Virginia

Implementation Standard

For

Electronic Data Interchange

TRANSACTION SET

867

Product Transfer and Resale Report

Interval Usage/Historical Interval Usage

Ver/Rel 004010

Summary of Changes

August 27, 2001 Version 2-1FINAL	Issue final version 2.1 for 1/1/2002 Open Access
December 1, 2002 Version 2.2 FINAL	Issue final version 2.2 for 1/1/2003 CSP Consolidated Billing. Also includes cleanup of errors found during FREDI reviews as follows: For MEA*NP (Percent Participation), changed VA Use to "Not Used for Open Access". For DTM*582 (PTD*BQ loop), added DTM03 (Time) and DTM04 (Time Code). For DTM*582 (PTD*PM loop), added DTM03 (Time) and DTM04 (Time Code). Inserted REF*MG page for the PTD*PM loop. For REF*MT (PTD*PM loop), corrected a greybox typo. Made corresponding changes to Data Dictionary and removed PTD*IA loop.
February 24, 2003 Version 2.2.1	Added note regarding non-use of Transaction for BARC, CVEC, C-BEC, MEC, NNEC, SVEC, and SEC.
March 21, 2003 Version 2.3	Approved Draft Version 2.2.1

Notes

PTD Loops Definition:

The PTD Loops are required. Some are used individually, others are used in pairs. This section describes the purpose of each PTD loop. Depending on the characteristics of the account, there may be a different number of loops.

Monthly Billed Summary Information (PTD01=BB): This loop is Optional.

Monthly Billed Summary (PTD01=BB): One PTD per Account - Data obtained from the billing system to reflect the billing data for this account.

Metered Services Information – by Meter (PTD01 = BO and PM):

Metered Services Summary (PTD01=BO): Sums intervals by meter by unit of measure. For each meter provided in the detail, there must be one summary loop for a kWh or kVARh unit of measurement. Data is obtained from the metering system. The PTD01=BO provides control totals for the sum of all intervals in the PTD01=PM by unit of measure and meter. However, the PTD01=BO loop will NEVER be provided for kW or kVAR. For instance, if there are two meters on the account, one of which measures kW and kWh and the other of which measures kWh, there will be two PTD01=BO loops for the summary kWh information and three PTD01=PM loops.

Metered Services Detail (PTD01=PM): One or more PTDs, one for each unit of measure for each meter. Data is obtained from the metering system. Individual intervals are provided in the PTD01=PM.

Metered Service Summary/Detail – Cancellation: On a cancellation for interval usage the PTD01=BO is mandatory and the PTD01=PM is not required to be resent.

PTD Loops Definition:

Account Services Information – by Account (PTD01 = SU and BQ):

Account Services Summary (PTD01=SU): Summing to the account level by kWh and kVARh. Data is obtained from the metering system. For every PTD01=SU, there must be a PTD01=BQ. The PTD01=SU loop will NEVER be provided for kW or kVAR. This is typically used when the account has a Data Recorder or Load Profile Recorder, or the metering system can sum information to the account level.

Account Services Detail (PTD01=BQ): One or more PTDs, one for each unit of measure. Data is obtained from the metering system. Individual intervals are provided in the PTD01=BQ loop. If the account measures kW and kWh, there will be one PTD01=BQ loop for the kWh intervals and one PTD01=BQ loop for the kW intervals.

Valid Loop Combinations:

There are several valid combinations of the use of the different PTD loops when ESP is the metering agent:

Combination # 1 – Interval **Account** Level Reporting
(intervals are summed to account level)

- Monthly Billed Summary (PTD01=BB) Account Services Summary (PTD01=SU)

- Account Services Detail (PTD01=BQ)

Combination # 2 – Interval **Meter** Level Reporting
(intervals are provided at meter level)

- Monthly Billed Summary (PTD01=BB) Meter Services Summary (PTD01=BO)
- Meter Services Detail (PTD01=PM)

Looping Notes:
Non-use Provision

The PTD loops may be sent in any order.
BARC, CVEC, C-BEC, MEC, NNEC, SVEC, and SEC do not support sending the 867 IU/HIU. Instead, the 867 MU will be used to transmit monthly-billed summary data.

How to Use the Implementation Standard

Segment: **REF** **Reference Identification**
Position: 030
Loop: LIN
Level: Detail
Usage: Optional
Max Use: >1
Purpose: To specify identifying information
Syntax Notes: **1** At least one of REF02 or REF03 is required.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

This section is used to show the X12 Rules for this segment. You must look further into the grayboxes below for State Rules.

Notes:	Recommended by UIG
VA Use:	Must be identical to account number as it appears on the customer's bill, excluding punctuation (spaces, dashes, etc.). Significant leading and trailing zeros must be included. Request: Required Accept Response: Required Reject Response: Required
Example:	REF*12*2931839200

The "Notes:" section generally contains notes by the Utility Industry Group (UIG).

This section is used to show the individual State's Rules for implementation of this segment.

One or more examples.

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification 12 Billing Account LDC assigned account number for end use customer.	**M ID 2/3**
Must Use	**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**

This column shows the use of each data element. If state rules differ, this will show "Conditional" and the conditions will be explained in the appropriate grayboxes.

These are X12 code descriptions, which often do not relate to the information we are trying to send. Unfortunately, X12 cannot keep up with our code needs so we often change the meanings of existing codes. See graybox for the UIG or state definitions.

This column shows the X12 attributes for each data element. Please refer to Data Dictionary for individual state rules.

M = Mandatory, O= Optional, X = Conditional

AN = Alphanumeric, N# = Decimal value, ID = Identification, R = Real

1/30 = Minimum 1, Maximum 30

867 Product Transfer and Resale Report
Interval Usage/Historical Interval Usage
X12 Structure

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	M	10		
	075	MEA	Measurements	O	20		
			LOOP ID - N1			5	
	080	N1	Name	M	1		
	120	REF	Reference Identification	O	12		

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 (Monthly Billed Summary) - BB	M	1		
	020	DTM	Date/Time Reference	M	10		
			LOOP ID - QTY			>1	
	110	QTY	Quantity	O	1		
			LOOP ID – PTD			>1	
Must Use	010	PTD	Product Transfer and Resale Detail (Meter Services Summary) – BO	M	1		
	020	DTM	Date/Time Reference	M	10		
	030	REF	Reference Identification	O	20		
			LOOP ID – QTY			>1	
	110	QTY	Quantity	O	1		
	160	MEA	Measurements	O	40		
			LOOP ID – PTD			>1	
Must Use	010	PTD	Product Transfer and Resale Detail (Meter Services Detail) – PM	M	1		
	020	DTM	Date/Time Reference	M	10		
	030	REF	Reference Identification	O	20		
			LOOP ID – QTY			>1	
	110	QTY	Quantity	O	1		
	210	DTM	Date/Time Reference	O	10		

			LOOP ID – PTD			>1
Must Use	010	PTD	Product Transfer and Resale Detail (Account Services Detail) – BQ	M	1	
	020	DTM	Date/Time Reference	M	10	
	030	REF	Reference Identification	O	20	
			LOOP ID – QTY			>1
	110	QTY	Quantity	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		

Data Dictionary for 867 Interval Usage

867 Interval Usage					
Appl Field	***Field Name***	***Description***	***EDI Segment***	***Related EDI Qualifier***	***Data Type***
Header Information					
1	Transaction Set Purpose Code	**00 –** Original **01 -** Cancellation - Cancels an entire Usage	BPT01		X(2)
2	Transaction Reference Number (Reference Identification)	Unique Number identifying this transaction assigned by the sender of the transaction. This number should be unique over all time.	BPT02	BPT01	X(30)
3	System Date	Date that the data was processed by the sender's application system.	BPT03	BPT01	9(8)
4	Report Type Code	**C1**- Cost Data Summary - Indicates this is an interval usage transaction. **KH**-Proposal Support Data-Meter Changeout when Meter Agent Changes. Interval Usage (used to tell the receiver that this is a partial usage statement). The billing agent must combine the KH usage and the MV usage to determine total usage for period.	BPT04	BPT01	X(2)
5	Final Indicator Action Code	Indicates if this is a final reading for that particular ESP (e.g., customer moves, customer switches, etc.).	BPT07 = **F**	BPT01	X(1)
6	Transaction Reference Number (Reference Identification)	Transaction Reference Number echoed from BPT02 of the Original Transaction	BPT09		X(30)
7	Date/Time Qualifier	Specifies type of date/time or both date and time.	DTM01 = **649**		X(3)
8	Document Due (Date)	The last date/time that information will be accepted by the billing party for processing the bill. If 810 is received after this date/time, and the billing party cannot process it, they must notify the non-billing party via Transaction Set 824	DTM02	DTM01= **649**	9(8)
9	Time Code	Code identifying the time (i.e. Time Zone) Condition: Time code must be sent if time is sent.	DTM04	DTM01 =**649**	X(2)
10	Measurement Qualifier	Percent Participation	MEA02 =**NP**		X(2)
11	Percent Participation (Measurement Value)	Used to express the percentage of the total load that is being supplied by the ESP. This is the multiplication of two fields that are on the 814 transaction. AMT*7N (Participating Interest) and AMT*QY (Eligible Load).	MEA03	MEA02 = **NP**	9(1).9999 9
12	Entity Identifier Code	Code identifying an organizational entity. This is the LDC's code.	N101 = **8S**	N1:	X(2)
13	LDC Name	LDC's Company Name	N102	N1: N101= **8S**	X(60)

14	Identification Code Qualifier	LDC's code designating the system/method of code structure used for Identification Code.	N103 = **1** or **9**	N1: N101 = **8S**	X(2)
15	LDC Duns (Identification Code)	LDC's DUNS Number or DUNS+4 Number	N104	N1: N101 = **8S** N103 = **1** or **9**	X(13)
16	Entity Identifier Code	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 **41** - Submitter	N106	N1: N101 = **8S**	X(2)
17	Entity Identifier Code	Code identifying an organizational entity. This is the LDC's code.	N101 = **SJ**	N1:	X(2)
18	ESP Name	ESP's Company Name	N102	N1: N101= **SJ**	X(60)
19	ESP Duns (Identification Code)	ESP's DUNS Number or DUNS+4 Number	N104	N1: N101 = **SJ** N103 = **1** or **9**	X(13)
20	Entity Identifier Code	Identifies whether the ESP is the sender or the receiver of this transaction	N106 = **40** or **41**	N1: N101 = **SJ**	X(2)
21	Entity Identifier Code	Code identifying an organizational entity. This is the LDC's code.	N101 = **8R**	N1:	X(2)
22	Customer Name	Customer Name	N102	N1: N101 = **8R**	X(60)
23	Reference Identification Qualifier	Code qualifying the Reference Identification. ESP-assigned account number for the end use customer.	REF01 = **11**	N1: N101 = **8R**	X(3)
24	ESP Account Number (Reference Identification)	Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier.	N102	N1: N101 = **8R**	X(3)
25	Reference Identification Qualifier	Code qualifying the Reference Identification. LDC -assigned account number for the end use customer.	REF01 = **12**	N1: N101= **8R** Loop REF01 = **11**	X(30)
26	LDC Account Number (Reference Identification)	Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier.	N102	N1: N101 = **8R**	X(3)
27	Reference Identification Qualifier	Code qualifying the Reference Identification. SDID – Service Delivery Identification used only by AEP.	REF01 = **Q5**	N1: N101 = **8R** Loop REF01 = **11**	X(30)
28	Description	A free form description to clarify the related data elements and their content. AEP assigned service delivery identification number.	REF03	N1: N101 = **8R** and Loop REF01 = **Q5**	X(80)
29	Reference Identification Qualifier	Code qualifying the Reference Identification. LDC's previous account number for the end use customer.	REF01 = **45**	N1: N101 = **8R** Loop REF01 = **45**	X(30)
30	Old Account Number (Reference Identification)	Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier. Previous LDC Customer Account Number	REF02	N1: N101 = **8R** Loop REF01 = **45**	X(30)
31	Reference Identification Qualifier	Code qualifying the Reference Identification. Billing Type	REF01 = **BLT**	N1: N101 = **8R**	X(3)

