Utility Industry Group Implementation Standard

for

Electronic Data Interchange

TRANSACTION SET

867

Product Transfer and Resale Report

Ver/Rel 004010

Meter Interval and Historical Usage Reporting

February 9, 2000

Summary of Changes

November 13, 1998 Initial release.

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

Pos.	Ref Des	Data Element	Name	Attributes 3060	Attributes 4010
H020	BPT03	373	Date	M DT 6/6	M DT 8/8
H080 D050	N101	98	Entity Identifier Code	M ID 2/2	M ID 2/3
H080 D050	N104	67	Identification Code	X AN 2/20	X AN 2/80
H130	PER02	93	Name	O AN 1/35	O AN 1/60
D210		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.				
D210		1251	Date Time Period	DTM07 in 3070	DTM06 in 4010

June 10, 1999

Pos.	Ref Des	Data Element	Name	Notes
H020	BPT07	306	Action Code	Added element and graybox
H020	BPT08	337	Time	Added element and graybox
H020	BPT04	755	Report Type Code	Added codes BR, C2 and DR
D010	PTD01	521	Product Transfer Type Code	Text added to segment gray box. Added *optional* UIG codes to PTD01.
D160	MEA01	737	Measurement Reference ID Code	Added "AN & "EN" codes.
H120	REF	_	_	Note changed to reflect UIG requirement.
H075	MEA MEA02	_ 738	_ Measurement Qualifier	Added *optional* MEA segment to Heading level and code "NP" to MEA02 for PA business requirement.
D110	QTY01	673	Quantity Qualifier	Added codes "32","9H","92","A5","D1"; "KC"; "KZ."
D110	QTY04	61	Free-Form Message	Added Element. Used to indicate a non-numeric value.
H080	N1	_	_	Maximum use = 1, not 5.
H100 D070	N3	_	_	Added "Not recommended for use. Will not be included in next release."
H110 D080	N4	_	_	Added "Not recommended for use. Will not be included in next release."

D140	AMT AMT01	_ 522	_ Amount Qualifier Code	Added segment AMT and new code "OS" to AMT01.
H120	REF	_	_	Added usage note in gray box.
D020 D210	DTM04	623	Time Code	Added DTM04 for states with multiple/varying time zones.
H050 D020 D210	DTM02 DTM03	373 337	Date Time	Group agreed to add DTM02/03 to allow the translator to validate date & time, facilitating immediate rejection with 997 if appropriate. No preference attached to either DTM02/03 or DTM05/06.

October 5, 1999	Document -Specific Best Practices	QTY02	380	Quantity	Added additional explanation.
	H020	BPT	-	Beginning Segment	Added Semantic Note.
		BPT02	127	Reference ID	Added explanation.
		BPT03	373	Date	Added explanation.
		BPT04	755	Report Type Code	Added several codes/explanations.
		BPT07	306	Action Code	Added element/code.
		BPT08	337	Time	Added element/explanation.
		BPT09	127	Reference ID	Added element/explanation.
	H050	DTM	-	Date/Time Reference	Added note.
	H075	MEA02	738	Measurement Qualifier	Clarified explanation.
	H120	REF01	128	Reference ID Qualifier	Added BLT and PC codes/explanations.
		REF02	127	Reference ID	Added explanations.
	D010	PTD01	521	Product Transfer Type Code	Added SD code; clarified explanations.
	D020/210	DTM	-	Date/Time Reference	Clarified note.
	D020	DTM01	374	Date/Time Qualifier	Added explanation for code 151.
	D030	REF	-	Reference Identification	Clarified note.
		REF01	128	Reference ID Qualifier	Added PR and AAY codes; clarified explanations for IX, JH, LU codes.
		REF02	127	Reference ID	Clarified explanation.
		REF03	352	Description	Clarified explanation.
	D110	QTY	-	Quantity	Clarified note.
		QTY01	673	Quantity Qualifier	Deleted 87 code. Added several explanations.
		QTY02	380	Quantity	Added explanation.
		QTY03	C001	Composite Unit	
		C00101	355	Unit or Basis for Measurement Code	Noted that graybox explanations are X12 usage.
	D160	MEA02	738	Measurement Qualifier	Added PRQ code/explanation; clarified MU code explanation.
		MEA04	C001	Composite Unit	Noted that graybox
		C00101	355	Unit or Basis for Measurement Code	explanations are X12 usage.
		MEA07	935	Measurement Significance Code	Added codes 76, 77, 78, 79.
February 9, 2000	Pos.	Ref Des	Data Element	Name	Notes
	H080	N101	98	Entity Identifier Code	Added graybox to code "48." Added codes "85" and "BF" and grayboxes.

