Ohio Electric

Implementation Guideline

For

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

TRANSACTION SET

867

Usage
Ver/Rel 004010

Summary of Changes

Version 1.0.0 May 1, 2001	Initial Release
Version 1.5.0 May 1, 2001	• Add DTM segment for document due date into the 867 per Change Control 11. • Change position of N1 loop for Scheduling Coordinator from position 040 to position 080 per Change Control 17. • Correct two typos in the 867 IG (The REF*PR and the QTY segments in the PL loop contain a gray box. In the gray box it lists the type of 867 (HI, HU, IU, MU). These two segments have a typo and list HU twice.) per Change Control 20. • Remove the Summary pages (usually pages 2 and 3) from the implementation guides. These pages are automatically created by Foresight, but the last round of changes to the documents was done in Word and has not been updated in Foresight per Change Control 22.
Version 2.0.0 December 31, 2001	• Added note to MEA01 elements in the 867 for Duke Energy Ohio to allow for them to send only current reading (and not previous reading) for all units of measure, not just demand per Change Control 27
Version 2.1.0 June 30, 2002	▪ Added note to N1~8R segment to show AP validates on first 4 characters of customer name per change control 48. ▪ Added text to title on N1 pages to show which N1 per change control 50 ▪ Updated REF~Q5 gray boxes to show SDID per change control 51
Version 2.2.0 October 1, 2005	▪ Added REF~NH and REF~PR to the BD loop per Change Control 53 ▪ Change the CO0101 in the QTY segment under the PTD*SU loop to remove the requirement to send the K1, K2, and K4 values per change control 61. ▪ Added TOU values to the PTD Summary Loop for the 867 Historical Usage transaction for FirstEnergy Corp. use only per change control 63.
Version 2.3.0 March 9, 2010	▪ During 3/3/10 meeting, the OSPO Data Working Group reviewed & confirmed EDI change controls up to and including CC67. All changes in the v2.2.0 redline were accepted and v2.3.0 created as the new baseline for Ohio.
Version 2.4.0 February 14, 2012	▪ Added PTD*FG loop, QTY*KC, and QTY*KZ segments as per EDI Change Control 69. • Incorporated AEP's administrative changes as per EDI Change Control 70. • Incorporated Duke Energy Ohio's administrative changes as per EDI Change Control 72. ▪ Remove BD loop as per EDI Change Control 75 • Incorporated First Energy's administrative changes as per EDI Change Control 81. • Added DTM*649 as optional when BPT01=01 as per EDI Change Control 83. • Added DTM*150/151 to SU loop pos 210 for HU as per EDI Change Control 84.
Version 2.5.0 February 15, 2013	• Incorporated LDC Rate Class, LDC Profile Description, and LDC Meter Cycle for HU as per EDI Change Control 82. Change effective NLT 6/30/12 for AEP, DP&L, and FE. Duke Energy Ohio NLT 12/31/2012. • Incorporated Service Voltage and Loss Factor to the 867HU as per EDI Change Control 91. Change Effective 5/25/2012 for First Energy companies only, not used by other EDUs. • Incorporated administrative changes to notes section and BPT04 as per EDI Change Control 97. No effective date necessary, change is admin only.
Version 2.6.0 March 24, 2014	• Incorporate Change Control 103 Update (add net meter indicator & qualifiers) • Incorporate Change Control 104 (clarify 867IU BO/PM looping for on/off peak) • Incorporate Change Control 105 & 114 (REFLF & REFSV required for AEP & FE) • Incorporate Change Control 108 (add effective date ranges to PLC & NSPL values) • Incorporate Change Control 110 (TOU reporting in 867HU) • Incorporate Change Control 111 (Add REFNH, REFLO, REFBF & REFPR to FG loop) • Incorporate Change Control 112 (add net meter qualifiers for FE in HU and IU) • Incorporate Change Control 115 (add meter number for PM loop for HI) • Incorporate Change Control 117 (clarify AEP practice for HU/HI handling)