32	Billing Type (Reference Identification)	Indicates if the bill is consolidated by the LDC or ESP, or whether each party will render their own bill. **LDC** - LDC consolidated Billing **ESP** - ESP consolidated Billing **DUAL** - Dual bills	REF02	N1: N101 = **8R** and LIN: REF01= **BLT**	X(4)
33	Reference Identification Qualifier	Code qualifying the Reference Identification. Billing Calculation Method – Production Code	REF01 = **PC**	N1: N101 = **8R**	X(3)
34	Billing Calculation Method (Reference Identification)	Indicates party to calculate the charges on the bill. **LDC** - LDC calculates bill. **DUAL** - Each calculate portion.	REF02	N1: N101 = **8R** and LIN: REF01= **PC**	X(4)
Please refer to General Notes for details about the use of the PTD loop combinations.					
Monthly Billed Summary - Loop Required if the LDC reads the meter					
This information is obtained from the billing system to reflect billing data for this account at the unit of measure level.					
35	Product Transfer Type Code	Monthly Billed Summary	PTD01= **BB**		X(2)
36	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **150**	PTD:	X(3)
37	Service Period Start Date	Start date of the period for which the readings are provided	DTM02	DTM01 = **150**	9(8)
38	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **151**	PTD:	X(3)
39	Service Period End Date	End date of the period for which the readings are provided.	DTM02	DTM01 = **151**	9(8)
40	Quantity Qualifier	Represents that the quantity was billed: **D1** - Billed	QTY01 = D1		X(2)
41	Quantity (Delivered - Billed kWh)	This data is taken from the LDC billing system and reflects the KWH amount on which the customer was billed.	QTY02	QTY01 = D1	-9(10).9(4)
42	Quantity Delivered Unit of Measurement (Unit or Basis for Measurement Code)	Indicates unit of measurement for quantity of consumption delivered during service period. **KH** - Kilowatt Hours	QTY03		X(2)
43	Quantity Qualifier	Represents that the quantity was billed: **D1** - Billed	QTY01 = **D1**		X(2)
44	Quantity (Delivered - Derived or Billed Demand)	Demand for which the customer was actually billed at account level only. Derived or billed demand is different from measured demand because the result is based on contract demand or rate minimum demand.	QTY02	QTY01 = D1	-9(10).9(4)
45	Quantity Delivered Unit of Measurement (Unit or Basis for Measurement Code)	Indicates unit of measurement for quantity of consumption delivered during service period. **K1** - Demand (kW)	QTY03		X(2)
46	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)

47	Quantity (Delivered - Measured or Registered Demand)	Reflects what the meter actual shows (including all factors except Power Factor) and is provided at the account level only.	QTY02	QTY01	- 9(10).9(4)
48	Quantity Delivered Unit of Measurement (Unit or Basis for Measurement Code)	Indicates unit of measurement for quantity of consumption delivered during service period. **K1** - Demand (KW)	QTY03		X(2)
Metered Services Summary - Loop Required when the metering agent is reporting interval data at the meter level.					
49	Product Transfer Type Code	Account Services Summary	PTD01= **SU**		X(2)
50	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **150**	PTD:	X(3)
51	Service Period Start Date	Start date of the period for which the readings are provided	DTM02	DTM01 = **150**	9(8)
52	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **151**	PTD:	X(3)
53	Service Period End Date	End date of the period for which the readings are provided	DTM02	DTM01 = **151**	9(8)
54	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)
55	Quantity (Delivered)	Represents quantity of consumption delivered for service period. Contains the difference in the meter readings multiplied by various factors, excluding Power Factor.	QTY02	QTY01	- 9(10).9(4)
56	Quantity Delivered Unit of Measurement (Unit or Basis for Measurement Code)	Indicates unit of measurement for quantity of consumption delivered during service period. **K3** - Kilovolt Amperes Reactive Hour (kVARh) **KH** - Kilowatt Hours (kWh) **KQ** - Kilowatt Q Hour	QTY03		X(2)
Account Services Summary - Loop required when the metering agent is reporting interval data at the account level.					
57	Product Transfer Type Code	Account Services Detail	PTD01= **BQ**		X(2)
58	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **150**	PTD:	X(3)
59	Service Period Start Date	Start date of the service period or start date of the changed in meter.	DTM02	DTM01 = **150**	9(8)
60	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **151**	PTD:	X(3)
61	Service Period End Date	End date of the service period or end date of the changed out meter.	DTM02	DTM01 = **151**	9(8)
62	Reference Identification Qualifier	Code qualifying the Reference Identification. Meter Type	REF01 = **MT**	PTD:	X(3)
63	Meter Type	Allow the receiver to know the interval length being sent. Type of Meter	REF02	REF01= **MT**	X(30)

64	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)
65	Quantity (Delivered)	Represents quantity of consumption delivered for service period. Contains the difference in the meter readings (or as measured by the meter) multiplied by various factors, excluding Power Factor.	QTY02	QTY01	9(10).9(4)
66	Quantity Delivered Unit of Measurement (Unit or Basis for Measurement code)	Indicates unit of measurement for quantity of consumption delivered during service period. **K3** - Kilovolt Amperes Reactive Hour (kVARh) **KH** - Kilowatt Hours (kWh) **KQ** - Kilowatt Q Hour	QTY03		X(2)
67	Report Period Date/Time	The date/time of the end of the interval.	DTM02 (CCYYMMDD) and DTM03(HHMM	DTM01 = **582**	DTM02= 9(8) and DTM03= 9(4)
68	Time Code	The time code must accurately provide the time zone when the daylight savings time starts and ends if the meter is adjusted for daylight savings time. **ED** = Eastern Daylight Time **ES** = Eastern Standard Time	DTM04		X(2)
Metered Services Summary - Loop required when the metering agent is reporting interval data at the meter level.					
69	Product Transfer Type Code	Metered Services Summary	PTD01= **BO**		X(2)
70	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **150**	PTD:	X(3)
71	Service Period Start Date	Start date of the service period or start date of the changed in meter.	DTM02	DTM01 = **150**	9(8)
72	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **151**	PTD:	X(3)
73	Service Period End Date	End date of the service period or end date of the changed out meter.	DTM02	DTM01 = **151**	9(8)
74	Meter Change Out Date	Used in conjunction with either the Service Period Start Date or the Service Period End Date to indicate when a meter has been replaced. Separate PTD loops must be created for each period and meter.	DTM02	DTM01 = **514**	9(8)
75	Reference Identification Qualifier	Code qualifying the Reference Identification. Meter Number	REF01 = **MG**	PTD:	X(3)
76	Meter Number (Reference Identification)	Serial number of this specific meter (may have multiple meters)	REF02	REF01 = **MG**	X(30)
77	Reference Identification Qualifier	Code qualifying the Reference Identification. Meter Role	REF01 = **JH**	PTD:	X(3)

78	Meter Role (Reference Identification)	Effect of consumption on summarized total. **S** = Subtractive (consumption subtracted from summarized total). **A** = Additive (consumption contributed to summarized total - do nothing). **I** = Ignore (consumption did not contribute to summarized total - do nothing	REF02	REF01 = **JH**	X(30)
79	Reference Identification Qualifier	Code qualifying the Reference Identification. Item Number – Rate Card Number	REF01 = **IX**	PTD:	X(3)
80	Number of Dials / Digits and related decimal positions	Needed to determine usage if meter reading rolls over during the billing period. Number of dials on the meter displayed as the number of dials to the left of the decimal, a decimal point, and number of dials to the right of the decimal.	REF02	REF01 = **IX**	9.9
81	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)
82	Quantity (Delivered)	Represents quantity of consumption delivered for service period. Contains the difference in the meter readings (or as measured by the meter) multiplied by various factors, excluding Power Factor.	QTY02	QTY01	9(10).9(4)
83	Quantity Delivered Unit of Measurement	Indicates unit of measurement for quantity of consumption delivered during service period. Indicates unit of measurement for quantity of consumption delivered during service period. **K3** - Kilovolt Amperes Reactive Hour (kVARh) **KH** - Kilowatt Hours (kWh) **KQ** - Kilowatt Q Hour	QTY03		X(2)
84	Measurement Qualifier	Used to specify physical measurements or counts, including dimensions, tolerances, variances, and weights.	MEA02 = **MU**		X(2)
85	Meter Multiplier	Meter Constant - used to represent how many units are reflected by one dial or digit increment.	MEA03	MEA02 = **MU**	9(9).9(4)
86	Measurement Qualifier	Used to specify physical measurements or counts, including dimensions, tolerances, variances, and weights.	MEA02 = **ZA**		X(2)
87	Power Factor	Relationship between watts and volt - amperes necessary to supply electric load.	MEA03	MEA02 = **ZA**	9(9).9(4)
88	Measurement Qualifier	Used to specify physical measurements or counts, including dimensions, tolerances, variances, and weights.	MEA02 = **CO**		X(2)
89	Transformer Loss Multiplier – Core Loss	Used when a customer owns a transformer and the transformer loss is not measured by the meter. Consumption figures from meter must be adjusted by this factor to reflect true end use consumption.	MEA03	MEA02 = **CO**	9(9).9(4)

Metered Services Detail - Loop Required when the metering agent is reporting interval data at the meter level.					
90	Product Transfer Type Code	Metered Services Detail – Physical Meter Information.	PTD01= **PM**		X(2)
91	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **150**	PTD:	X(3)
92	Service Period Start Date	Start date of the service period or start date of the changed in meter.	DTM02	DTM01 = **150**	9(8)
93	Date/Time Qualifier	Specifies type of date/time or both date or time.	DTM01 = **151**	PTD:	X(3)
94	Service Period End Date	End date of the service period or end date of the changed out meter.	DTM02	DTM01 = **151**	9(8)
95	Meter Change Out Date	Used in conjunction with either the Service Period Start Date or the Service Period End Date to indicate when a meter has been replaced. Separate PTD loops must be created for each period and meter.	DTM02	DTM01 = **514**	9(8))
96	Reference Identification Qualifier	Code qualifying the Reference Identification. Meter Number	REF01 = **MG**	PTD:	X(3)
97	Meter Number (Reference Identification)	Serial number of this specific meter (may have multiple meters).	REF02	REF01 = **MG**	X(30)
98	Reference Identification Qualifier	Code qualifying the Reference Identification. Meter Type	REF01 = **MT**	PTD:	X(3)
99	Meter Type (Reference Identification)	Type of Meter	REF02	REF01= **MT**	X(5)
100	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)
101	Quantity (Delivered)	Represents quantity of consumption delivered for service period. Contains the difference in the meter readings (or as measured by the meter) multiplied by various factors, excluding Power Factor.	QTY02	QTY01	9(10).9(4)
102	Quantity Delivered Unit of Measurement	Indicates unit of measurement for quantity of consumption delivered during service period.	QTY03		X(2)
103	Reference Identification Qualifier	Code qualifying the Reference Identification. Sequence Number	REF01 = **6W**	PTD:	X(3)
104	Sequence Number (Reference Identification)	Identifies channel number when there is more than one channel on a meter measuring the same quantity (e.g., two kWh channels).	REF02	REF01= **6W**	X(5)
105	Quantity Qualifier	Represents whether the quantity is actual or estimated: **KA** = Estimated **87** = Quantity Received - Actual (Co-generation) **9H** = Estimated Duration – (Co-generation) **QD** = Actual	QTY01		X(2)

106	Quantity (Delivered)	Represents quantity of consumption delivered for service period. Contains the difference in the meter readings (or as measured by the meter) multiplied by various factors, excluding Power Factor.	QTY02	QTY01	9(10).9(4)
107	Quantity Delivered Unit of Measurement	Indicates unit of measurement for quantity of consumption delivered during service period. Indicates unit of measurement for quantity of consumption delivered during service period. **K3** - Kilovolt Amperes Reactive Hour (kVARh) KH - Kilowatt Hours (kWh) KQ - Kilowatt Q Hour	QTY03		X(2)
108	Date/Time Qualifier	Specifies of end date/time of the interval.	DTM01= **582**	PTD:	X(3)
109	Report Period Date / Time	The date / time of end of the interval.	DTM02 (CCYYMMDD) and DTM03 (HHMM)	DTM01= **582**	DTM02= 9(8) and DTM03= 9(4)
110	Time Code	The time code must accurately provide the time zone when the daylight savngs time starts and ends if the meter is adjusted for daylight savings time. **ED** = Eastern Daylight Time **ES** = Eastern Standard Time	DTM04		X(2)

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) is 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:

VA Use:	Required.
Example:	ST*867*000000001

Data Element Summary

	Ref. Des.	Data Element	Name	X12 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:

VA Use:	Required.
Examples:	BPT*00*199902010001*19990131*C1****120101 BPT*00*199902010001*19990131*C1***F*120101 BPT*01*199902020001*19990131*C1****120101*1999020100001

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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. **Note:** Do not need to send detail data		
Must Use	**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 must be unique over all time.		
Must Use	**BPT03**	**373**	**Date** Date expressed as CCYYMMDD	**M**	**DT 8/8**
			Transaction Creation Date – the date that the data was processed by the application system.		
Must Use	**BPT04**	**755**	**Report Type Code** Code indicating the title or contents of a document, report or supporting item	**O**	**ID 2/2**
			C1 Cost Data Summary Interval Readings		
			KH Proposal Support Data Meter Reading Changeout when Meter Agent Changes – Interval Usage (used to tell the receiver that this is a partial usage statement). The billing agent must combine the KH usage to determine total usage for period.		
Conditional	**BPT07**	**306**	**Action Code** Code indicating type of action	**O**	**ID ½**
			F Final		

			Condition: Indicates Final usage for specific ESP Code to indicate this is the final usage data being sent for this customer. Either the customer account is final with the LDC or the customer switched to a new ESP.		
Optional	**BPT08**	**337**	**Time** Time expressed in 24 hour clock time Transaction creation time. This is the time that the transaction was created by the sender's application system. Recommended format: HHMMSS	**O**	**TM 4/8**
Conditional	**BPT09**	**127**	**Reference Identification** Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier When BPT01 = 01 (cancel), this element is required and should contain the transaction identification number from BPT02 of the transaction that is being cancelled.	**O**	**AN 1/30**

Segment: **DTM** **Date/Time Reference**
Position: 050
Loop:
Level: Heading
Usage: Optional
Max Use: 10
Purpose: To specify pertinent dates and times
Syntax Notes: **1** At least one of DTM02, DTM03 or DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	Required for LDC Consolidated Bill Ready Billing. In LDC Consolidated Bill Ready, the LDC sends an 867 to the CSP, who calculates their own portion of the bill and sends the 810 to the LDC. Not provided on cancel transaction.
VA Use:	Required for LDC Consolidated Bill Ready Billing, optional for LDC Consolidated Rate Ready Billing and CSP Consolidated Billing. Not used for Dual Billing.
Examples:	DTM*649*19990131

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time	**M ID 3/3**
			649 Document Due The date that the non-billing party must provide the 810 transaction back to the billing party. If the billing party receives a file after the date, and the billing party cannot process it, they must notify the non-billing party via Transaction Set 824.	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD	**X DT 8/8**
Must Use	**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) Recommended format: HHMMSS	**X TM 4/8**
Conditional	**DTM04**	**623**	**Time Code** Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or – and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and – are substituted by P and M in the codes that follow. **Condition:** Time code must be sent if time is sent ED Eastern Daylight ES Eastern Standard ET Eastern Time UT Universal Time Coordinate	**O ID 2/2**

Segment: **MEA** **Measurements**
Position: 075
Loop:
Level: Heading
Usage: Optional
Max Use: 20
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights
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.

VA Use:	Not Used for Open Access (was used in Retail Pilots)
Example:	MEA**NP*. 66667

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**MEA02**	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies	**O ID 1/3**
			NP Percent of Specified Percent Participation indicates the percentage of the total load that is supplied by the ESP. This is the multiplication of two fields that are on the 814 transaction, AMT*7N (Participating Interest) and AMT*QY (Eligible Load).	
Must Use	**MEA03**	**739**	**Measurement Value** The value of the measurement The whole number "1" represents 100 percent. Decimal numbers less than "1" represent percentages from 1 percent to 99 percent.	**X R 1/20**

Segment: **N1** **Name**
Position: 080
Loop: N1
Level: Heading
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes: **1** At least one of N102 or N103 is required.
2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: **1** This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
2 N105 and N106 further define the type of entity in N101.

VA Use:	Required. Three N1 segments will be used in Virginia, where N101 = 8S, SJ, and 8R. The (end-use) Customer Account Number for the ESP and the LDC, the Service Delivery Identification, and the LDC's previous Customer Account Number, if applicable, are to be placed in REF segments following the N101=8R segment, with REF01 = 11, 12, and 45, respectively.
Example:	N1*8S*LDC COMPANY*1*007909411**40

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**N101**	**98**	**Entity Identifier Code** Code identifying an organizational entity, a physical location, property or an individual 8S Consumer Service Provider (CSP) LDC	**M ID 2/3**
Must Use	**N102**	**93**	**Name** Free-form name LDC Company Name	**X AN 1/60**
Must Use	**N103**	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67) 1 D-U-N-S Number, Dun & Bradstreet 9 D-U-N-S+4, D-U-N-S Number with Four Character Suffix	**X ID 1/2**
Must Use	**N104**	**67**	**Identification Code** Code identifying a party or other code LDC D-U-N-S Number or D-U-N-S+4 Number	**X AN 2/80**
Optional	**N106**	**98**	**Entity Identifier Code** 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	**O ID 2/3**

Segment: **N1** **Name**
Position: 080
Loop: N1
Level: Heading
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes: **1** At least one of N102 or N103 is required.
2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: **1** This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
2 N105 and N106 further define the type of entity in N101.

VA Use:	Required. Three N1 segments will be used in Virginia, where N101 = 8S, , SJ, and 8R. The (end-use) Customer Account Number for the and the LDC, the Service Delivery Identification, and the LDC's previous Customer Account Number, if applicable, are to be placed in REF segments following the N101=8R segment, with REF01 = 11, 12, and 45, respectively.
Example:	N1*SJ*ESP COMPANY*9*007909422ESP**40

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**N101**	**98**	**Entity Identifier Code** Code identifying an organizational entity, a physical location, property or an individual SJ Service Provider ESP	**M ID 2/3**
Must Use	**N102**	**93**	**Name** Free-form name ESP Company Name	**X AN 1/60**
Must Use	**N103**	**66**	**Identification Code Qualifier** Code designating the system/method of code structure used for Identification Code (67) 1 D-U-N-S Number, Dun & Bradstreet 9 D-U-N-S+4, D-U-N-S Number with Four Character Suffix	**X ID 1/2**
Must Use	**N104**	**67**	**Identification Code** Code identifying a party or other code ESP D-U-N-S Number or D-U-N-S + 4 Number	**X AN 2/20**
Optional	**N106**	**98**	**Entity Identifier Code** 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	**O ID 2/3**

Segment: **N1** **Name**
Position: 080
Loop: N1
Level: Heading
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes: **1** At least one of N102 or N103 is required.
2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: **1** This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
2 N105 and N106 further define the type of entity in N101.

Notes:	Please note that while you may place your N1 segments in any order, the REF segments that follow must be contained within the N1*8R loop.
VA Use:	Required Three N1 segments will be used in Virginia, where N101 = 8S, , SJand 8R. The (end-use) Customer Account Number for the ESP and the LDC, the Service Delivery Identification, and the LDC's previous Customer Account Number, if applicable, are to be placed in REF segments following the N101=8R segment, with REF01 = 11, 12, and 45, respectively.
Example:	N1*8R*CUSTOMER NAME

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**N101**	**98**	**Entity Identifier Code** Code identifying an organizational entity, a physical location, property or an individual	**M ID 2/3**
			8R Consumer Service Provider (CSP) Customer End Use Customer	
Must Use	**N102**	**93**	**Name** Free-form name	**X AN 1/60**
			Customer Name	

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required if I was previously provided to the LDC
Example:	REF*11*1394959

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification 11 Account Number ESP-assigned account number for the end use customer.	**M ID 2/3**
Must Use	**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**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required Not used by AEP
Example:	REF*12*1239485790

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			12 Billing Account LDC-assigned account number for the end use customer.	
Must Use	**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**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:
Notes: SDID numbers will only contain uppercase letters (A to Z) and Digits (0 - 9). Note that punctuation (spaces, dashes, etc.) must be excluded, and leading and trailing zeros that are part of the SDID number must be present.
VA Use: Required if customer is in AEP service territory
Example: REF*Q5**9876541324960WHW

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes		
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification Q5 Property Control Number AEP assigned Service Delivery *I*dentification Number		**M**	**ID 2/3**
Must Use	**REF03**	**352**	**Reference Identification** A free form description to clarify the related data elements and their content AEP assigned Service Delivery *I*dentification Number		**X**	**AN 1/80**

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. **2** If either C04003 or C04004 is present, then the other is required. **3** If either C04005 or C04006 is present, then the other is required.
Semantic Notes:	**1** REF04 contains data relating to the value cited in REF02.
Comments:	
VA Use:	Optional: Recommended if account number has changed within the last 60 days. **Note:** Will use old LDC Account Number (as optional) for Utilities that have built in intelligence in their Account Numbers.
Example:	REF*45*939581900

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			45 Old Account Number LDC's previous account number for the end use customer.	
Must Use	**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**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required
Example:	REF*BLT*LDC

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			BLT Billing Type Identifies whether the bill is consolidated by the LDC or ESP, or whether each party will render their own bill.	
Must Use	**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**
			LDC The LDC bills the customer ESP The ESP bills the customer DUAL Each party bills the customer for their portion	

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required
Example:	REF*PC*LDC

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			PC Production Code Identifies the party that is to calculate the charges on the bill.	
Must Use	**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**
			LDC The LDC calculates the charges on the bill DUAL Each party calculates its portion of the bill.	

IF …			**THEN…**	
Bills the Customer	**Calculates**		**Billing Party**	**Calc. Party**
	LDC Portion	**ESP Portion**	**REF*BLT**	**REF*PC**
LDC	LDC	LDC	LDC	LDC
LDC	LDC	ESP	LDC	DUAL
ESP	LDC	ESP	ESP	DUAL
DUAL	LDC	ESP	DUAL	DUAL

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:	PTD Loops may be sent in any order.
VA Use:	Optional.
Example:	PTD*BB

Data Element Summary

	Ref. Des.	Data Element	Name	X12 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.	

Note:

Refer to the "PTD Loops Definition" section earlier in this document for an explanation of this specific PTD Loop.

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This reflects the start of the range for the billing period.
VA Use:	Required
Example:	DTM*150*19990101

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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	
				Previous Meter Read Date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This reflects the end of the range for the billing period.
VA Use:	Required
Example:	DTM*151*19990131

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			151	Service Period End	
				Service Meter Read Data	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	Billed kWh
VA Use:	Required
Example:	QTY*D1*22348*KH

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			D1	Billed	
				Used when Quantity in QTY02 is a "Billed" quantity.	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			KH	Kilowatt Hour (kWh)	
				Billed Kilowatt Hours as shown on the customer's bill. May or may not be the same as measured kilowatt-hours. Metered and Unmetered services	

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	Billed Demand
VA Use:	Required if account measures Demand (kW). This must be sent even if Billed (derived) demand is equal to measured demand.
Example:	QTY*D1*14*K1

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			D1	Billed	
				Used when Quantity in QTY02 is a "Billed" quantity.	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K1	Kilowatt Demand (kW)	
				Represents potential power load measured at predetermined intervals	

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	Measured Demand
VA Use:	Required if account measures Demand (kW)
Example:	QTY*QD*14*K1

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			KA	Estimated	
				Quantity shown is an estimated quantity	
			87	Quantity Received	
				Quantity Received from customer in a Co generation environment	
			9H	Estimated Duration	
				The quantity received is an estimated quantity in a Co generation environment	
			QD	Quantity Delivered	
				Used when Quantity in QTY02 is Actual	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K1	Kilowatt Demand	
				Represents potential power load measured at predetermined intervals	

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:	PTD Loops may be sent in any order
VA Use:	Optional if this is a metered account that measures kWh, kQh, or kVARh. 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.
Example:	PTD*SU

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**PTD01**	**521**	**Product Transfer Type Code** Code identifying the type of product transfer	**M ID 2/2**
			SU Summary Account Services Summary Total for the service for the account.	

Note:

Refer to the "PTD Loops Definition" section earlier in this document for an explanation of this specific PTD Loop.