H120	REF01	128	Reference Id Qualifier	Added code "LU" and graybox.
H120	REF03	352	Description	Added graybox.
D110	QTY03.1 (C00101)	355	Unit or Basis for Measurement Code	Added code "KQ" and graybox.

867 Product Transfer and Resale Report

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 the Product Transfer and Resale Report Transaction Set (867) as adopted by the UIG for use within the context of an Electronic Data Interchange (EDI) environment.

Notes

This implementation of the transaction set is used by the utility industry in the deregulated, alternative energy supply environment to report the historical consumption of energy or the current interval consumption of energy by a customer account to the customer's energy service provider (ESP).

867 Product Transfer and Resale Report

Best Practices

Global Best Practices

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 processable 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 PTD Segment

The PTD loop conveys consumption information for one meter or register over a number of metering intervals. Accounts that have multiple meters or registers require multiple PTD loops.

Use of The QTY Loop

Each QTY/MEA/DTM loop conveys consumption information about one metering interval for the meter identified in the PTD/REF segment

The value in QTY02 is always unsigned. Direction of flow for this quantity is defined by the value of REF03 when REF02 = JH in the preceding REF segment (Detail position 030).

Use of DTM02/03 and DTM05/06

Use of DTM02/03 rather than DTM05/06 allows the translator to validate on date and time. This facilitates immediate rejection with a 997.

While there is at present no preferred coding practice, UIG encourages the use of DTM02/03 in new implementations, where possible.

867 Product Transfer and Resale Report

Functional Group ID=PT

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	BPT	Beginning Segment for Product Transfer and Resale	M	1		
	050	DTM	Date/Time Reference	O	10		
	075	MEA	Measurements	O	1		
			LOOP ID - N1			5	
Must Use	080	N1	Name	O	1		
	090	N2	Additional Name Information	O	2		
	100	N3	Address Information	O	2		
	110	N4	Geographic Location	O	1		
	120	REF	Reference Identification	O	12		
			LOOP ID - PER			>1	
	130	PER	Administrative Communications Contact	O	1		

Detail

	Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	Notes and Comments
			LOOP ID - PTD			>1	
Must Use	010	PTD	Product Transfer and Resale Detail	M	1		
	020	DTM	Date/Time Reference	O	10		
	030	REF	Reference Identification	O	20		
			LOOP ID - N1			5	
	050	N1	Name	O	1		
	060	N2	Additional Name Information	O	2		
	070	N3	Address Information	O	2		
	080	N4	Geographic Location	O	1		
			LOOP ID - QTY			>1	
Must Use	110	QTY	Quantity	O	1		
	140	AMT	Monetary Amount	O	12		
	160	MEA	Measurements	O	40		
	190	REF	Reference Identification	O	>1		
	210	DTM	Date/Time Reference	O	10		

Summary

	Pos. No.	Seg. ID	Name	Req. Des.	Max. Use	Loop Repeat	Notes and Comments
Must Use	030	SE	Transaction Set Trailer	M	1		

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** Code uniquely identifying a Transaction Set 867 Product Transfer and Resale Report	**M ID 3/3**
Must Use	**ST02**	**329**	**Transaction Set Control Number** 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: **BPT** **Beginning Segment for Product Transfer and Resale**
Position: 020
Loop:
Level: Heading
Usage: Mandatory
Max Use: 1
Purpose: To indicate the beginning of the Product Transfer and Resale Report Transaction Set and transmit identifying data
Syntax Notes: **1** If either BPT05 or BPT06 is present, then the other is required.
Semantic Notes: **1** BPT02 identifies the transfer/resale number.
2 BPT03 identifies the transfer/resale date.
3 BPT08 identifies the transfer/resale time.
4 BPT09 is used when it is necessary to reference a Previous Report Number.
Comments:

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	**BPT01**	**353**	**Transaction Set Purpose Code** Code identifying purpose of transaction set		**M ID 2/2**
			00	Original
				Conveys original readings for the account being reported.
			01	Cancellation
				Indicates that the readings previously reported for the account are to be ignored.
			05	Replace
				Indicates that the readings previously cancelled for the account are being replaced.
			07	Duplicate
				Indicates that this is a retransmission of previously furnished information.
			52	Response to Historical Inquiry
				Response to a request for historical meter reading.
			CO	Corrected
				Indicates that the readings previously reported for the account are being corrected.
	BPT02	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		**O AN 1/30**
			A unique transaction identification number assigned by the originator of this transaction. This number should be unique over time.		
Must Use	**BPT03**	**373**	**Date** Date expressed as CCYYMMDD		**M DT 8/8**
			Transaction Creation Date. This is the date that the transaction was created by the sender's application system.		
	BPT04	**755**	**Report Type Code** Code indicating the title or contents of a document, report or supporting item		**O ID 2/2**
			22	Functional Plan
				Usage model information for an aggregated customer class (load profile).
			23	Contractual Plan
				Load template for an individual customer's usage within an aggregated customer class.

		BR	Benchmark Testing Results		
			Special meter read		
		C1	Cost Data Summary		
			Interval readings		
		C2	Functional Cost and Hour		
			Cumulative values reported by TOU period		
		DD	Distributor Inventory Report		
			Usage		
		DR	Datalog Report		
			Mixed values (reporting cycle contains periods of both cumulative and interval data)		
		KH	Proposal Support Data		
			Off-cycle interval readings taken when meter agent is changed		
		KJ	Change Proposal Data		
			Off-cycle monthly readings taken when meter agent is changed		
BPT07	**306**	**Action Code**		**O**	**ID ?**
		Code indicating the type of action			
		F	Final		
			Final transaction for this customer indicates that the customer has finalled the account.		
BPT08	**337**	**Time**		**O**	**TM 4/8**
		Time expressed in 24 hour clock time			
		The transaction creation time. This is the time that the transaction was created by the senders application system.			
BPT09	**127**	**Reference Identification**		**O**	**AN 1/30**
		Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier			
		When BPT01 = 01 or CO, this element should contain the transaction identification number from BPT02 of the transaction that is being cancelled or corrected.			

Segment: **DTM** **Date/Time Reference**
Position: 050
Loop: QTY
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 DTM04 is present, then DTM03 is required.
3 If either DTM06 or DTM07 is present, then the other is required.
Semantic Notes:
Comments:
Notes: In time expressions, HH cannot equal 24; when HH = 00, DD (day) denotes the beginning day.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time 649 Document Due Date and Time the Billing Charges are due back to the Billing Party.	**M**	**ID 3/3**
	DTM02	**373**	**Date** Date expressed as CCYYMMDD. Use of DTM02/03 allows the translator to validate date and time	**X**	**DT 8/8**
	DTM03	**337**	**Time** Time 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).	**X**	**TM 4/8**
	DTM05	**1250**	**Date Time Period Format Qualifier** Code indicating the date format, time format, or date and time format D8 Date Expressed in Format CCYYMMDD DT Date and Time Expressed in Format CCYYMMDDHHMM	**X**	**ID 2/3**
	DTM06	**1251**	**Date Time Period** Expression of a date, a time, or range of dates, times or dates and times	**X**	**AN 1/35**

Segment: **MEA** **Measurements**
Position: 075
Loop:
Level: Heading
Usage: Optional
Max Use: 1
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:

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
	MEA02	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies NP Percent of Specified Used to indicate the percentage of load that is supplied by the ESP to the customer. The value of MEA03 is the product of two AMT02 values from TS814: where AMT01 = 7N (Participating Interest) and AMT01 = QY (Eligible Load Percentage).	**O ID 1/3**
Must Use	**MEA03**	**739**	**Measurement Value** The value of the measurement	**X R 1/20**