Summary of Changes

Version 2.6.1
February 13, 2015

- Incorporate Change Control 120 (DP&L support of 867HI)
- Incorporate Change Control 122 (correct Duke 867MU notes)
- Incorporate Change Control 123 (add Duke net meter data reporting)
- Incorporate Change Control 124 (correct FE net meter QTY01 in PL loop)

Version 2.6.2
February 11, 2016

- Incorporate Change Control 127 (AEP OH Net Meter Reporting)
- Incorporate Change Control 131 (PM loop optional in 867IU Cancel)
- Incorporate Change Control 137v2 (Duke Energy Ohio use of PTD*SU in 867HU)

Version 2.6.3
February, 2017

- Incorporated Change Control 140 (Add the REF*MG to the PTD*PM loop in the 867IU transaction as a Required field)
- Incorporated Change Control 142 (Remove comment from Notes and BPT04 C1 related to Duke identifying whether an account has interval data available. Duke to make changes to their system to identify the summary historical usage as DD regardless of whether the account has interval data available. Also fix typo in graybox of X5)
- Incorporated Change Control 146 (Update the 867 for monthly usage only to add new codes (71, 76, 85, 97) to the MEA07 in the SU and PL loops and C04002 in the REF*IX for AEP only for AEP's TOU Market Transition)
- Incorporated Change Control 151 (Update the DTM04 value in the PTD*PM loop to show the correct value of "ES" for Eastern Standard Time)

Version 2.6.4
February 28, 2018

- Incorporate Change Control 155 (Change to add Dayton Power & Light (DPL) use of the PTD*BB loop to 867MU/IU which reflects the EDU's billing data for the service at the unit of measure level.)
- Incorporate Change Control 156 (Change to add Dayton Power & Light (DPL) use of the QTY*87 and QTY*9H segments in the PTD*SU, PTD*PL, PTD*BO and PTD*PM loops.)
- Incorporated Change Control 160 (Add code 20 – Unavailable (Used when meter data is not available to fill the intervals) to the QTY01 in the PM loop of the 867)
- Incorporated Change Control 164 (Clean up the PTD~BC Loop in the 867 to remove the PTD~BD example and update the DTMs to show how it is being sent in production)
- Incorporated Change Control 167 (Update the Definitions section of the 867 IG to show the correct processing by FirstEnergy when an HI request is processed)
- Incorporate Change Control 168 (Update the Definitions section of the 867 IG to correct the typo under the Duke Energy Ohio 867 Historical Usage where it notes "M76 (Interval Meter)". Should say "M76 (Invalid Meter)".)

Definitions:

The following acronyms are used throughout this 867 Guideline.

HI – Historical Interval. The HI will be sent in response to an 814 HI request. This will be historical usage for an account that has an interval meter.

HU – Historical Usage. The HU will be sent in response to an 814 HU request. This will be historical usage for an account that has non-interval metered or unmetered services.

MU – Monthly Usage. The MU will be sent monthly (may be sent bi-monthly for customers on bi-monthly billing) for any account that has non-interval metered or unmetered services. This is the usage that will be used to calculate the 810 in Consolidated Billing

IU – Interval Usage. The IU will be sent monthly for any account that has an interval meter. This is the usage that will be used to calculate the 810 in Consolidated Billing

867 Looping
The looping in the 867 is directly related to the service being requested by the CRES, the type of service on the account, and the type of 867 being sent. The indicator for the type of 867 being sent is shown in the BPT04 element.

Historical Usage (867HU and 867HIU):

AEP
AEP supports both 867HU and 867HIU via EDI. In the event the CRES requests Historical Interval (HI) usage for an account without historical interval history present, AEP will accept the request, send REF*1P with HIU (Historical Interval Unavailable) and provide the CRES with 867 Historical Usage transaction set.

