
**1** If SAC01 is "A" or "C", then at least one of SAC05, SAC07, or SAC08 is required. The value of the SAC01 indicator is not to be used to indicate the sign of the amount in SAC05.
**2** SAC05 is the total amount for the service, promotion, allowance, or charge. If SAC05 is present with SAC07 or SAC08, then SAC05 takes precedence.
**3** SAC08 is the allowance or charge rate per unit.
**4** SAC10 and SAC11 are the quantity basis when the allowance or charge quantity is different from the purchase order or invoice quantity.
SAC10 and SAC11 used together indicate a quantity range, which could be a dollar amount, that is applicable to service, promotion, allowance, or charge.

**Comments:**
**1** SAC04 may be used to uniquely identify the service, promotion, allowance, or charge. In addition, it may be used in conjunction to further the code in SAC02.

**Notes:**
Account/Invoice level charges and allowances.

Previous editions of this guideline stated that the amount shown in SAC05 will always be positive and that the code used in SAC01 will indicate whether to add or subtract the SAC05 amount to or from the TDS. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect; future versions of the UIG guidelines will no longer contain the above statement.

### Data Element Summary

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| Must Use | SAC01 | 248 | **Allowance or Charge Indicator** | M ID 1/1 |

Code which indicates an allowance or charge for the service specified

A — Allowance

Previous editions of this guideline stated that this code indicated that the amount in SAC05 should be subtracted when summing the invoice total. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect. Future versions of the UIG guidelines will no longer contain the above statement.

C — Charge

Previous editions of this guideline stated that this code indicated that the amount in SAC05 should be added when summing the invoice total. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect. Future versions of the UIG guidelines will no longer contain the above statement.

| | | | | |
|---|---|---|---|---|
| | | N — No Allowance or Charge<br>The amount in the SAC05 should be ignored when summing the invoice total. | | |
| **SAC03** | **559** | **Agency Qualifier Code**<br>Code identifying the agency assigning the code values<br>EU — Electric Utilities<br>Use this code until the DM for code UT to indicate the UIG is approved. | **X** | **ID 2/2** |
| **SAC04** | **1301** | **Agency Service, Promotion, Allowance, or Charge Code**<br>Agency maintained code identifying the service, promotion, allowance, or charge<br>The Utility Industry Group maintains this code list. See the UIG web site at http://www.uig.org or contact a UIG member for implementation details. The most current listing will be available on the web site. | **X** | **AN 1/10** |
| **SAC05** | **610** | **Amount**<br>Monetary amount<br>Previous editions of this guideline stated that this amount will always be positive and that the SAC01 will indicate whether to add to or subtract from the TDS. As a result of a clarification provided by X12F, it has been determined that the above statement is incorrect; future versions of the UIG guidelines will no longer contain the above statement. The code used in SAC01 does not indicate the sign of the amount in SAC05. The amount shown in SAC05 may be either positive or negative; if negative, the minus sign, " - ", must be transmitted. | **O** | **N2 1/15** |
| **SAC06** | **378** | **Allowance/Charge Percent Qualifier**<br>Code indicating on what basis allowance or charge percent is calculated<br>Z — Mutually Defined<br>Used for percent participation. | **X** | **ID 1/1** |
| **SAC07** | **332** | **Percent**<br>Percent expressed as a percent<br>Used to express the percentage of the total load that is being supplied by the ESP. This is the multiplication of two fields that are on the 814 transaction, AMT*7N (Participating Interest) and AMT*QY (Eligible Load). Present as a percent: e.g. 75% should be expressed as 75, and 66.67% is expressed as 66.67. | **X** | **R 1/6** |
| **SAC08** | **118** | **Rate**<br>Rate expressed in the standard monetary denomination for the currency specified | **O** | **R 1/9** |
| **SAC09** | **355** | **Unit or Basis for Measurement Code**<br>Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken<br>2I — British Thermal Units (BTUs) Per Hour<br>99 — Watt<br>BL — Block<br>Baseline usage for a predetermined period of time<br>BY — British Thermal Unit (BTU)<br>BZ — Million BTU's<br>MMBtu or Decatherms<br>CF — Cubic Feet<br>DA — Days<br>EA — Each<br>GA — Gallon<br>HH — Hundred Cubic Feet<br>Ccf<br>HJ — Horsepower | **X** | **ID 2/2** |