Segment: **N1** **Name**
Position: 080
Loop: N1
Level: Heading
Usage: Must Use
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** Code identifying an organizational entity, a physical location, property or an individual		**M**	**ID 2/3**
			48	In-service Source		
				Used to identify the party that reads the meter. Often referred to as the Meter Reading Service Provider (MRSP).		
			55	Service Manager		
				Used to identify the party that manages meter data on behalf of another. Often referred to as the Meter Data Management Agent (MDMA).		
			85	Billing Provider		
				Used to identify the party that will present the bill to the end use customer.		
			8R	Consumer Service Provider (CSP) Customer		
				Current name of the end use customer. If the customer name or postal address changes, the old information is qualified by AO.		
			8S	Consumer Service Provider (CSP)		
				Utility		
			AG	Agent/Agency		
				Metering Agent		
			AO	Account of		
				Old customer name or written address (new information is qualified by 8R).		
			BF	Billed From		
				Used to identify the party calculating the bill.		
			SJ	Service Provider		
				Energy Service Provider		
	N102	**93**	**Name** Free-form name		**X**	**AN 1/60**
	N103	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67)		**X**	**ID 1/2**
			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		
			An identifier assigned by the Utility		
		92	Assigned by Buyer or Buyer's Agent		
			An identifier assigned by the Energy Service Provider (N101 = SJ) or the end use customer (N101 = 8R).		
N104	**67**	**Identification Code** Code identifying a party or other code		**X**	**AN 2/80**
N106	**98**	**Entity Identifier Code** Code identifying an organizational entity, a physical location, property or an individual.		**O**	**ID 2/3**
		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.			
		40	Receiver		
			Entity to accept transmission		
		41	Submitter		
			Entity transmitting transaction set		

Segment: **N2** **Additional Name Information**
Position: 090
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** Free-form name	**M**	**AN 1/60**
	N202	**93**	**Name** Free-form name	**O**	**AN 1/60**

Segment: **N3** **Address Information**
Position: 100
Loop: N1
Level: Heading
Usage: Optional
Max Use: 2
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:
Notes: Not recommended for use. This segment will not be included in the next release.

Data Element Summary

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

Segment: **N4** **Geographic Location**
Position: 110
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.
Notes: Not recommended for use. This segment will not be included in the next release.

Data Element Summary

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

Segment: **REF** **Reference Identification**
Position: 120
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: Data in this segment refers only to the entity identified in the N1 segment of this loop. UIG requires this segment be used in at least one N1 loop.

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification		**M ID 2/3**
			06	System Number 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.	
			10	Account Manager's Code Meter Data Management Agent-assigned account number for end use customer	
			11	Account Number Energy Service Provider-assigned account number for the end use customer.	
			12	Billing Account Utility-assigned account number for the end use customer.	
			45	Old Account Number Utility's previous account number for the end use customer.	
			BLT	Billing Type This information is included for reference purposes only. It identifies whether the LDC or ESP consolidates the bill or whether each party will render its own bill. See REF02 for valid values.	
			CR	Customer Reference Number This code is no longer recommended by the UIG and will be removed from future versions of the guidelines. Instead, the N104 segment should be used when N101 is 8R and N103 is 92.	
			GK	Third Party Reference Number Former/departing ESP's account number for the end use customer.	
			LU	Location Number Service Delivery Point (SDP) Identification number for the point where service is delivered to the customer. (See	

REF03 for valid use and values.)

PC Production Code

This information is included for reference purposes only. It identifies the party that calculates the bill. See REF02 for valid values.

WF Locally Assigned Control Number

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

When REF01 is not LU:
REF03 may be used as a text field to clarify the related data elements and their content.
When REF01 is LU:
REF03 must be used and contains the SDP Code assigned by the utility (LDC).

Segment: **PER** **Administrative Communications Contact**
Position: 130
Loop: PER
Level: Heading:
Usage: Optional
Max Use: 1
Purpose: To identify a person or office to which 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** Code identifying the major duty or responsibility of the person or group named IC Information Contact	**M**	**ID 2/2**
	PER02	**93**	**Name** Free-form name	**O**	**AN 1/60**
	PER03	**365**	**Communication Number Qualifier** Code identifying the type of communication number EM Electronic Mail FX Facsimile TE Telephone	**X**	**ID 2/2**
	PER04	**364**	**Communication Number** Complete communications number including country or area code when applicable	**X**	**AN 1/80**
	PER05	**365**	**Communication Number Qualifier** Code identifying the type of communication number EM Electronic Mail FX Facsimile TE Telephone	**X**	**ID 2/2**
	PER06	**364**	**Communication Number** Complete communications number including country or area code when applicable	**X**	**AN 1/80**
	PER07	**365**	**Communication Number Qualifier** Code identifying the type of communication number EM Electronic Mail FX Facsimile TE Telephone	**X**	**ID 2/2**
	PER08	**364**	**Communication Number** Complete communications number including country or area code when applicable	**X**	**AN 1/80**

Segment: **PTD** **Product Transfer and Resale Detail**
Position: 010
Loop: PTD
Level: Detail
Usage: Mandatory
Max Use: 1
Purpose: To indicate the start of detail information relating to the transfer/resale of a product and provide identifying data
Syntax Notes: **1** If either PTD02 or PTD03 is present, then the other is required.
2 If either PTD04 or PTD05 is present, then the other is required.
Semantic Notes:
Comments:
Notes: The PTD loop conveys consumption information for one meter or register over a number of metering intervals. Accounts that have multiple meters or registers require multiple PTD loops; the total consumption from multiple meters may be summarized in another PTD loop, qualified by SU. Accounts which have multiple services; e.g. both electric and gas, require separate PTD loops for each service. Changes in meter types within the same usage reporting period require separate PTD loops.