In the 867HU, AEP sends the PTD*FG loop and a PTD*PL loop for each meter/unit of measure/time of use/net meter channel (consumption- usage delivered & generation – usage received). For unmetered services, the PTD*FG and PTD*BC loops are sent. In the 867HIU, AEP sends the PTD*FG and a PTD*PM loop for each meter/unit of measure. For net metering in the 867HIU, AEP sends single PM loop reporting net usage delivered (consumption), if interval read is net negative (usage received / generation) reports 0KH, no 87/9H qualifiers are sent in 867HIU.

DPL
DPL supports both 867HU and 867HIU via EDI. If a CRES requests interval detail on a non-interval account, DPL will reject with a reject code of HIU (INVALID REQUEST FOR USAGE). The CRES may re-submit the request as 814HU and DPL will provide summary level 867HU data.

In the 867HU, DPL sends the PTD*FG loop and a PTD*PL loop for each meter/unit of measure/time of use. For unmetered services, the PTD*FG and PTD*BC loops are sent. In the 867HIU, DPL sends the PTD*FG loop and a PTD*PM loop for each meter/unit of measure.

Duke Energy Ohio
Duke Energy Ohio supports both 867HU and 867HIU via EDI. If a CRES requests interval detail on a non-interval account, Duke will reject with a reject code of M76 (Invalid Meter). The CRES may re-submit the request as 814HU and Duke will provide summary level 867HU data.

In the 867HU, Duke sends the PTD*FG loop, a PTD*SU loop, and a PTD*PL loop for each meter/unit of measure. In the 867HIU, Duke sends the PTD*FG loop, a PTD*BO loop and a PTD*PM loop for each meter/unit of measure. For unmetered services, the PTD*FG and PTD*BC loops are sent.

FirstEnergy

FirstEnergy supports both 867HU and 867HIU via EDI in Ohio. If a CRES requests HI and interval data is not available, the request would be accepted with a REF*1P code of HIU (Historical Interval Usage Unavailable) and an 867 Historical usage will be provided.

In the 867HU, FirstEnergy sends the PTD*FG loop and a PTD*SU loop for each unit of measure/time of use. For unmetered services, the PTD*FG and PTD*BC loops are sent.

Monthly Usage (867MU and 867IU):

AEP

In the 867MU, for metered services AEP sends the PTD*SU loop and a PTD*PL loop for each meter/unit of measure. For unmetered services AEP sends a PTD*BC loop. In the 867IU, AEP sends a PTD*BO and a PTD*PM loop for each meter/unit of measure if the BPT04 = C1. If the BPT04 = X5, only the PTD*BO loop is sent for each meter/unit of measure.

DPL

In the 867MU, for metered services, DPL sends the PTD*BB loop for each account and a PTD*SU loop and a PTD*PL loop for each meter/unit of measure. For unmetered services, DPL sends a PTD*BC loop. In the 867IU, DPL sends a PTD*BB loop for each account and a PTD*BO loop and a PTD*PM loop for each meter/unit of measure if the BPT04 = C1. If the BPT04 = X5, only the PTD*BB loop is sent for each account and a PTD*BO loop is sent for each meter/unit of measure.

Duke Energy Ohio

In the 867MU, Duke sends a single PTD*BB and PTD*SU loop for each account and a PTD*PL loop for each meter/unit of measure. For unmetered services, Duke sends a single PTD*BB for each account and PTD*BC loop for each unmetered service. In the 867IU, Duke sends a single PTD*BB for each account, and a PTD*BO and a PTD*PM loop for each meter/unit of measure if the BPT04 = C1. If the BPT04 = X5, only the PTD*BB will be sent for the account and a PTD*BO loop is sent for each meter/unit of measure.

Duke Energy Ohio – Billing for Net Metering – Net Consumption

For any month where the customer consumes more electricity than they generate, Duke Energy Ohio will reduce the generation from consumption and report net consumption in the SU loop. A supplier's billed consumption for a month where the customer is a net consumer is the net of consumption less generation.