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This reflects the start date of the range for the billing period
VA Use:	Required if account has metered services
Example:	DTM*150*19990101

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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		
				Previous Meter Read Date		
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X**	**DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This date reflects the end of the range for this billing period
VA Use:	Required if account had metered services
Example:	DTM*151*19990131

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			151	Service Period End	
				Current Meter Read Data	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	There will be one QTY loop for each of the QTY03 Units of Measurement listed below that are measured on this account when interval data is being provided at the Account level.
VA Use:	Required
Example:	QTY*QD*22348*KH

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			KA	Estimated	
				Quantity shown is an estimated quantity	
			QD	Quantity Delivered	
				Used when Quantity in QTY02 is Actual	
			87	Quantity Received	
				Quantity Received from customer in a Co-generation environment	
			9H	Estimated Duration	
				The quantity received shown is an estimated quantity in a Co-generation environment	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K3	Kilovolt Amperes Reactive Hour (kVARh)	
				Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters	
			KH	Kilowatt Hour (kWh)	
			KQ	Kilopascal	
				Represents pressure - Kilowatt Q Hour (kQh)	

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:	This loop is always used in conjunction with the Account Services Summary loop (PTD01=SU). It is used when the metering agent is reporting interval data at the account level. PTD loops may be sent in any order.
VA Use:	Optional
Example:	PTD*BQ

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**PTD01**	**521**	**Product Transfer Type Code** Code identifying the type of product transfer	**M ID 2/2**
			BQ Other Account Services Detail Account Service Detail Subtotals by type of meter (e.g. demand vs. KwH.	

Note:

Refer to the "PTD Loops-Definition" section earlier in this document for an explanation of this specific PTD Loop.

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This date reflects the start of the range for this meter for this billing period.
VA Use:	Required
Example:	DTM*150*19990101

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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 Previous Meter Read Date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	This date reflects the end of the range for this meter for this billing period.
VA Use:	Required
Example:	DTM*151*19990131

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			151	Service Period End	
				Current Meter Read Data	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

Notes:	The use of this segment allows the receiver to know the interval length being sent.
VA Use:	Required
Example:	REF*MT*KH015

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification MT Meter Type	**M ID 2/3**
Must Use	**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**

When REF01 is MT, the meter type is expressed as a five-character field. The first two characters are the type of consumption; the last three characters are the metering interval. Valid values can be a combination of the following values:

Type of Consumption

K1	Kilowatt Demand
K2	Kilovolt Amperes Reactive Demand
K3	Kilovolt Amperes Reactive Hour
K4	Kilovolt Amperes
K5	Kilovolt Amperes Reactive
KH	Kilowatt Hour
KQ	Kilowatt Q Hour
T9	Thousand Kilowatt Hours

Metering Interval

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	Kilowatt Hours Per Month
K1015	Kilowatt Demand per 15 minute interval

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	There will be one QTY loop for each of the QTY03 Units of Measurement listed below that are measured on this account when interval data is being provided at the Account level.
VA Use:	Required
Example:	QTY*QD*22348*KH

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			KA	Estimated	
				Used when Quantity in QTY02 is Estimated Quantity shown is an estimated quantity.	
			QD	Quantity Delivered	
				Used when Quantity in QTY02 is Actual	
			87	Quantity Received	
				Quantity Received from customer in a Co-generation environment	
			9H	Estimated Duration	
				The quantity received shown is an estimated quantity in a Co-generation environment	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K3	Kilovolt Amperes Reactive Hour (kVARh)	
				Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters	
			KH	Kilowatt Hour (kWh)	

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	End date and time of the period for which the quantity is provided. Time will include zone. Each interval must be explicitly labeled with the date and time.
VA Use:	Required
Example:	DTM*582*19990115*1500

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time	**M ID 3/3**
			582 Report Period	
			The date/time of the end of the interval.	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD	**X DT 8/8**
Must Use	**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**
			HHMM format	
Optional	**DTM04**	**623**	**Time Code** Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or – and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and – are substituted by P and M in the codes that follow	**O ID 2/2**
			The time code must accurately provide the time zone when the daylight savings time starts and ends if the meter is adjusted for daylight savings time. If meter is not adjusted for daylight savings time, the time code will always reflect Eastern Daylight Time which will be interpreted as prevailing time.	
			ED Eastern Daylight Time	
			ES Eastern Standard Time	

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:	This loop is always used in conjunction with the Metered Services Detail loop (PTD01=PM). It is used when the metering agent is reporting interval data at the meter level. PTD loops may be sent in any order.
VA Use:	Optional – Cancellation Mandatory for kWh and kVARh
Example:	PTD*BO

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**PTD01**	**521**	**Product Transfer Type Code** Code identifying the type of product transfer	**M ID 2/2**
			BO Designated Items	
			Meter Services Summary Total for metered 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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

VA:	Required, unless a "DTM*514" is substituted for this code.
Example:	DTM*150*19990101

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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	
				Previous Meter Read Date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

VA Use:	Required, unless a "DTM*514" is substituted for this code.
Example:	DTM*151*19990131

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			151	Service Period End	
				Current Meter Read Data	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	Used in conjunction with either the Service Period Start Date or the Service Period End Date to indicate when a meter has been replaced. Separate PTD loops must be created for each period and meter.
VA Use:	Required when a meter is changed and the meter agent does not change.
Example:	Date Range in the first PTD is shown as: DTM*150*19990201 DTM*514*19990214 Date Range in the second PTD is shown as: DTM*514*19990214 DTM*151*19990228

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			514	Transferred	
				Exchanged meter read date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required if this is a metered account and the meter is on the account at the end of the period. For some utilities, they may not be able to provide the actual meter number for a meter that has been changed out during the month. In that case, the REF*MG will not be sent.
Example:	REF*MG*2222277S

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification MG Meter Number	**M ID 2/3**
Must Use	**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**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

Notes:	Meter Role – effect of consumption on summarized total
VA Use:	Required if consumption is provided at a meter level
Example:	REF*JH*A

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification		**M ID 2/3**
			JH	Tag Meter Role	
Must Use	**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**
			S	Subtractive - this consumption needs to be subtracted from the summarized total	
			A	Additive - this consumption contributed to the summarized total (do nothing).	
			I	Ignore - this consumption did not contribute to the summarized total (do nothing).	

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required for meters with dials
Example:	REF*IX*6.0 REF*IX*5.1 REF*IX*4.2

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification IX Item Number Rate Card Number is the Number of Dials on the Meter displayed as the number of dials to the left of the decimal, a decimal point, and the number of dials to the right of the decimal.	**M ID 2/3**
Must Use	**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**
Optional	**REF03**	**352**	**Description** A free-form description to clarify the related data elements and their content Optional use: See Meter Type (REF*MT) on 814 Enrollment for valid codes.	**X AN 1/80**

# Dials	Positions to left of decimal	Positions to right of decimal	X12 Example
6	6	0	REF*IX*6.0
6	5	1	REF*IX*5.1
6	4	2	REF*IX*4.2

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	There will be one QTY loop for each of the QTY03 Units of Measurement listed below for each meter that are measured on this account when interval data is being provided at the meter level.
VA Use:	Required
Example:	QTY*QD*22348*KH

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			KA	Estimated	
				Quantity shown is an estimated quantity	
			QD	Quantity Delivered	
				Used when Quantity in QTY02 is Actual	
			87	Quantity Received	
				Quantity received from a customer in a Co-generation environment.	
			9H	Estimated Duration	
				Quantity received is an estimated quantity in a Co-generation environment	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K3	Kilovolt Amperes Reactive Hour (kVARh)	
				Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters	
			KH	Kilowatt Hour (kWh)	
			KQ	Kilopascal	
				Represents pressure Kilowatt Q Hour (kQh)	

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
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.

VA Use: Required for a meter that has a meter multiplier other than 1.
Example: MEA**MU*2

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**MEA02**	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies MU Multiplier	**O ID 1/3**
Must Use	**MEA03**	**739**	**Measurement Value** The value of the measurement When the multiplier equals 1, do not send this MEA segment.	**X R 1/20**

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
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.

VA Use: Required if it is available to the meter agent and it is used in the calculation of the customer's bill. This is only relevant and should only ever be sent with Demand (K1). If not present with a demand quantity, it should be assumed to be 1.

Example: MEA**ZA*.95

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**MEA02**	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies	**O ID 1/3**
			ZA Power Factor Relationship between watts and volt - amperes necessary to supply electric load	
Must Use	**MEA03**	**739**	**Measurement Value** The value of the measurement	**X R 1/20**
			When no Power Factor is present or the value is 1, do not send this MEA segment.	

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
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.

VA Use: Required when Transformer Loss is not calculated by the meter.
Example: MEA**CO*1.02

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**MEA02**	**738**	**Measurement Qualifier** Code identifying a specific product or process characteristic to which a measurement applies	**O ID 1/3**
			CO Core Loss Transformer Loss Multiplier - When a customer owns a transformer and the transformer loss is not measured by the meter.	
Must Use	**MEA03**	**739**	**Measurement Value** The value of the measurement	**X R 1/20**

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:	This loop is always used in conjunction with the Metered Services Summary loop (PTD01=BO). It is used when the metering agent is reporting interval data at the meter level. PTD loops may be sent in any order.
VA Use:	Required – Cancellation Do Not Send
Example:	PTD*PM

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**PTD01**	**521**	**Product Transfer Type Code** Code identifying the type of product transfer	**M ID 2/2**
			PM Physical Meter Information Provides measured service detail, which includes information from a meter, meter totalizer or recorder.	

Note:

Refer to the "PTD Loops Definition" section earlier in this document for an explanation of this specific PTD Loop.

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

VA Use:	Required, unless a "DTM*514" is substituted for this code.
Example:	DTM*150*1999010134

Data Element Summary

	Ref. Des.	Data Element	Name		X12 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 Previous Meter Read Date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

VA Use:	Required, unless a "DTM*514" is substituted for this code.
Example:	DTM*151*19990131

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			151	Service Period End	
				Current Meter Read Date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	Used in conjunction with either the Service Period Start Date or the Service Period End Date to indicate when a meter has been replaced. Separate PTD loops must be created for each period and meter.
VA Use:	Required when a meter is changed and the meter agent does not change.
Example:	Date Range in the first PTD is shown as: DTM*150*19990201 DTM*514*19990214 Date Range in the second PTD is shown as: DTM*514*19990214 DTM*151*19990228

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time		**M ID 3/3**
			514	Transferred Exchanged meter read date	
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD		**X DT 8/8**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

VA Use:	Required if this is a metered account and the meter is on the account at the end of the period. For some utilities, they may not be able to provide the actual meter number for a meter that has been changed out during the month. In that case, the REF*MG will not be sent.
Example:	REF*MG*2222277S

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification MG Meter Number	**M ID 2/3**
Must Use	**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**

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

Notes:	The use of this segment allows the receiver to know the interval length being sent.
VA Use:	Required
Example:	REF*MT*KH015

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			MT Meter Ticket	
			Meter Type. Billing Data Types and Interval Frequencies	
Must Use	**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**
			When REF01 is MT, the meter type is expressed as a five-character field. The first two characters are the type of consumption; the last three characters are the metering interval. Valid values can be a combination of the following values:	

Type of Consumption

K1	Kilowatt Demand
K2	Kilovolt Amperes Reactive Demand
K3	Kilovolt Amperes Reactive Hour
K4	Kilovolt Amperes
K5	Kilovolt Amperes Reactive
KH	Kilowatt Hour
KQ	Kilowatt Q Hour
T9	Thousand Kilowatt Hours

Metering Interval

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	Kilowatt Hours Per Month
K1015	Kilowatt Demand per 15 minute interval

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.
2 If either C04003 or C04004 is present, then the other is required.
3 If either C04005 or C04006 is present, then the other is required.
Semantic Notes: **1** REF04 contains data relating to the value cited in REF02.
Comments:

Notes:	The use of this segment allows the receiver to know the interval channel.
VA Use:	Optional
Example:	REF*6W*KH001

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**REF01**	**128**	**Reference Identification Qualifier** Code qualifying the Reference Identification	**M ID 2/3**
			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).	
Must Use	**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**
			When REF01 is 6W, the Sequence Number is expressed as a five-character field. The first two characters are the type of consumption, the last three characters indicates the specific channel.	