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	PTD01	521	**Product Transfer Type Code** Code identifying the type of product transfer		M ID 2/2
			BB	Demand Information Only	
				Monthly Billed Summary Total tariff-based charges (billing system data); distinguished from meter or register charges.	
			BC	Issue - Other Agency	
				Unmetered Service Summary Total for unmetered service.	
			BD	Issue - Other Department	
				Unmetered Service Detail Unmetered service for a designated unit and device class or type (e.g. light, fixture, wattage, etc).	
			BO	Designated Items	
				Metered Service Summary Total for metered service.	
			BQ	Other	
				Account Service Detail Subtotals by type of meter (e.g. demand vs. kWh).	
			SD	Ship and Debit Sale	
				Scheduling Determinants Used to provide information required by an ISO for scheduling purposes. For example: capacity and transmission obligations.	
			IA	Inventory Adjustment	
				Residential Metered Service Summary Total for residential metered service.	
			IB	Interbranch	
				Residential Metered Service Detail Residential metered service at the meter level.	
			PM	Physical Meter Information	

			Provides measured service detail, which includes information from a meter, meter totalizer or recorder.		
		SU	Summary		
			Account Service Summary Total for the service for the account. This can include the reporting of unmetered service.		
PTD04	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification		**X**	**ID 2/3**
		OZ	Product Number		
PTD05	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		**X**	**AN 1/30**
		EL	Electric Service		
		FO	Fuel Oil Service		
		GAS	Gas Service		
		LP	Liquid Propane Service		
		ST	Steam Service		
		SW	Sewage Service		
		WA	Water Service		

Segment: **DTM** **Date/Time Reference**
Position: 020
Loop: PTD
Level: Detail
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 DTM04 is present, then DTM03 is required.
3 If either DTM06 or DTM07 is present, then the other is required.
Semantic Notes:
Comments:
Notes: In time expressions, HH cannot equal 24; when HH = 00, DD (day) denotes the beginning day.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time 150 Service Period Start 151 Service Period End 514 Transferred Exchanged meter read date MRR Meter Reading Date of special meter read	**M**	**ID 3/3**
	DTM02	**373**	**Date** Date expressed as CCYYMMDD. Use of DTM02/03 allows the translator to validate date and time	**X**	**DT 8/8**
	DTM03	**337**	**Time** Time 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).	**X**	**TM 4/8**
	DTM04	**623**	**Time Code** Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + sign or Ò sign and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + sign and - sign are substituted by P and M in the codes that follow. X12 approved codes for time zones to be used as required.	**O**	**ID 2/2**
	DTM05	**1250**	**Date Time Period Format Qualifier** Code indicating the date format, time format, or date and time format D8 Date Expressed in Format CCYYMMDD DT Date and Time Expressed in Format CCYYMMDDHHMM	**X**	**ID 2/3**
	DTM06	**1251**	**Date Time Period** Expression of a date, a time, or range of dates, times or dates and times	**X**	**AN 1/35**

Segment: **REF** **Reference Identification**
Position: 030
Loop: PTD
Level: Detail
Usage: Optional
Max Use: 20
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:
Note: This segment is required if PTD01 equals PM; this segment is optional if PTD01 equals SU.
When REF01=JH, REF02 specifies the direction of flow associated with the quantity in QTY02.