Duke Energy Ohio – Billing for Net Metering – Net Generation

For any month where the customer generates more electricity than they consume, Duke Energy Ohio will credit the customer's account for the net generation in the SU loop. A supplier's billed consumption for a month where the customer is a net generator is zero.

FirstEnergy

In the 867MU, FirstEnergy sends the PTD*SU loop and a PTD*PL loop for each meter/unit of measure. For unmetered services, FirstEnergy sends a PTD*BC loop. In the 867IU, FirstEnergy sends a PTD*BO and a PTD*PM loop for each meter/unit of measure if the BPT04 = C1. If the BPT04 = X5, only the PTD*BO loop is sent for each meter/unit of measure.

867 Product Transfer and Resale Report

<div align="right">

Functional Group ID=PT

</div>

Introduction:

This Draft Standard for Trial Use contains the format and establishes the data contents of the Product Transfer and Resale Report Transaction Set (867) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to: (1) report information about product that has been transferred from one location to another; (2) report sales of product from one or more locations to an end customer; or (3) report sales of a product from one or more locations to an end customer, and demand beyond actual sales (lost orders). Report may be issued by either buyer or seller.

Transaction Set Notes

1. The N1 loop is used to identify the transaction sender and receiver.

				Segment:	**ST** Transaction Set Header

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:
Notes: Required
ST~867~000000001

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	ST01	143	**Transaction Set Identifier Code**	M ID 3/3
			Code uniquely identifying a Transaction Set	
			867 Product Transfer and Resale Report	
M	ST02	329	**Transaction Set Control Number**	M AN 4/9
			Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	

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:				
Notes:		If BPT01 = '01' (Cancellation), then an original 867 must be sent as soon as corrected data is available, if there is any replacement/corrected data.		
		Required		
		BPT~00~199902010001~19990131~DD		
		BPT~00~199902010001~19990131~DD~~~F		
		BPT~01~199902020001~19990131~DD~~~~~1999020100001		

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	BPT01	353	**Transaction Set Purpose Code**		**M ID 2/2**
			Code identifying purpose of transaction set		
			00	Original	
				Conveys original readings for the account being reported.	
			01	Cancellation	
				Readings previously reported for the account are to be ignored.	
			52	Response to Historical Inquiry	
				Response to a request for historical meter reading	
M	BPT02	127	**Reference Identification**		**O AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			A unique transaction identification number assigned by the originator of this transaction. This number must be unique over time.		
			This code will be used as a cross reference to the 810 billing document, and for billing parties that make the other party whole, it will also be cross referenced on the 820.		
			Transaction Reference numbers will only contain uppercase letters (A to Z) and digits (0 to 9). Note that punctuation (spaces, dashes, etc.) must be excluded.		
M	BPT03	373	**Date**		**M DT 8/8**
			Date expressed as CCYYMMDD		
			The transaction creation date - the date that the data was processed by the sender's application system.		
M	BPT04	755	**Report Type Code**		**O ID 2/2**
			Code indicating the title or contents of a document, report or supporting item		
			C1	Cost Data Summary	
				Indicates transaction is an Interval Data transaction. This will be used when supplier is receiving both summary and detail interval data on an account with only interval meters.	

			DD	Distributor Inventory Report	

Indicates transaction is a monthly metered or unmetered transaction (no interval meters in the transaction).

			DR	Datalog Report	

Indicates transaction contains some combination of Interval, Monthly, and/or Unmetered Data. (Duke Energy Ohio ONLY)

			X5	Restricted Report	

Indicates transaction contains summary data (at the meter level), but there are interval meters on the account

C   **BPT07**   **306**   **Action Code**   **O**   **ID 1/2**

Code indicating type of action

Conditional, Required if final usage reading.

           F   Final

Final meter read data being sent for this customer. The customer account is final with the EDU or the customer switched to a new CRES.

