

Utility Industry Group Implementation Guideline

for

Electronic **D**ata **I**nterchange

TRANSACTION SET

867

Product Transfer and Resale Report

Ver/Rel 004010

Meter Interval and Historical Usage Reporting

NOVEMBER 13, 1998

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	N101	98	Entity Identifier Code	M ID 2/2	M ID 2/3
D050					
H080	N104	67	Identification Code	X AN 2/20	X AN 2/80
D050					
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
<p>Note: Ver 3070 provided qualifiers D6, D8, RD6, and RD8 in DTM06. Ver 4010 provides D8 and RD8 only in DTM05.</p>					
D210		1251	Date Time Period	DTM07 in 3070	DTM06 in 4010

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.
- Both the MEA and DTM segments must be sent with the first iteration of the QTY loop. The MEA segment must be sent to establish the initial measurement values and readings; for subsequent iterations of the QTY loop, the MEA segment need not be sent because the readings can be inferred by accumulating the QTY02 value. The DTM segment must be sent to establish the initial interval date and time; for subsequent iterations of the QTY loop, this segment need not be sent because the dates and times can be inferred from the metering interval identified in the meter type (REF01 = MT).

Use of The CTT Segment

- The X12 standards specify that the number of line items (CTT01) is the accumulation of the number of LIN segments. Because the UIG does not use the LIN segment, previous editions of this Guideline specified that CTT01 would be the accumulation of the number of PTD segments. Some translators validate CTT01 to the LIN segment and report errors if the LIN is not used. Because of these errors, the UIG no longer includes the CTT segment in this implementation of this transaction set.

867 Product Transfer and Resale Report

Functional Group ID=**PT**

Heading

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	ST	Transaction Set Header	M	1		
Must Use	020	BPT	Beginning Segment for Product Transfer and Resale	M	1		
						5	
LOOP ID - N1							
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		
Must Use	120	REF	Reference Identification	O	12		
						>1	
LOOP ID - PER							
	130	PER	Administrative Communications Contact	O	1		

Detail

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

Summary

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
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

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u>		
Must Use	ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set	M ID 3/3
			867 Product Transfer and Resale Report	
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 BPT09 is used when it is necessary to reference a Previous Report Number.
Comments:

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
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 A unique transaction identification number assigned by the originator of this transaction.	O AN 1/30
Must Use	BPT03	373	Date Date expressed as CCYYMMDD Transaction Creation Date	M DT 8/8
	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.	

C1	Cost Data Summary
	Interval readings
DD	Distributor Inventory Report
	Usage
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

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: **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.	
		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).	
		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).	
		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		X	AN 2/80
			Code identifying a party or other code		
N106	98	Entity Identifier Code		O	ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual. 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

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u>		
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:

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
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.

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
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: Must Use
Max Use: 12
Purpose: To specify identifying information
Syntax Notes: 1 At least one of REF02 or REF03 is required.
Semantic Notes:
Comments:
Notes: Required by the Utility Industry Group

Data Element Summary

Ref.	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.	
		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.	
		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.	
		WF Locally Assigned Control Number ESP's previous account number for the end use customer.	
	REF02	127 Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30
	REF03	352 Description A free-form description to clarify the related data elements and their content	X AN 1/80

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

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Must Use</u>	<u>Des.</u>	<u>Element</u>		
	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.

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
Must Use	PTD01	Product Transfer Type Code Code identifying the type of product transfer	M ID 2/2
		PM Physical Meter Information	
		SU Summary	
		Information provided is summarized/totalized by account	
	PTD04	Reference Identification Qualifier Code qualifying the Reference Identification	X ID 2/3
		OZ Product Number	
	PTD05	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: **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.

Data Element Summary

Must Use	Ref. Des.	Data Element	Name		Attributes	
					M	ID 2/3
	REF01	128	Reference Identification Qualifier			
			Code qualifying the Reference Identification			
			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		
			JH	Tag		
				Meter Role. See REF02 for valid values.		
			LO	Load Planning Number		
				Load Profile		
			LU	Location Number		
				Identification number for the point where service is delivered to the customer.		
			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.		
			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.

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

REF03 352 Description X AN 1/80

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

Segment: **N1** Name
Position: 050
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

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u>		
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:

Data Element Summary

	<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Des.</u>	<u>Element</u>		
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.

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Des.</u>	<u>Element</u>		
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.

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
		87 Quantity Received Received from the customer in a co-generation environment.	
		DY Days	
		KA Estimated	
		QD Quantity Delivered	
	QTY02	380 Quantity Numeric value of quantity	X R 1/15
	QTY03	C001 Composite Unit of Measure To identify a composite unit of measure (See Figures Appendix for examples of use)	O
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	

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 Power to which a unit is raised	O	R 1/15
C00103	649	Multiplier Value to be used as a multiplier to obtain a new value	O	R 1/10

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: When meter readings are recorded, this segment is sent with the first iteration of the QTY loop, to establish the initial measurement values and readings. For subsequent iterations of the QTY loop, this segment need not be sent because the readings can be inferred by accumulating the QTY02 value. May not apply to summarized or historical data.

Data Element Summary

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
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
			Average or contract demand
		AE	Meter reading-beginning actual/ending estimated
		AF	Actual Total
		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
		R1	Opening Reading
		TI	Time

	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	
				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	
			MX	Maximum	
			PJ	Pulse width	
				Pulse multiplier	
			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	X	R 1/20
			The value of the measurement		
				Represents the meter constant when MEA02 equals "MU". When no multiplier is present, use a value of 1.	
	MEA04	C001	Composite Unit of Measure	X	
			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		
			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	

		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		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 810 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

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

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
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: This segment must be sent with the first iteration of the QTY loop, to establish the initial interval date and time. For subsequent iterations of the QTY loop, this segment need not be sent because the dates and times can be inferred from the metering interval identified in the meter type (REF01 = MT).

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	M ID 3/3
		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	
	DTM05	1250 Date Time Period Format Qualifier Code indicating the date format, time format, or date and time format	X ID 2/3
		D8 Date Expressed in Format CCYYMMDD	
		DT Date and Time Expressed in Format 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	

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

	<u>Ref.</u>	<u>Data</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	SE01	96		Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M NO 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