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	REF01	128	**Reference Identification Qualifier** Code qualifying the Reference Identification		M ID 2/3
			46	Old Meter Number	
				Identifies meters being removed	
			6W	Sequence Number	
				Identifies channel number when there is more than one channel on a meter measuring the same quantity (e.g., two kWh channels).	
			IX	Item Number	
				Number of dials on meter. See REF02 for valid values.	
			JH	Tag	
				Direction of flow at metering point. See REF02 for valid values.	
			LO	Load Planning Number	
				Load Profile	
			LU	Location Number	
				Service Delivery Point (SDP) Identification number for the point where service is delivered to the customer. (See REF03 for valid use and values.)	
			MG	Meter Number	
			MT	Meter Ticket Number	
				Meter Type. Used to identify the type of consumption measured by this meter and the interval between measurements. See REF02 for examples.	
			NH	Rate Card Number	
				Utility Rate class or tariff	
			P5	Position Code	
				Used to identify the position of this meter relative to other meters at this location.	
			PR	Price Quote Number	
				Identifies a unit pricing category under a rate code.	
			PRT	Product Type	

	Identifies the type of service; e.g., yard light, water heater, etc.
SC	Shipper Car Order Number
	Service Indicator. See REF02 for valid values.
SU	Special Processing Code
	Life support equipment verification. See REF02 for valid values.
YT	Reporter Identification
	Automatic Meter Reading (AMR) device identification.
AAY	Accounting Period Reference
	Revenue Month (related to the Service Period)

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 JH, valid values for REF02 are:
A = Additive: this consumption contributed to the summarized total (do nothing).
I = Ignore: this consumption did not contribute to the summarized total (do nothing).
S = Subtractive: this consumption must be subtracted from the summarized total.

When REF01 is MT, the meter type is expressed as a five-character field. The first two characters are the type of consumption, expressed in the units of measure from Data Element 355. The three-character metering interval is expressed as one of the following values:

Nnn = number of minutes, from 001 to 999
ANN = annual
BIA = bi-annual
BIM = bi-monthly
DAY = daily
MON = monthly
QTR = quarterly

For example:
KHMON represents kilowatt hours per month
K1015 represents kilowatt demand per 15 minute interval
K1060 represents kilowatt demand per hourly interval

When REF01 is SC, valid values for REF02 are:
M = Metered
U = Unmetered

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 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** A free-form description to clarify the related data elements and their content	**X**	**AN 1/80**

When REF01 is not LU:
REF03 may be used as a text field to clarify the related data elements and their content.
When REF01 is LU:
REF03 must be used and contains the SDP Code assigned by the utility (LDC)

Segment: **N1** **Name**
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** Code identifying an organizational entity, a physical location, property or an individual MQ Metering Location	**M**	**ID 2/3**
	N102	**93**	**Name** Free-form name	**X**	**AN 1/60**
	N103	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67) 92 Assigned by Buyer or Buyer's Agent An identifier assigned by the customer.	**X**	**ID 1/2**
	N104	**67**	**Identification Code** Code identifying a party or other code	**X**	**AN 2/80**

Segment: **N2** **Additional Name Information**
Position: 060
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** Free-form name	**M**	**AN 1/60**
	N202	**93**	**Name** Free-form name	**O**	**AN 1/60**

Segment: **N3** **Address Information**
Position: 070
Loop: N1
Level: Detail
Usage: Optional
Max Use: 2
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:
Notes: Not recommended for use. This segment will not be included in the next release.

Data Element Summary

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

Segment: **N4** **Geographic Location**
Position: 080
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: Not recommended for use. This segment will not be included in the next release.

Data Element Summary

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

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail:
Usage: Must Use
Max Use: 1
Purpose: To specify quantity information
Syntax Notes: **1** At least one of QTY02 or QTY04 is required.
2 Only one of QTY02 or QTY04 may be present.
Semantic Notes: **1** QTY04 is used when the quantity is non-numeric.
Comments:
Notes: Each QTY/MEA/DTM loop conveys consumption information about one metering interval. The direction of flow for the quantity in QTY02 is defined by the value of 030REF02 when REF01 = JH.

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity;		**M ID 2/2**
			9H	Estimated Duration
				Estimated quantity received from the customer in a co-generation environment.
			32	Quantity Sold
				Normal data transmission (not estimated, adjusted or anomalous)
			92	Allotted Usage Quantity
				Estimated and not affecting any performance factors
			A5	Adjusted Quantity
				Adjusted value to correct metering inconsistencies or errors
			AO	Verified Receipts
				Verified - value is actual but appears anomalous
			87	Quantity Received
				Actual quantity received from the customer in a co-generation environment. Used to indicate the flow back into the grid.
			D1	Billed
				Used to show the usage that was billed by the distribution company
			DY	Days
			KA	Estimated
			KC	Net Quantity Decrease
				Capacity Obligation
			KZ	Corrective Action Requests Written
				Transmission Obligation
			QD	Quantity Delivered
				Quantity delivered to the customer.
	QTY02	**380**	**Quantity** Numeric value of quantity	**X R 1/15**
				This value is always unsigned
	QTY03	**C001**	**Composite Unit of Measure**	**O**