C   **BPT09**   **127**   **Reference Identification**   **O**   **AN 1/30**

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

When BPT01 = 01 (cancel), this element is required and contains the transaction identification number from BPT02 of the transaction that is being cancelled.

Conditional: Required if this is a cancel (BPT01 = 01)

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, not used for Dual Billing or LDC Consolidated Rate Ready				
	Optional in the Usage Cancel transaction (BPT01=01).				
Examples:	DTM*649*19990131*2359				

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	DTM01	374	**Date/Time Qualifier**		**M** **ID 3/3**
			Code specifying type of date or time, or both date and time		
			649	Document Due	
				The date that the non-billing party must provide the 810 transaction back to the billing party.	
M	DTM02	373	**Date**		**X** **DT 8/8**
			Date expressed as CCYYMMDD		
M	DTM03	337	**Time**		**X** **TM 4/8**
			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		

Segment:		**N1** Name (8S - EDU)			

Segment: **N1** Name (8S - EDU)
Position: 080
Loop: N1   Optional
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: Required

N1~8S~EDU COMPANY~1~007909411~~41

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	N101	98	**Entity Identifier Code**	M	ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual		
			8S Consumer Service Provider (CSP)		
			EDU		
M	N102	93	**Name**	X	AN 1/60
			Free-form name		
			EDU Name		
M	N103	66	**Identification Code Qualifier**	X	ID 1/2
			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		
M	N104	67	**Identification Code**	X	AN 2/80
			Code identifying a party or other code		
			EDU D-U-N-S Number or D-U-N-S + 4 Number		
M	N106	98	**Entity Identifier Code**	O	ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual		
			40 Receiver		
			41 Submitter		

Segment:		**N1** Name (SJ - CRES)			
Position:		080			
Loop:		N1	Optional		
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:
Required

N1~SJ~CRES COMPANY~9~007909422CRES~~40
N1~SJ~CRES COMPANY~1~007909422~~40

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	N101	98	**Entity Identifier Code**	M	ID 2/3

Code identifying an organizational entity, a physical location, property or an individual

SJ		Service Provider
CRES		

	Ref. Des.	Data Element	Name		Attributes
M	N102	93	**Name**	X	AN 1/60

Free-form name

CRES Name

	Ref. Des.	Data Element	Name		Attributes
M	N103	66	**Identification Code Qualifier**	X	ID 1/2

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

	Ref. Des.	Data Element	Name		Attributes
M	N104	67	**Identification Code**	X	AN 2/80

Code identifying a party or other code

CRES D-U-N-S Number or D-U-N-S + 4 Number

	Ref. Des.	Data Element	Name		Attributes
M	N106	98	**Entity Identifier Code**	O	ID 2/3

Code identifying an organizational entity, a physical location, property or an individual

40		Receiver
41		Submitter

Segment:		**N1** Name (RS - Scheduling Coordinator)			

Segment: $\quad$ **N1** Name (RS - Scheduling Coordinator)
Position: $\quad$ 080
Loop: $\quad$ N1 $\quad$ Optional
Level: $\quad$ Heading
Usage: $\quad$ Optional
Max Use: $\quad$ 1
Purpose: $\quad$ To identify a party by type of organization, name, and code
Syntax Notes: $\quad$ 1 $\quad$ At least one of N102 or N103 is required.
$\qquad$ 2 $\quad$ If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: $\quad$ 1 $\quad$ 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.
$\qquad$ 2 $\quad$ N105 and N106 further define the type of entity in N101.
Notes: $\quad$ Required when a CRES is using more than one Scheduling Coordinator (Not used by AEP)
N1~RS~SCHEDULING COORDINATOR~1~006193212S