Segment: **QTY** **Quantity**
Position: 110
Loop: QTY
Level: Detail
Usage: Optional
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:	There will be one QTY loop for **each** of the QTY03 Units of Measurement listed below for each meter that is measured on this account. If there are 2 meters on the account, and one measures kWh and kW, and the other measures just kWh, there will be 3 PTD01=PM loops. If a meter measures total usage, as well as on peak and off peak, there will be three QTY loops sent within one PTD01=PM loop. The MEA segment that follows each QTY will specify which time of use the QTY applies to.
VA Use:	Required
Example:	QTY*QD*87*KH

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	**QTY01**	**673**	**Quantity Qualifier** Code specifying the type of quantity		**M ID 2/2**
			KA	Estimated	
				Quantity shown is estimated quantity	
			QD	Quantity Delivered	
				Used when Quantity in QTY02 is Actual	
			87	Quantity Received	
				Quantity Received from customer in a Co-generation environment	
			9H	Estimated Duration	
				The quantity received is an estimated quantity in a Co-generation environment	
Must Use	**QTY02**	**380**	**Quantity** Numeric value of quantity		**X R 1/15**
Must Use	**QTY03**	**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**
			K1	Kilowatt Demand (kW)	
				Represents potential power load measured at predetermined intervals	

K2	Kilovolt Amperes Reactive Demand (kVAR)
	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 (kVARh)
	Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters
K4	Kilovolt Amperes (kVA)
	Measure of electrical power
KH	Kilowatt Hour (kWh)
KQ	Kilopascal
	Represents pressure - Kilowatt Q Hour (kQh)

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 DTM05 is required.
2 If DTM04 is present, then DTM03 is required.
3 If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:
Comments:

Notes:	End date and time of the period for which the quantity is provided. Time will include zone. Each interval must be explicitly labeled with the date and time.
VA Use:	Required
Example:	DTM*582*19990115*1500

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier** Code specifying type of date or time, or both date and time 582 Report Period The date/time of the end of the interval.	**M ID 3/3**
Must Use	**DTM02**	**373**	**Date** Date expressed as CCYYMMDD	**X DT 8/8**
Must Use	**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) HHMM format	**X TM 4/8**
Optional	**DTM04**	**623**	**Time Code** Code identifying the time. In accordance with International Standards Organization standard 8601, time can be specified by a + or – and an indication in hours in relation to Universal Time Coordinate (UTC) time; since + is a restricted character, + and – are substituted by P and M in the codes that follow The time code must accurately provide the time zone when the daylight savings time starts and ends if the meter is adjusted for daylight savings time. If meter is not adjusted for daylight savings time, the time code will always reflect Eastern Daylight Time which will be interpreted as prevailing time. ED Eastern Daylight Time ES Eastern Standard Time	**O ID 2/2**

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.
PA Use: Required
Example: SE*55*000000001

Data Element Summary

	Ref. Des.	Data Element	Name	X12 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**

Example 01

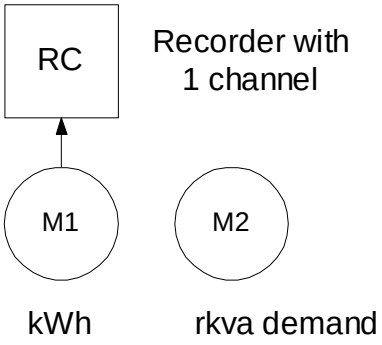
Following example is for an account with one meter and recorder under glass. Meter measures kWh and kQh. Recorder under glass saves kWh on channel 1 and kQh on channel 2. Meter multiplier is 1. There is no Power factor and no transformer loss. There is interval data provided by the recorder under glass.

ST*867*0001	Transaction Set Header
BPT*00*00010613160622993500*20000106*C1****170000	Beginning Segment
DTM*649*20000109*180000*ET	Document Due Date & Time
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*007909411	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*13949529465	ESP Account number
REF*12*1234567890	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges
PTD*PM	Metered Services Detail loop
DTM*150*19991129*0030*ET	Service Period Start Date & Time
DTM*151*19991230*1230*ET	Service Period End Date & Time

REF*MG*78404985	Meter Number (serial number of meter/recorder)
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*18.81*KH	kWh consumption for interval beginning on 19991129 with interval end time of 0030.
DTM*582*19991129*0030*ET	Date of interval (19991129 with interval end time of 0030). Ending Interval Time in HHMM.
QTY*QD*18.99*KH	kWh consumption for interval beginning on 19991129 with interval end time of 0100.
DTM*582*19991129*0100*ET	Date of interval (19991129 with interval end time of 0100). Ending Interval Time in HHMM.
QTY*QD*18.45*KH	kWh consumption for interval beginning on 19991129 with interval end time of 0130
DTM*582*19991129*0130*ET	Date of interval (19991129 with interval end time of 0130). Ending Interval Time in HHMM.
QTY*QD*19.08	kWh consumption for interval beginning on 19991129 with interval end time of 0200
DTM*582*19991129*0200*ET	Date of interval (19991129 with interval end time of 0200). Ending Interval Time in HHMM.
QTY*QD*19.35	kWh consumption for interval beginning on 19991129 with interval end time of 0230
DTM*582*19991129*0230*ET	Date of interval (19991129 with interval end time of 0230) Ending Interval Time in HHMM.
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*185.31	kWh consumption for interval ending on 19991230 with interval end time of 1130
DTM*582*19991230*1130*ET	Date of interval (19991230 with interval end time of 1130). Ending Interval Time in HHMM.
QTY*QD*293.49	kWh consumption for interval ending on 19991230 with interval end time of 1200
DTM*582*19991230*1200*ET	Date of interval (19991230 with interval end time of 1200). Ending Interval Time in HHMM.
QTY*QD*69.66	kWh consumption for interval ending on 19991230 with interval end time of 1230
DTM*582*19991230*1230*ET	Date of interval (19991230 with interval end time of 1230). Ending Interval Time in HHMM.
PTD BO	
DTM*150*19991129*0030*ET	Service Period Start Date & Time
DTM*151*19991230*1230*ET	Service Period End Date & Time
REF*MG*78404985	Meter Number (serial number of meter/recorder)
REF*JH*I	Meter Role
QTY*QD*176400*KH	Total kWh consumption (sum of all intervals)
PTD*PM	Metered Services Detail loop
DTM*150*19991129*0030*ET	Service Period Start Date & Time
DTM*151*19991230*1230*ET	Service Period End Date & Time

REF*MG*78404985	Meter Number (serial number of meter/recorder)
REF*MT*KQ030	Meter Type (kQh consumption type recorded in 30 minute intervals)
QTY*QD*.88*KQ	kQh consumption for interval beginning on 19991129 with interval end time of 0030.
DTM*582*19991129*0030*ET	Date of interval (19991129 with interval end time of 0030). Ending Interval Time in HHMM.
QTY*QD*.78*KQ	kQh consumption for interval beginning on 19991129 with interval end time of 0100.
DTM*582*19991129*0100*ET	Date of interval (19991129 with interval end time of 0100). Ending Interval Time in HHMM.
QTY*QD*.88*KQ	kQh consumption for interval beginning on 19991129 with interval end time of 0130
DTM*582*19991129*0130*ET	Date of interval (19991129 with interval end time of 0130). Ending Interval Time in HHMM.
QTY*QD*.83*KQ	kQh consumption for interval beginning on 19991129 with interval end time of 0200
DTM*582*19991129*0200*ET	Date of interval (19991129 with interval end time of 0200). Ending Interval Time in HHMM.
QTY*QD*.78*KQ	kQh consumption for interval beginning on 19991129 with interval end time of 0230
DTM*582*19991129*0230*ET	Date of interval (19991129 with interval end time of 0230). Ending Interval Time in HHMM.
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*74.05*KQ	kQh consumption for interval ending on 19991230 with interval end time of 1130
DTM*582*19991230*1130*ET	Date of interval (19991230 with interval end time of 1130). Ending Interval Time in HHMM.
QTY*QD*74.26*KQ	kQh consumption for interval ending on 19991230 with interval end time of 1200
DTM*582*19991230*1200*ET	Date of interval (19991230 with interval end time of 1200). Ending Interval Time in HHMM.
QTY*QD*22.45*KQ	kQh consumption for interval ending on 19991230 with interval end time of 1230
DTM*582*19991230*1230*ET	Date of interval (19991230 with interval end time of 1230). Ending Interval Time in HHMM.
PTD BO	
DTM*150*19991129*0030*ET	Service Period Start Date & Time
DTM*151*19991230*1230*ET	Service Period End Date & Time
REF*MG*78404985	Meter Number (serial number of meter/recorder)
REF*JH*I	Meter Role
QTY*QD*146700*KQ	Total kQh consumption (sum of all intervals)
SE*0000040	Number of segments passed

Example 02
Following example is for an account with one physical recorder (RC), one drive meter (MTR#1) measuring kWh on channel 1 in the recorder, and one rkva demand meter (MTR#2). There is no Power factor and no transformer loss. **This example only includes interval data.**

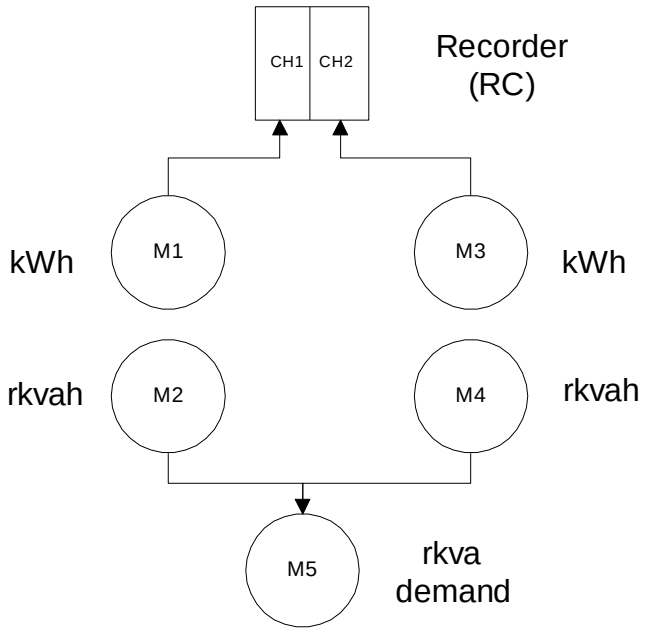


ST*867*0001	Transaction Set Header
BPT*00*991224021131606229935*19991224*C1	Beginning Segment
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*33378555441	ESP Account number
REF*12*99965214754	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges
PTD*PM	**Metered Services Detail loop – for kWh intervals for RC**
DTM*150*19991118*1730*ET	Service Period Start Date, Start Time
DTM*151*19991223*0800*ET	Service Period End Date, Stop Time

REF*MG*RC	Meter Number (serial number of meter/recorder)
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*244.30*KH	Quantity delivered – kWh
DTM*582*19991118*1730**	End of interval, date, and time
QTY*QD*252.59*KH	Quantity delivered – kWh
DTM*582*19991118*1800**	End of interval, date, and time
QTY*QD*250.91*KH*	Quantity delivered – kWh
DTM*582*19991118*1830**	End of interval, date, and time
QTY*QD*248.70*KH	Quantity delivered – kWh
DTM*582*19991118*1900**	End of interval, date, and time
QTY*QD*248.44*KH	Quantity delivered – kWh
DTM*582*19991118*1930**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*45.88*KH	Quantity delivered – kWh
DTM*582*19991223*0700**	End of interval, date, and time
QTY*QD*63.76*KH	Quantity delivered – kWh
DTM*582*19991223*0730**	End of interval, date, and time
QTY*QD*82.43*KH	Quantity delivered – kWh
DTM*582*19991223*0800**	End of interval, date, and time
PTD BO	
DTM*150*19991118*1730*ET*	Service Period Start Date, Start Time
DTM*151*19991223*0800*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*250228.18*KH	Total kWh consumption (sum of all intervals)
SE*0480*0001	Transaction Set Trailer, number of segments, transaction control number

Example 03

Following example is for an account with one recorder (RC), two drive meters measuring kWh (MTR#1 & MTR#3) recorded on channel 1 and 2 of the recorder. Additional meters at location include two rkvah meters (MTR#2 & MTR#4) driving rkva demand pulse accumulator (MTR#5). The two rkvah meters (MTR#2 & MTR#4) are not read in the field. There is no Power factor and no transformer loss. **This example only contains interval data.**