To identify a composite unit of measure (See Figures Appendix for examples of use)

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

1N	Count
	Indicates meter pulses
2I	British Thermal Units (BTUs) Per Hour
70	Volt
99	Watt
BY	British Thermal Unit (BTU)
BZ	Million BTU's
	Decatherms
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 [X12]
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.[X12]
K3	Kilovolt Amperes Reactive Hour
	Represents actual electricity equivalent to kilowatt-hours; billable when usage meets or exceeds defined parameters.[X12]
K4	Kilovolt Amperes
K5	Kilovolt Amperes Reactive
K7	Kilowatt
KH	Kilowatt Hour
KQ	Kilopascal
	Represents kQhr meter measurement: reactive power expended in one hour measured in kiloQhour 60 degrees lagging to 30 degrees leading.
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**	**O**	**R 1/15**

		Power to which a unit is raised		
C00103	**649**	**Multiplier** Value to be used as a multiplier to obtain a new value	**O**	**R 1/10**
QTY04	**61**	**Free-Form Message** Free-form information	**X/Z**	**AN 1/30**

Segment: **AMT** **Monetary Amount**
Position: 140
Loop: QTY
Level: Detail
Usage: Optional
Max Use: 12
Purpose: To indicate the total monetary amount
Syntax Notes:
Semantic Notes:
Comments:
Notes:

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	**AMT01**	**522**	**Amount Qualifier Code** Code to qualify amounts 0S Previously Billed This is to be used only on an historical usage document to provide historical billed amounts along with the historical usage for this customer.	**M**	**ID 1/2**
Must Use	**AMT02**	**782**	**Monetary Amount** Monetary amount	**M**	**R 1/18**
	AMT03	**478**	**Credit/Debit Flag Code** Code indicating whether amount is a credit or debit C Credit D Debit	**O**	**ID 1/1**

Segment: **MEA** **Measurements**
Position: 160
Loop: QTY
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:

Data Element Summary

Ref. Des.	Data Element	Name		Attributes
MEA01	**737**	**Measurement Reference ID Code** Code identifying the broad category to which a measurement applies		**O ID 2/2**
		AA	Meter reading-beginning actual/ending actual	
		AB	Average Balance	
			Average or contract demand	
		AE	Meter reading-beginning actual/ending estimated	
		AF	Actual Total	
		AN	Work	
			Period actual	
		BC	Billed Actual	
		BN	Billed Minimum	
		BO	Meter Reading as Billed	
			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	
			Period Estimated	
		R1	Opening Reading	
		TI	Time	
MEA02	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies		**O ID 1/3**

			CJ	Cycle Time			
			CO	Core Loss			
				Transformer Loss Multiplier. Used when a customer owns a transformer and the transformer loss is not measured by the meter.			
			LN	Length			
			MEF	Meter Factor			
			MU	Multiplier			
				It is generally accepted that when MEA02=MU, no data except the multiplier value in MEA03 can be carried by this MEA segment. Separate MEA segments are then added as needed to carry all other MEA data. As a result, additional QTY or PTD loops may be required. Policy to be reviewed for future releases.			
			MX	Maximum			
			PJ	Pulse width			
				Pulse multiplier			
			PRQ	Product Reportable Quantity			
				Consumption. Represents the quantity consumed (delivered) for the service period. It is the calculated difference of meter readings, or is a direct reading of the meter, then multiplied by (several) factors, not including the power factor.			
			PU	Pressure Base			
			RUD	Usage Deviation (Applies to Kilowatt Hours, Kilowatt Demand and Reactive Demand)			
			TC	Temperature			
			UG	Usage			
				Used when reporting partial-period usage prior to the first full-period reporting.			
			ZA	Power Factor			
				Relationship between watts and volt-amperes necessary to supply electric load			
	MEA03	**739**	**Measurement Value** The value of the measurement		**X**	**R**	**1/20**
			Represents the meter constant when MEA02 equals "MU". When no multiplier is present, use a value of 1.				
	MEA04	**C001**	**Composite Unit of Measure** To identify a composite unit of measure (See Figures Appendix for examples of use)		**X**		
Must Use	**C00101**	**355**	**Unit or Basis for Measurement Code** Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		**M**	**ID**	**2/2**
			1N	Count			
				Indicates meter pulses			
			2I	British Thermal Units (BTUs) Per Hour			
			70	Volt			
			99	Watt			
			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 [X12]
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 [X12]
K3	Kilovolt Amperes Reactive Hour
	Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters [X12]
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 **O R 1/15**
Power to which a unit is raised