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes	
M	N101	98	**Entity Identifier Code**		M	ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual			
			RS	Receiving Facility Scheduler		
				Scheduling Coordinator		
M	N102	93	**Name**		X	AN 1/60
			Free-form name			
			Name of Scheduling Coordinator			
M	N103	66	**Identification Code Qualifier**		X	ID 1/2
			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		
M	N104	67	**Identification Code**		X	AN 2/80
			Code identifying a party or other code			
			Scheduling Coordinator D-U-N-S Number or D-U-N-S + 4 Number			

Segment:		**N1** Name (8R - Customer)				

Segment: **N1** Name (8R - Customer)
Position: 080
Loop: N1   Optional
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: Required

N1~8R~CUSTOMER NAME
N1~8R~CUSTOMER NAME~92~STORE 7813

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes		
M	N101	98	Entity Identifier Code		M	ID 2/3
			Code identifying an organizational entity, a physical location, property or an individual			
			8R Consumer Service Provider (CSP) Customer			
			Customer			
M	N102	93	Name		X	AN 1/60
			Free-form name			
			Customer Name as documented in the sender's application system.			
C	N103	66	Identification Code Qualifier		X	ID 1/2
			Code designating the system/method of code structure used for Identification Code (67)			
			Condition: Required if available			
			92 Assigned by Buyer or Buyer's Agent			
C	N104	67	Identification Code		X	AN 2/80
			Code identifying a party or other code			
			Store Number			
			Condition: Required if available			

Segment:		**REF** Reference Identification (CRES Account Number)				
Position:	120					
Loop:	N1	Optional				
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:
Account 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 account number must be present.
Required if previously sent on the Enrollment or Change.
REF~11~1394959

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			11 Account Number		
			CRES assigned customer account number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			CRES customer account number		

Segment:	**REF** Reference Identification (EDU Account Number)		
Position:	120		
Loop:	N1 Optional		
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: Account 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 account number must be present.

Conditional - Required for all utilities except AEP, which will use Service Delivery Identification Number.

REF~12~1239485790

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	**M**	**ID 2/3**
			Code qualifying the Reference Identification		
			12 Billing Account		
			EDU Account Number		
M	REF02	127	**Reference Identification**	**X**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Account Number		

			Segment:	**REF** Reference Identification (Previous EDU Account Number)

Segment: **REF** Reference Identification (Previous EDU Account Number)
Position: 120
Loop: N1   Optional
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: Account 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 account number must be present.
Condition: Required if the account number has changed in the last 60 days. Required for all utilities except AEP, which will use Service Delivery Identification Number. (Not used by AEP)
REF~45~939581900

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			45 Old Account Number		
			EDU's Previous Account Number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Previous Account Number		

Segment:		**REF** Reference Identification (Billing Type)		
Position:		120		
Loop:		N1 Optional		
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:		HI: Not Used		
		HU: Not Used		
		IU: Required		
		MU: Required		
		REF~BLT~LDC		

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**		M ID 2/3
			Code qualifying the Reference Identification		
			BLT	Billing Type	
				Identifies whether the bill is consolidated by the EDU (LDC) or CRES (ESP), or whether each party will render their own bill. See REF02 for valid values.	
M	REF02	127	**Reference Identification**		X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			DUAL	Dual Billing	
				Each party bills the customer for its portion	
			ESP	Energy Supplier Consolidated Billing	
				The CRES bills the customer.	
			LDC	Utility Consolidated Billing	
				The EDU bills the customer	

Segment:		**REF** Reference Identification (Party Calculating Charges)		
Position:	120			
Loop:	N1	Optional		
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:		HI: Not Used		
		HU: Not Used		
		IU: Required		
		MU: Required		
		REF~PC~LDC		

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**		M ID 2/3
			Code qualifying the Reference Identification		
			PC	Production Code	
				Identifies the party that is to calculate the charges on the bill	
M	REF02	127	**Reference Identification**		X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			DUAL	Each Party calculates its portion of the bill	
			ESP	The CRES calculates charges for each party	
			LDC	The EDU calculates charges for each party	

Segment:		**REF** Reference Identification (Q5 = SDID Number)			
Position:		120			
Loop:		N1 Optional			
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.