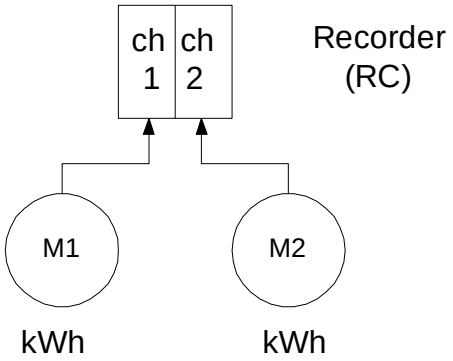


ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000110*C1	Beginning Segment
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*569875145	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*11548755542	ESP Account number
REF*12*14569862147	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	**Metered Services Detail loop – for intervals**
DTM*150*19991207*1000*ET*	Service Period Start Date, Start Time
DTM*151*20000110*0930*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*55.98*KH	Quantity delivered – kWh
DTM*582*19991207*1000**	End of interval, date, and time
QTY*QD*54.45*KH	Quantity delivered – kWh
DTM*582*19991207*1030**	End of interval, date, and time
QTY*QD*53.01*KH*	Quantity delivered – kWh
DTM*582*19991207*1100**	End of interval, date, and time
QTY*QD*48.78*KH	Quantity delivered – kWh
DTM*582*19991207*1130**	End of interval, date, and time
QTY*QD*46.98	Quantity delivered – kWh
DTM*582*19991207*1200**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*45.00	Quantity delivered – kWh
DTM*582*20000110*0830**	End of interval, date, and time
QTY*QD*40.05	Quantity delivered – kWh
DTM*582*20000110*0900**	End of interval, date, and time
QTY*QD*38.25	Quantity delivered – kWh
DTM*582*20000110*0930**	End of interval, date, and time
PTD BO	
DTM*150*19991207*1000*ET*	Service Period Start Date, Start Time
DTM*151*20000110*0930*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*468120*KH	Total kWh consumption (sum of all intervals)
SE*0056*0212	Transaction Set Trailer, number of segments, transaction control number

Example 04

Following example is for an account with one physical recorder (RC) and two drive meters MTR#1 and MTR#2 measuring kWh on channel 1 and channel 2 in the recorder. There is no Power factor and no transformer loss. **This example only includes interval data.**



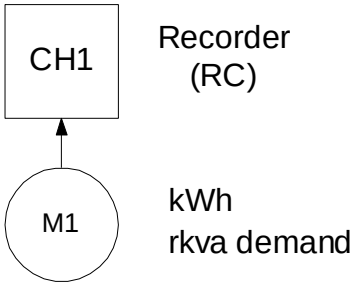
ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000112*C1	Beginning Segment
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*44555856581	ESP Account number
REF*12*78965452555 or	LDC Account number or
REF*Q5**76543217860SFJ	AEP Service delivery ID number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#1**
DTM*150*19991213*0930*ET	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*0930**	End of interval, date, and time
QTY*QD*6.91*KH	Quantity delivered – kWh
DTM*582*19991213*1000**	End of interval, date, and time
QTY*QD*5.88*KH*	Quantity delivered – kWh
DTM*582*19991213*1030**	End of interval, date, and time
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*5.26*KH	Quantity delivered – kWh
DTM*582*20000112*0700*	End of interval, date, and time
QTY*QD*5.64*KH	Quantity delivered – kWh
DTM*582*20000112*0730*	End of interval, date, and time
QTY*QD*5.64*KH	Quantity delivered – kWh
DTM*582*20000112*0800*	End of interval, date, and time
PTD BO	
DTM*150*19991213*0930*ET	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number
REF*JH*I**	Meter Role
QTY*QD*28092.672*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#2**
DTM*150*19991213*0930*ET	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*12.96*KH	Quantity delivered – kWh
DTM*582*19991213*0930**	End of interval, date, and time
QTY*QD*12.48*KH	Quantity delivered – kWh
DTM*582*19991213*1000**	End of interval, date, and time
QTY*QD*11.28*KH*	Quantity delivered – kWh
DTM*582*19991213*1030**	End of interval, date, and time
QTY*QD*12.24*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*12.48*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*13.68*KH	Quantity delivered – kWh
DTM*582*20000112*0700**	End of interval, date, and time
QTY*QD*12.96*KH	Quantity delivered – kWh
DTM*582*20000112*0730**	End of interval, date, and time
QTY*QD*12.00*KH	Quantity delivered – kWh
DTM*582*20000112*0800**	End of interval, date, and time
PTD BO	
DTM*150*19991213*0930*ET*	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number
REF*JH*I**	Meter Role
QTY*QD*23967.36*KH	Total kWh consumption (sum of all intervals)
SE*0890*0002	Transaction Set Trailer, number of segments, transaction control number

Example 05

Following example is for an account with one physical recorder (RC), one drive meter (MTR#1) measuring kWh on channel 1 in the recorder and rkva demand. There is no Power factor and no transformer loss. **This example only includes interval data.**

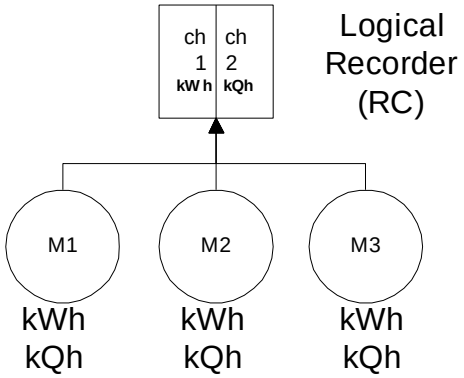


ST*867*0001	Transaction Set Header
BPT*00*00020419595006213101*20000204*C1	Beginning Segment
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*11559863517	ESP Account number
REF*12*77885542156 or	LDC Account number or
REF*Q5**98765432156WHL	AEP Service delivery ID number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	**Metered Services Detail loop – for kWh intervals for RC**
DTM*150*20000104*1500*ET*	Service Period Start Date and time
DTM*151*20000204*1600*ET*	Service Period End Date and time
REF*MG*RC	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*43.92*KH	Quantity delivered – kWh
DTM*582*20000104*1500**	End of interval, date, and time
QTY*QD*46.80*KH	Quantity delivered – kWh
DTM*582*20000104*1530**	End of interval, date, and time
QTY*QD*47.52*KH*	Quantity delivered – kWh
DTM*582*20000104*1600**	End of interval, date, and time
QTY*QD*46.80*KH	Quantity delivered – kWh
DTM*582*20000104*1630**	End of interval, date, and time
QTY*QD*48.96*KH	Quantity delivered – kWh
DTM*582*20000104*1700**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*56.88*KH	Quantity delivered – kWh
DTM*582*20000204*1500**	End of interval, date, and time
QTY*QD*59.04*KH	Quantity delivered – kWh
DTM*582*20000204*1530**	End of interval, date, and time
QTY*QD*64.80*KH	Quantity delivered – kWh
DTM*582*20000204*1600**	End of interval, date, and time
PTD BO	
DTM*150*20000104*1500*ET*	Service Period Start Date and time
DTM*151*20000204*1600*ET*	Service Period End Date and time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*119788.3*KH	Total kWh consumption (sum of all intervals)
SE*2300*0077	Transaction Set Trailer, number of segments, transaction control number

Example 06

Following example is for an account with one logical recorder (RC), three drive meters with recorders under glass (MTR#1, MTR#2 & MTR#3) measuring kWh on channel 1 and kQh on channel 2 in the recorder. There is no Power factor and no transformer loss. **This example only includes interval data.** Interval data is passed at the recorder under glass level.



ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000112*C1	Beginning Segment
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*46985555785	ESP Account number
REF*12*33569985674	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#1**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*99.79*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*97.98*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*94.35*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*97.46*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*100.31*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*101.35*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*104.72*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*105.75*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*94928.37*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#1**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*72.88*KQ	Quantity delivered – kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*71.84*KQ	Quantity delivered – kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*69.74*KQ*	Quantity delivered – kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*71.84*KQ	Quantity delivered – kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*73.18*KQ	Quantity delivered – kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*68.09*KQ	Quantity delivered – kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*73.33*KQ	Quantity delivered - kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*73.63*KQ	Quantity delivered - kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213**1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*115956.48*KQ	Total kQh consumption (sum of all intervals)

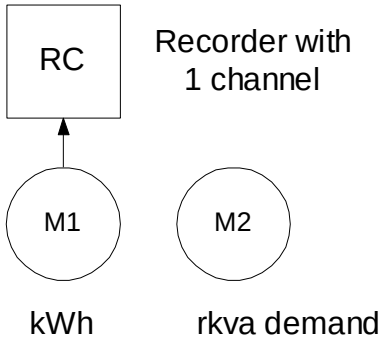
PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#2**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*56.51*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*55.73*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*57.02*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*56.25*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*61.69*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*50.28*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*50.54*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*60.13*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*55166.31*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#2**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*39.66*KQ	Quantity delivered – kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*38.91*KQ	Quantity delivered – kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*36.37*KQ*	Quantity delivered – kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*41.30*KQ	Quantity delivered – kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*41.15*KQ	Quantity delivered – kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*29.33*KQ	Quantity delivered – kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*30.38*KQ	Quantity delivered – kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*35.02*KQ	Quantity delivered – kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*68666.74*KQ	Total kQh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#3**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*9.59*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*9.85*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*9.33*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*9.85*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*10.89*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*5.70*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*5.96*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*6.22*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*11823.40*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#3**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*7.04*KQ	Quantity delivered - kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*6.59*KQ	Quantity delivered - kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*6.59*KQ*	Quantity delivered - kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*6.59*KQ	Quantity delivered - kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*8.38*KQ	Quantity delivered - kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*2.39*KQ	Quantity delivered - kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*2.54*KQ	Quantity delivered - kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*3.29*KQ	Quantity delivered - kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*14012.87*KQ	Total kQh consumption (sum of all intervals)
SE*4567*00002	Transaction Set Trailer, number of segments, transaction control number

Example 07
Following example is for an account with one physical recorder (RC), one drive meter (MTR#1) measuring kWh on channel 1 in the recorder, and one rkva demand meter (MTR#2). There is no Power factor and no transformer loss.
This example combines the monthly readings, consumption, and demands with interval data.



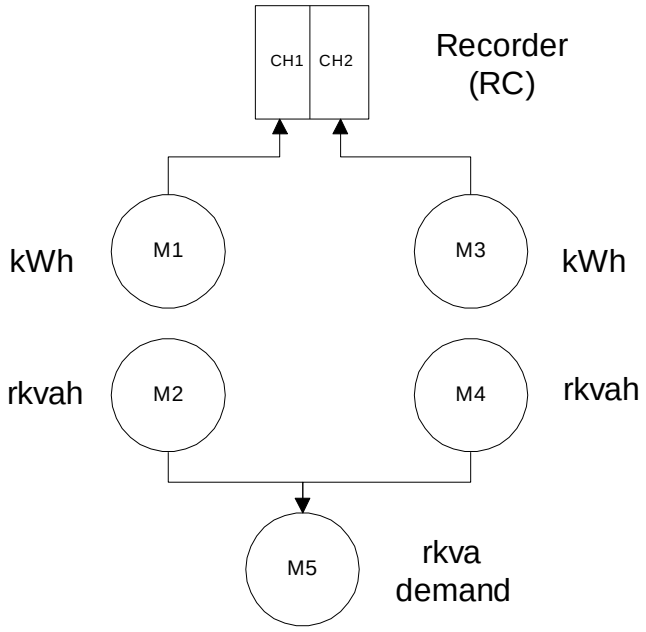
ST*867*0001	Transaction Set Header
BPT*00*991224021131606229935*19991224*C1	Beginning Segment
DTM*649*19991229**	Document Due Date
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*33378555441	ESP Account number
REF*12*99965214754	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	Metered Services Detail loop
DTM*150*19991118**	Service Period Start Date
DTM*151*19991223**	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*250560*KH	Quantity delivered in kWh
MEA*AF*PRQ*250560*KH***51	Meter reading-actual total, total consumption in kWh with no readings. Total consumption passed by recorder.
	Note: No Power Factor
	Note: No Transformer Loss Multiplier
QTY*QD*95988*KH	Quantity delivered in kWh
MEA*AF*PRQ*95988*KH***41	Meter reading-actual total, total off peak consumption in kWh with no readings. Total off peak consumption passed by recorder.
QTY*QD*154572*KH	Quantity delivered in kWh
MEA*AF*PRQ*154572*KH***42	Meter reading-actual total, total on peak consumption in kWh with no readings. Total on peak consumption passed by recorder.
PTD*PM	Metered Services Detail loop
DTM*150*19991118	Service Period Start Date
DTM*151*19991223	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*K1MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*636*K1	Quantity Delivered in kW
MEA*AF*PRQ*636*K1***41	Meter reading-actual total off peak kW demand
QTY*QD*629*K1	Quantity Delivered in kW
MEA*AF*PRQ*629*K1***42	Meter reading-actual total on peak kW demand
PTD*PM	Metered Services Detail loop
DTM*150*19991118	Service Period Start Date
DTM*151*19991223	Service Period End Date
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*117	LDC rate for meter
REF*JH*A	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*250560*KH	Quantity Delivered in kWh
MEA*AA*PRQ*250560*KH*17922*18270*51	Meter reading-actual beginning and ending readings with total kWh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991118	Service Period Start Date
DTM*151*19991223	Service Period End Date

REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*117	LDC rate for meter
REF*JH*A	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*K2MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*280.8*K2	Quantity Delivered in rkva demand.
MEA*AF*PRQ*280.8*K2**.39*51	Meter reading-actual total rkva demand
MEA*MU*720	Meter multiplier
PTD*PM	**Metered Services Detail loop – for kWh intervals for RC**
DTM*150*19991118*1730*ET*	Service Period Start Date, Start Time
DTM*151*19991223*0800*ET*	Service Period End Date, Stop Time
REF*MG*RC	Meter Number (serial number of meter/recorder)
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*244.30*KH	Quantity delivered – kWh
DTM*582*19991118*1730*ET*	End of interval, date, and time
QTY*QD*252.59*KH	Quantity delivered – kWh
DTM*582*19991118*1800*ET*	End of interval, date, and time
QTY*QD*250.91*KH*	Quantity delivered – kWh
DTM*582*19991118*1830*ET	End of interval, date, and time
QTY*QD*248.70*KH	Quantity delivered – kWh
DTM*582*19991118*1900*ET*	End of interval, date, and time
QTY*QD*248.44*KH	Quantity delivered – kWh
DTM*582*19991118*1930*ET*	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*45.88*KH	Quantity delivered – kWh
DTM*582*19991223*0700*ET*	End of interval, date, and time
QTY*QD*63.76*KH	Quantity delivered – kWh
DTM*582*19991223*0730*ET*	End of interval, date, and time
QTY*QD*82.43*KH	Quantity delivered – kWh
DTM*582*19991223*0800*ET*	End of interval, date, and time
PTD BO	
DTM*150*19991118*1730*ET*	Service Period Start Date, Start Time
DTM*151*19991223*0800*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*250228.18*KH	Total kWh consumption (sum of all intervals)

Example 08

Following example is for an account with one recorder (RC), two drive meters measuring kWh (MTR#1 & MTR#3) recorded on channel 1 and 2 of the recorder. Additional meters at location include two rkvah meters (MTR#2 & MTR#4) driving rkva demand pulse accumulator (MTR#5). The two rkvah meters (MTR#2 & MTR#4) are not read in the field. There is no Power factor and no transformer loss. **This example combines the monthly readings, consumption, and demands with interval data.**



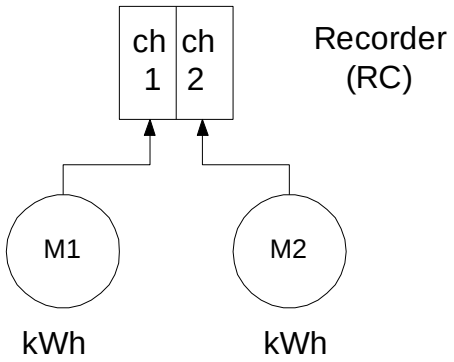
ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000110*C1	Beginning Segment
DTM*649*20000113**	Document Due Date
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*569875145	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*11548755542	ESP Account number
REF*12*14569862147	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	Metered Services Detail loop
DTM*150*19991207	Service Period Start Date
DTM*151*20000110	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*468120*KH	Quantity delivered 468120 kWh
MEA*AF*PRQ*468120*KH***51	Meter reading-beginning actual/ending actual, total consumption of 468120 kWh with no readings. Total consumption passed by recorder.
	Note: No Power Factor
	Note: No Transformer Loss Multiplier
QTY*QD*258575*KH	Quantity delivered 258575 kWh
MEA*AF*PRQ*258575*KH***41	Meter reading-beginning actual/ending actual, off peak consumption of 258575 kWh with no readings. Off peak consumption passed by recorder.
QTY*QD*209545*KH	Quantity delivered 209545 kWh
MEA*AF*PRQ*209545*KH***42	Meter reading-beginning actual/ending actual, on peak consumption of 209545 kWh with no readings. On peak consumption passed by recorder.
PTD*PM	**Metered Services Detail loop – for intervals**
DTM*150*19991207*1000*ET*	Service Period Start Date, Start Time
DTM*151*20000110*0930*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*55.98*KH	Quantity delivered – kWh
DTM*582*19991207*1000*ET*	End of interval, date, and time
QTY*QD*54.45*KH	Quantity delivered – kWh
DTM*582*19991207*1030*ET*	End of interval, date, and time
QTY*QD*53.01*KH*	Quantity delivered – kWh
DTM*582*19991207*1100*ET*	End of interval, date, and time
QTY*QD*48.78*KH	Quantity delivered – kWh
DTM*582*19991207*1130*ET*	End of interval, date, and time
QTY*QD*46.98	Quantity delivered – kWh
DTM*582*19991207*1200*ET*	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*45.00	Quantity delivered – kWh
DTM*582*20000110*0830*ET*	End of interval, date, and time
QTY*QD*40.05	Quantity delivered – kWh
DTM*582*20000110*0900*ET*	End of interval, date, and time
QTY*QD*38.25	Quantity delivered – kWh
DTM*582*20000110*0930*ET*	End of interval, date, and time
PTD BO	
DTM*150*19991207*1000*ET*	Service Period Start Date, Start Time

DTM*151*20000110*0930*ET*	Service Period End Date, Stop Time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*468120*KH	Total kWh consumption (sum of all intervals)
PTD*PM	Metered Services Detail loop for demand readings
DTM*150*19991207**	Service Period Start Date
DTM*151*20000110**	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*117	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*K1MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*749*K1	Quantity delivered 749 kW demand
MEA*AF*PRQ*749*K1***42	Actual Total kW on peak demand = 749
QTY*QD*750*K1	Quantity delivered 750 kW demand
MEA*AF*PRQ*750*K1***41	Actual Total kW off peak demand = 750
PTD*PM	Metered Services Detail loop
DTM*150*19991207	Service Period Start Date
DTM*151*20000110	Service Period End Date
REF*MG*MTR#1	Meter Number
REF*NH*117	LDC rate for meter
REF*JH*A	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*96600*KH	Quantity delivered 96600 kWh
MEA*AA*PRQ*96600*KH*6360*6682*51	Meter reading-beginning actual/ending actual, difference in readings = 322.
MEA*MU*300	Meter multiplier = 300
PTD*PM	Metered Services Detail loop – MTR#3
DTM*150*19991207	Service Period Start Date
DTM*151*20000110	Service Period End Date
REF*MG*MTR#3	Meter Number
REF*NH*117	LDC rate for meter
REF*JH*A	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*371520*KH	Quantity delivered 371520 kWh
MEA*AA*PRQ*371520*KH*9027*9543*51	Meter reading-beginning actual/ending actual, difference in readings = 322.
MEA*MU*720	Meter multiplier = 720
PTD*PM	Metered Services Detail loop – MTR#5
DTM*150*19991207	Service Period Start Date
DTM*151*20000110	Service Period End Date

REF*MG*MTR#5	Meter Number
REF*NH*117	LDC rate for meter
REF*JH*A	Meter Role
REF*MT*K2MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*383.4*K2	Quantity delivered 383.4 rkva demand
MEA*AF*PRQ*383.4*K2**2.13*51	RKVA demand meter reading (actual total) = 2.13.
MEA*MU*180	Meter multiplier = 180
SE*1000*0288	Transaction Set Trailer, number of segments, transaction control number

Example 09
Following example is for an account with one physical recorder (RC) and two drive meters (MTR#1 and MTR#2) measuring kWh on channel 1 and channel 2 in the recorder. There is no Power factor and no transformer loss. **This example combines the monthly readings, consumption, and demands with interval data.**



ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000112*C1	Beginning Segment
DTM*649*20000118*180000*ET*	Document Due Date, Time, and Time Code
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*44555856581	ESP Account number
REF*12*78965452555	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

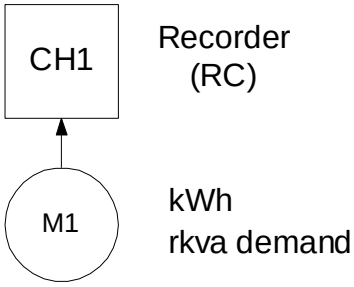
PTD*PM	Metered Services Detail loop
DTM*150*19991213	Service Period Start Date
DTM*151*20000112	Service Period End Date
REF*MG*RC	Recorder Serial Number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*52032*KH	Quantity delivered 52032 kWh
MEA*AF*PRQ*52032*KH***51	Meter reading-actual total, total consumption of 52032 kWh with no readings. Total consumption passed by recorder.
	Note: No Power Factor
	Note: No Transformer Loss Multiplier
QTY*QD*21138*KH	Quantity delivered 21138 kWh
MEA*AF*PRQ*21138*KH***42	Meter reading-beginning actual/ending actual, on peak consumption of 21138 kWh with no readings. On peak consumption passed by recorder.
PTD*PM	Metered Services Detail loop
DTM*150*19991213	Service Period Start Date
DTM*151*20000112	Service Period End Date
REF*MG*RC	Recorder Serial Number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF IX 5.2	Dials and decimals
REF*MT*K1MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*250*K1	Quantity Delivered in kW
MEA*AF*PRQ*250*K1***41	Meter reading-actual total kW demand
QTY*QD*199*K1	Quantity Delivered in kW
MEA*AF*PRQ*199*K1***42	Meter reading-actual total kW demand
PTD*PM	Metered Services Detail loop
DTM*150*19991213	Service Period Start Date
DTM*151*20000112	Service Period End Date
REF*MG*MTR#1	Meter Number
REF*NH*227	LDC rate for meter
REF*JH*A	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*28032*KH	Quantity Delivered in kWh
MEA*AA*PRQ*28032*KH*3677*3750*51	Meter reading-actual beginning and ending readings with difference in reading for total kWh consumption
MEA*MU*384	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991213	Service Period Start Date
DTM*151*20000112	Service Period End Date

REF*MG*MTR#2	Meter Number
REF*NH*227	LDC rate for meter
REF*JH*A	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*24000*KH	Quantity Delivered in kWh
MEA*AA*PRQ*24000*KH*820*850*51	Meter reading-actual beginning and ending readings with difference in reading for total kWh consumption
MEA*MU*800	Meter multiplier
PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#1**
DTM*150*19991213*0930*ET*	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*0930**	End of interval, date, and time
QTY*QD*6.91*KH	Quantity delivered – kWh
DTM*582*19991213*1000**	End of interval, date, and time
QTY*QD*5.88*KH*	Quantity delivered – kWh
DTM*582*19991213*1030**	End of interval, date, and time
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*5.99*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*5.26*KH	Quantity delivered – kWh
DTM*582*20000112*0700**	End of interval, date, and time
QTY*QD*5.64*KH	Quantity delivered – kWh
DTM*582*20000112*0730**	End of interval, date, and time
QTY*QD*5.64*KH	Quantity delivered – kWh
DTM*582*20000112*0800**	End of interval, date, and time
PTD BO	
DTM*150*19991213*0930*ET*	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number
REF*JH*I**	Meter Role
QTY*QD*28092.672*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#2**
DTM*150*19991213*0930*ET*	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*12.96*KH	Quantity delivered – kWh
DTM*582*19991213*0930**	End of interval, date, and time
QTY*QD*12.48*KH	Quantity delivered – kWh
DTM*582*19991213*1000**	End of interval, date, and time
QTY*QD*11.28*KH*	Quantity delivered – kWh
DTM*582*19991213*1030**	End of interval, date, and time
QTY*QD*12.24*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*12.48*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*13.68*KH	Quantity delivered – kWh
DTM*582*20000112*0700**	End of interval, date, and time
QTY*QD*12.96*KH	Quantity delivered – kWh
DTM*582*20000112*0730**	End of interval, date, and time
QTY*QD*12.00*KH	Quantity delivered – kWh
DTM*582*20000112*0800**	End of interval, date, and time
PTD BO	
DTM*150*19991213*0930*ET*	Service Period Start Date, Start Time
DTM*151*20000112*0800*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number
REF*JH*I**	Meter Role
QTY*QD*23967.36*KH	Total kWh consumption (sum of all intervals)
SE*4444*0003	Transaction Set Trailer, number of segments, transaction control number