C00103 649 Multiplier **O R 1/10**
Value to be used as a multiplier to obtain a new value

C00104 355 Unit or Basis for Measurement Code **O ID 2/2**
Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

ZZ	Mutually Defined
	Represents gas heating or billing factor

C00105 1018 Exponent **O R 1/15**
Power to which a unit is raised

C00106 649 Multiplier **O R 1/10**
Value to be used as a multiplier to obtain a new value

MEA05 740 Range Minimum **X R 1/20**
The value specifying the minimum of the measurement range
Beginning reading

MEA06 741 Range Maximum **X R 1/20**
The value specifying the maximum of the measurement range
Ending reading or single reading (e.g., demand).

MEA07 935 Measurement Significance Code O ID 2/2

Code used to benchmark, qualify or further define a measurement value

03	Approximately
	Estimated and not affecting any performance factors
10	Not equal to
22	Actual
31	Calculated
34	Ratchet
	Highest previously attained value
39	Corrected
40	Uncorrected
41	Off Peak
42	On Peak
43	Intermediate
44	Average
46	Estimated
51	Total
	Totalizer
62	Current
68	As Is
	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 867 Guideline will be issued when the DMs are approved. Until then, the following non-standard definitions for the 3070 codes will be used.

Non-Standard 3070 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: **REF** **Reference Identification**
Position: 190
Loop: QTY
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To specify identifying information
Syntax Notes: **1** At least one of REF02 or REF03 is required.
Semantic Notes:
Comments:
Note: This segment is used to convey reason codes for non-reading or estimation

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification ESN Estimate Sequence Number Estimate Reason Code	**M**	**ID 2/3**
	REF02	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier Reason Code when available.	**X**	**AN 1/30**
	REF03	**352**	**Description** A free-form description to clarify the related data elements and their content Reason Description when a code is not available.	**X**	**AN 1/80**

Segment: **DTM** **Date/Time Reference**
Position: 210
Loop: QTY
Level: Detail:
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 DTM04 is present, then DTM03 is required.
3 If either DTM06 or DTM07 is present, then the other is required.
Semantic Notes:
Comments:
Notes: In time expressions, HH cannot equal 24; when HH= 00, DD (day) denotes the beginning day.

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time 150 Service Period Start 151 Service Period End 319 Failed Meter failure date 514 Transferred Exchanged meter read date 634 Next Review Date Next meter read date 730 Reporting Cycle Date Period PPP Peak Period Peak Period Usage	**M ID 3/3**
	DTM02	**373**	**Date** Date expressed as CCYYMMDD. Use of DTM02/03 allows the translator to validate date and time	**X DT 8/8**
	DTM03	**337**	**Time** Time 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).	**X TM 4/8**
	DTM04	**623**	**Time Code** Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + sign or Ò sign and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + sign and - sign are substituted by P and M in the codes that follow. X12 approved codes for time zones to be used as required.	**O ID 2/2**
	DTM05	**1250**	**Date Time Period Format Qualifier** Code indicating the date format, time format, or date and time format D8 Date Expressed in Format CCYYMMDD DT Date and Time Expressed in Format	**X ID 2/3**

				CCYYMMDDHHMM		
			RD8	Range of Dates Expressed in Format CCYYMMDD-CCYYMMDD 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		
			RDT	Range of Date and Time, Expressed in Format CCYYMMDDHHMM-CCYYMMDDHHMM A range of dates and times expressed in the format CCYYMMDDHHMM-CCYYMMDDHHMM where CCYY is the numerical expression of the century CC and year YY, MM is the numerical expression of the month within the year, DD is the numerical expression of the day within the month, HH is the numerical expression of hours in the day based on a twenty-four hour clock, and MM is the numerical expression of minutes within an hour; the first occurrence of CCYYMMDDHHMM is the starting time and the second is the ending time		
DTM06	**1251**	**Date Time Period**			**X**	**AN 1/35**
		Expression of a date, a time, or range of dates, times or dates and times				

Segment: **SE** **Transaction Set Trailer**
Position: 030
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** 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** 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**