Required if customer is in AEP service territory. Maximum use of 1 per transaction

REF~Q5~9876543245678DCH

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			Q5 Property Control Number		
			AEP assigned Service Delivery Identification Number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			AEP assigned Service Delivery Identification Number		

Segment:		**PTD** Product Transfer and Resale Detail (BB=Billed Summary)	
Position:		010	
Loop:		**PTD** **Mandatory**	
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:		HI: Not Used	
		HU: Not Used	
		IU: Required for DPL and Duke Energy OH only	
		MU: Required for DPL and Duke Energy OH only	

For IU/MU: Any Transformer Loss Factor (MEA~~CO) the KH value in the QTY02 of the BB loop should be representative of the Transformer Loss Factor being applied. No adjustments should be made to the KH values in the QTY02 in the SU, BO, PL or PM loops.

NOTE: The BB loop includes unmetered usage.

DPL will provide the billed energy **and demand** in the PTD*BB loop. **Since billed demand is reported at the service level and the PTD*BB loop is at the account level, the billed demand will be accompanied by a REF*NH for the rate code which is unique per service on an account.**

One Monthly Billed Summary PTD loop is required for every account reporting kWh & k1 (if applicable) units of measure.
PTD~BB

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	PTD01	521	**Product Transfer Type Code**	M ID 2/2
			Code identifying the type of product transfer	
			BB Monthly Billed Summary	
			This information is obtained from the billing system to reflect the billing data for this account at the unit of measure level.	

			Segment:	**DTM** Date/Time Reference (Service Period Start)

Segment: **DTM** Date/Time Reference (Service Period Start)
Position: 020
Loop: PTD   Mandatory
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:
HI: Not Used
HU: Not Used
IU: Required
MU: Required
DTM~150~19990101

Data Element Summary

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

Segment:		**DTM** Date/Time Reference (Service Period End)			

Segment: **DTM** Date/Time Reference (Service Period End)
Position: 020
Loop: **PTD** **Mandatory**
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:
> HI: Not Used
> HU: Not Used
> IU: Required
> MU: Required
> DTM~151~19990131

Data Element Summary

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

Segment:		**QTY** Quantity (Billed Kilowatt Hours)		
Position:	110			
Loop:	QTY	Optional		
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
HI: Not Used
HU: Not Used
IU: Required
MU: Required
QTY~D1~22348~KH

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	QTY01	673	**Quantity Qualifier**	M	ID 2/2
			Code specifying the type of quantity		
			D1 Billed		
			Used when quantity in QTY02 is a "Billed" quantity		
M	QTY02	380	**Quantity**	X	R 1/15
			Numeric value of quantity		
M	QTY03	355	**Unit or Basis for Measurement Code**	M	ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			KH Kilowatt Hour		
			kWh - Kilowatt Hours		

Segment: **QTY** Quantity (Billed Demand)

Position:	110
Loop:	QTY Optional
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 - Required if account measures Demand (KW). This must be sent even if Billed (derived) demand is equal to measured demand.
	HI: Not Used
	HU: Not Used
	IU: Required as per above note
	MU: Required as per above note
	QTY~D1~223~K1

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	QTY01	673	**Quantity Qualifier**	M	ID 2/2
			Code specifying the type of quantity		
			D1 Billed		
			Used when quantity in QTY02 is a "Billed" quantity		
M	QTY02	380	**Quantity**	X	R 1/15
			Numeric value of quantity		
M	QTY03	355	**Unit or Basis for Measurement Code**	M	ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			K1 Kilowatt Demand		

Segment:		**QTY** Quantity (Measured Demand)		
Position:		110		
Loop:		QTY	Optional	
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 - Required if account measures Demand (KW).
HI: Not Used
HU: Not Used
IU: Required as per above note
MU: Required as per above note
QTY~QD~223~K1