| | |
|---|---|
| K1 | Kilowatt Demand<br>Represents potential power load measured at predetermined intervals |
| K2 | Kilovolt Amperes Reactive Demand<br>Reactive power that must be supplied for specific types of customer’s equipment; billable when kilowatt demand usage meets or exceeds a defined parameter |
| K3 | Kilovolt Amperes Reactive Hour<br>Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters |
| K4 | Kilovolt Amperes |
| K5 | Kilovolt Amperes Reactive |
| K7 | Kilowatt |
| KH | Kilowatt Hour |
| LB | Pound |
| MO | Months |
| T1 | Thousand pounds gross |
| T9 | Thousand Kilowatt Hours |
| TD | Therms |
| TH | Thousand |
| TZ | Thousand Cubic Feet<br>Mcf |
| UN | Unit |
| WK | Week |
| YR | Years |

**SAC10 380 Quantity X R 1/15**

Numeric value of quantity

**SAC13 230 Reference Identification X AN 1/30**

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier

Used as a sequencing number for the non-billing party to sequence bill line items for printing the bill.

**SAC15 352 Description X AN 1/80**

A free-form description to clarify the related data elements and their content

**Segment:** **TXI** **Tax Information**
**Position:** 050
**Loop:** SAC
**Level:** Summary:
**Usage:** Optional
**Max Use:** 10
**Purpose:** To specify tax information
**Syntax Notes:**
**1** At least one of TXI02 TXI03 or TXI06 is required.
**2** If either TXI04 or TXI05 is present, then the other is required.
**3** If TXI08 is present, then TXI03 is required.
**Semantic Notes:**
**1** TXI02 is the monetary amount of the tax.
**2** TXI03 is the tax percent expressed as a decimal.
**3** TXI07 is a code indicating the relationship of the price or amount to the associated segment.
**Comments:**
**Notes:** Taxes included in this position relate to the immediately preceding SAC charges.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes | |
|---|---|---|---|---|---|
| **Must Use** | **TXI01** | **963** | **Tax Type Code**<br>Code specifying the type of tax<br>Use any valid Data Element 963 codes as mutually agreed between the trading partners. | **M** | **ID 2/2** |
| | **TXI02** | **782** | **Monetary Amount**<br>Monetary amount | **X** | **R 1/18** |
| | **TXI03** | **954** | **Percent**<br>Percentage expressed as a decimal<br>Present as **a decimal**, e.g., 75% should be expressed as .75 | **X** | **R 1/10** |
| | **TXI06** | **441** | **Tax Exempt Code**<br>Code identifying exemption status from sales and use tax<br>1 Yes (Tax Exempt)<br>2 No (Not Tax Exempt) | **X** | **ID 1/1** |
| | **TXI07** | **662** | **Relationship Code**<br>Code indicating the relationship between entities<br>A Add<br>The amount in the TXI02 should be added when summing the invoice total.<br>O Information Only<br>The amount in the TXI02 should be ignored when summing the invoice total. | **O** | **ID 1/1** |
| | **TXI08** | **828** | **Dollar Basis for Percent**<br>Dollar basis to be used in the percent calculation of the allowance, charge or tax | **O** | **R 1/9** |
| | **TXI10** | **350** | **Assigned Identification**<br>Alphanumeric characters assigned for differentiation within a transaction set | **O** | **AN 1/20** |

**Segment:** **CTT** **Transaction Totals**
**Position:** 070
**Loop:**
**Level:** Summary:
**Usage:** Optional
**Max Use:** 1
**Purpose:** To transmit a hash total for a specific element in the transaction set
**Syntax Notes:**
**Semantic Notes:**
**Comments:** **1** This segment is intended to provide hash totals to validate transaction completeness and correctness.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| **Must Use** | **CTT01** | **354** | **Number of Line Items**<br>Total number of line items in the transaction set<br>The number of IT1 segments. | **M N0 1/6** |

**Segment:** **SE** **Transaction Set Trailer**
**Position:** 080
**Loop:**
**Level:** Summary:
**Usage:** Mandatory
**Max Use:** 1
**Purpose:** To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)
**Syntax Notes:**
**Semantic Notes:**
**Comments:** **1** SE is the last segment of each transaction set.

**Data Element Summary**

| | Ref. Des. | Data Element | Name | Attributes |
|---|---|---|---|---|
| Must Use | SE01 | 96 | **Number of Included Segments**<br>Total number of segments included in a transaction set including ST and SE segments | M N0 1/10 |
| Must Use | SE02 | 329 | **Transaction Set Control Number**<br>Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set | M AN 4/9 |