Example 10

Following example is for an account with one physical recorder (RC), one drive meter (MTR#1) measuring kWh on channel 1 in the recorder and rkva demand. There is no Power factor and no transformer loss. **This example combines the monthly readings, consumption, and demands with interval data.**



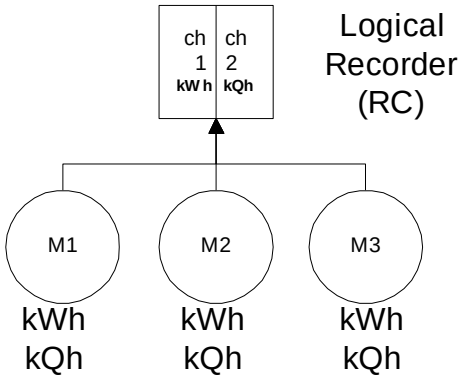
ST*867*0001	Transaction Set Header
BPT*00*00020419595006213101*20000204*C1	Beginning Segment
DTM*649*20000209*	Document Due Date
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*11559863517	ESP Account number
REF*12*77885542156	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	Metered Services Detail loop
DTM*150*20000104**	Service Period Start Date
DTM*151*20000204**	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*119520*KH	Quantity delivered in kWh
MEA*AF*PRQ*119520*KH***51	Meter reading-actual total, total consumption in kWh with no readings. Total consumption passed by recorder.
PTD*PM	Metered Services Detail loop
DTM*150*20000104	Service Period Start Date
DTM*151*20000204	Service Period End Date
REF*MG*RC	Recorder serial number
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*K1MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*325*K1	Quantity Delivered in kW
MEA*AF*PRQ*325*K1***41	Meter reading-actual total off peak kW demand
QTY*QD*360*K1	Quantity Delivered in kW
MEA*AF*PRQ*360*K1***42	Meter reading-actual total on peak kW demand
PTD*PM	Metered Services Detail loop
DTM*150*20000104	Service Period Start Date
DTM*151*20000204	Service Period End Date
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*A	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*119520*KH	Quantity Delivered in kWh
MEA*AA*PRQ*119520*KH*2969*3135*51	Meter reading-actual beginning and ending readings with total kWh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*20000104	Service Period Start Date
DTM*151*20000204	Service Period End Date
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF IX 5.0	Dials and decimals
REF*MT*K2MON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*43.2*K2	Quantity Delivered in rkva demand.
MEA*AF*PRQ*43.2*K2**.06*51	Meter reading-actual total rkva demand
MEA*MU*720	Meter multiplier

PTD*PM	**Metered Services Detail loop – for kWh intervals for RC**
DTM*150*20000104*1500*ET*	Service Period Start Date and time
DTM*151*20000204*1600*ET*	Service Period End Date and time
REF*MG*RC	Meter Number (serial number of meter/recorder)
REF*NH*227	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*43.92*KH	Quantity delivered – kWh
DTM*582*20000104*1500**	End of interval, date, and time
QTY*QD*46.80*KH	Quantity delivered – kWh
DTM*582*20000104*1530**	End of interval, date, and time
QTY*QD*47.52*KH*	Quantity delivered – kWh
DTM*582*20000104*1600**	End of interval, date, and time
QTY*QD*46.80*KH	Quantity delivered – kWh
DTM*582*20000104*1630**	End of interval, date, and time
QTY*QD*48.96*KH	Quantity delivered – kWh
DTM*582*20000104*1700**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*56.88*KH	Quantity delivered – kWh
DTM*582*20000204*1500**	End of interval, date, and time
QTY*QD*59.04*KH	Quantity delivered – kWh
DTM*582*20000204*1530**	End of interval, date, and time
QTY*QD*64.80*KH	Quantity delivered – kWh
DTM*582*20000204*1600**	End of interval, date, and time
PTD BO	
DTM*150*20000104*1500*ET*	Service Period Start Date and time
DTM*151*20000204*1600*ET*	Service Period End Date and time
REF*MG*RC	Recorder serial number
REF*JH*I**	Meter Role
QTY*QD*119788.3*KH	Total kWh consumption (sum of all intervals)
SE***2370***0002	Transaction Set Trailer, number of segments, transaction control number

Example 11

Following example is for an account with one logical recorder (RC), three drive meters with recorders under glass (MTR#1, MTR#2 & MTR#3) measuring kWh on channel 1 and kQh on channel 2 in the recorder. There is no Power factor and no transformer loss. **This example combines the monthly readings, consumption, and demands with interval data.** Interval data is passed at the recorder under glass level.



ST*867*0001	Transaction Set Header
BPT*00*00102113160622993501*20000112*C1	Beginning Segment
DTM*649*20000118**	Document Due Date
MEA**NP*1.0	Percent Participation – only send if less than 100%
N1*8S*LDC COMPANY*1*444587965	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*003847464ESP1	ESP Company name and DUNS + 4
N1*8R*CUSTOMER NAME	Customer name
REF*11*46985555785	ESP Account number
REF*12*33569985674	LDC Account number
REF*BLT*LDC	Identifies LDC as party consolidating bill
REF*PC*DUAL	Identifies party calculating charges

PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date
REF*MG*RC	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*161915*KH	Quantity delivered 161915 kWh
MEA*AF*PRQ*161915*KH***51	Meter reading-actual total, total consumption of 161915 kWh with no readings. Total consumption passed by recorder.
QTY*QD*90903*KH	Quantity delivered 90903 kWh
MEA*AF*PRQ*90903*KH***41	Meter reading-beginning actual/ending actual, off peak consumption of 90903 kWh with no readings. Off peak consumption passed by recorder.
QTY*QD*71012*KH	Quantity delivered 71012 kWh
MEA*AF*PRQ*71012*KH***42	Meter reading-beginning actual/ending actual, on peak consumption of 71012 kWh with no readings. On peak consumption passed by recorder.
PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF IX 6.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*95040*KH	Quantity Delivered in kWh
MEA*AA*PRQ*95040*KH*1561*1693*51	Meter reading-actual beginning and ending readings with difference in reading for total kWh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991213	Service Period Start Date
DTM*151*20000112	Service Period End Date
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF IX 6.0	Dials and decimals
REF*MT*KQMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*115920*KQ	Quantity Delivered in kQh
MEA*AA*PRQ*115920*KQ*1824*1985*51	Meter reading-actual beginning and ending readings with difference in reading for total kQh consumption
MEA*MU*720	Meter multiplier

PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF IX 6.0	Dials and decimals
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*11520*KH	Quantity Delivered in kWh
MEA*AA*PRQ*11520*KH*218*234*51	Meter reading-actual beginning and ending readings with difference in reading for total kWh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF IX 6.0	Dials and decimals
REF*MT*KQMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*13680*KQ	Quantity Delivered in kQh
MEA*AA*PRQ*13680*KQ*236*255*51	Meter reading-actual beginning and ending readings with difference in reading for total kQh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF*MT*KHMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*54720*KH	Quantity Delivered in kWh
MEA*AA*PRQ*54720*KH*943*1019*51	Meter reading-actual beginning and ending readings with difference in reading for total kWh consumption
MEA*MU*720	Meter multiplier
PTD*PM	Metered Services Detail loop
DTM*150*19991213**	Service Period Start Date
DTM*151*20000112**	Service Period End Date

REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*A	Meter Role
REF IX 6.0	Dials and decimals
REF*MT*KQMON	Following quantity and measurements are totals for the month (monthly interval).
QTY*QD*68400*KQ	Quantity Delivered in kQh
MEA*AA*PRQ*68400*KQ*1105*1200*51	Meter reading-actual beginning and ending readings with difference in reading for total kQh consumption
MEA*MU*720	Meter multiplier
PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#1**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*99.79*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*97.98*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*94.35*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*97.46*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*100.31*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*101.35*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*104.72*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*105.75*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*94928.37*KH	Total kWh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#1**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*72.88*KQ	Quantity delivered – kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*71.84*KQ	Quantity delivered – kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*69.74*KQ*	Quantity delivered – kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*71.84*KQ	Quantity delivered – kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*73.18*KQ	Quantity delivered – kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*68.09*KQ	Quantity delivered – kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*73.33*KQ	Quantity delivered - kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*73.63*KQ	Quantity delivered - kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213**1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#1	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*115956.48*KQ	Total kQh consumption (sum of all intervals)
PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#2**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time

REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*56.51*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*55.73*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*57.02*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*56.25*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*61.69*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*50.28*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*50.54*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*60.13*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*55166.31*KH	Total kWh consumption (sum of all intervals)
PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#2**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time

REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*39.66*KQ	Quantity delivered – kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*38.91*KQ	Quantity delivered – kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*36.37*KQ*	Quantity delivered – kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*41.30*KQ	Quantity delivered – kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*41.15*KQ	Quantity delivered – kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*29.33*KQ	Quantity delivered – kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*30.38*KQ	Quantity delivered – kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*35.02*KQ	Quantity delivered – kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#2	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*68666.74*KQ	Total kQh consumption (sum of all intervals)

PTD*PM	**Metered Services Detail loop – for kWh intervals for MTR#3**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KH030	Meter Type (kWh consumption type recorder in 30 minute intervals)
QTY*QD*9.59*KH	Quantity delivered – kWh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*9.85*KH	Quantity delivered – kWh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*9.33*KH*	Quantity delivered – kWh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*9.85*KH	Quantity delivered – kWh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*10.89*KH	Quantity delivered – kWh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*5.70*KH	Quantity delivered – kWh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*5.96*KH	Quantity delivered – kWh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*6.22*KH	Quantity delivered – kWh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*11823.40*KH	Total kWh consumption (sum of all intervals)
PTD*PM	**Metered Services Detail loop – for kQh intervals for MTR#3**
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time

REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*NH*130	LDC rate for meter
REF*JH*I	Meter Role
REF*MT*KQ030	Meter Type (kQh consumption type recorder in 30 minute intervals)
QTY*QD*7.04*KQ	Quantity delivered - kQh
DTM*582*19991213*1100**	End of interval, date, and time
QTY*QD*6.59*KQ	Quantity delivered - kQh
DTM*582*19991213*1130**	End of interval, date, and time
QTY*QD*6.59*KQ*	Quantity delivered - kQh
DTM*582*19991213*1200**	End of interval, date, and time
QTY*QD*6.59*KQ	Quantity delivered - kQh
DTM*582*19991213*1230**	End of interval, date, and time
QTY*QD*8.38*KQ	Quantity delivered - kQh
DTM*582*19991213*0100**	End of interval, date, and time
	QTY & DTM segments continue for all intervals up to the stop time.
QTY*QD*2.39*KQ	Quantity delivered - kQh
DTM*582*20000112*1000**	End of interval, date, and time
QTY*QD*2.54*KQ	Quantity delivered - kQh
DTM*582*20000112*1030**	End of interval, date, and time
QTY*QD*3.29*KQ	Quantity delivered - kQh
DTM*582*20000112*1100**	End of interval, date, and time
PTD BO	
DTM*150*19991213*1100*ET*	Service Period Start Date, Start Time
DTM*151*20000112*1100*ET*	Service Period End Date, Stop Time
REF*MG*MTR#3	Meter Number (serial number of meter/recorder)
REF*JH*I**	Meter Role
QTY*QD*14012.87*KQ	Total kQh consumption (sum of all intervals)
SE*6789*0003	Transaction Set Trailer, number of segments, transaction control number

Example 12
IU Cancel - Interval Detail reporting at the SUMMARY Level

BPT*01*234567*19990201*C1*****120101	Cancel transaction with original tran ref in BPT09
N1*8S*LDC COMPANY*1*007909411**40	LDC Company name and DUNS
N1*SJ*ESP COMPANY*9*007909422ESP**41	ESP Company name and DUNS
N1*8R*CUSTOMER NAME	Customer name
REF*11*1394959	ESP Account number
REF*12*1239485790	LDC Account number
REF*Q5**9876541324960WHW	SDID Service Delivery Identification Number
REF*BLT*LDC	Bill type - identifies party consolidating bill
REF*PC*DUAL	Bill Calculator - identifies party calculating charges
PTD*BO	
DTM*150*19990101	Service Period Start Date
DTM*151*19990131	Service Period End Date
REF*MG*2222277S	Meter number (serial number of Recorder)
REF*JH*A	Meter role
QTY*QD*555555*KH	Total kWh consumption (sum of all intervals)