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	QTY01	673	**Quantity Qualifier**	M	ID 2/2
			Code specifying the type of quantity		
			KA	Estimated Quantity Delivered	
				Used when the quantity delivered is estimated	
			QD	Quantity Delivered	
				Quantity is actual	
M	QTY02	380	**Quantity**	X	R 1/15
			Numeric value of quantity		
M	QTY03	355	**Unit or Basis for Measurement Code**	M	ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			K1	Kilowatt Demand	

Segment:	**REF** Reference Identification (EDU Rate Code)
Position:	190
Loop:	QTY Optional
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:	
Notes:	HI: Not Used
	HU: Not Used
	IU: Required for DP&L if there is billed demand on the account
	MU: Required for DP&L if there is billed demand on the account
	REF~NH~RES

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			NH Rate Card Number		
			EDU Rate Code or tariff		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Rate Code or tariff		

Segment:		**PTD** Product Transfer and Resale Detail (Non-Interval Metered Services Summary)		

Position: 010
Loop: **PTD** **Mandatory**
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: HI: Not Used
HU: Required for FE only since reporting at account level, otherwise not used
IU: Required for FirstEnergy when BPT04 = X5, otherwise not used.
MU: Required if there are metered services on the account

A summary loop will be provided for each type of consumption (unit of measure) for all meters on the account. Usage for all meters on the same tariff rate will be summed in this loop. For MU/IU – Data is obtained from the metering system.
PTD~SU

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	PTD01	521	**Product Transfer Type Code**	M ID 2/2
			Code identifying the type of product transfer	
			SU Summary	

	Segment:	**DTM** Date/Time Reference (Service Period Start)
	Position:	020
	Loop:	**PTD** **Mandatory**
	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:		

HI: Not Used
HU: Not Used
IU: Required for FirstEnergy when BPT04 = X5, otherwise not used.
MU: Required if there are metered services on the account
DTM~150~19990101

Data Element Summary

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

Segment:		**DTM** Date/Time Reference (Service Period End)			
Position:		020			
Loop:		**PTD** **Mandatory**			
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:

HI: Not Used
HU: Not Used
IU: Required for FirstEnergy when BPT04 = X5, otherwise not used.
MU: Required if there are metered services on the account
DTM~151~19990131

Data Element Summary

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

Segment:		**QTY** Quantity			

Position: 110
Loop: QTY Optional
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.
Sending values for K1, K2, and K4 is optional. The summing of these units of measure does not give a valid number and should not be used for billing. If these values are sent, they should only be used to validate the detail PTD loops.
HI: Not Used
HU: Required for First Energy only, otherwise not used
IU: Required for FirstEnergy when BPT04 = X5, otherwise not used.
MU: Required if there are metered services on the account
QTY~QD~22348~KH

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes	
M	QTY01	673	**Quantity Qualifier**		M	ID 2/2

Code specifying the type of quantity

KA	Estimated	
	Quantity is estimated	
QD	Quantity Delivered	
	Quantity is actual	
87	Actual Quantity Received (Net Metering)	
	Used when the net generation quantity received is actual. (DP&L, FirstEnergy & Duke Energy Ohio Only)	
9H	Estimated Quantity Received (Net Metering)	
	Used when the net generation quantity received is estimated. (DP&L, FirstEnergy & Duke Energy Ohio Only)	

	Ref. Des.	Data Element	Name		Attributes	
M	QTY02	380	**Quantity**		X	R 1/15

Numeric value of quantity

	Ref. Des.	Data Element	Name		Attributes	
M	QTY03	C001	**Composite Unit of Measure**		O	

To identify a composite unit of measure (See Figures Appendix for examples of use)
Note this is a composite data element, populate C00101

	Ref. Des.	Data Element	Name		Attributes	
M	C00101	355	**Unit or Basis for Measurement Code**		M	ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

K1	Kilowatt Demand	
	kW - Represents potential power load measured at predetermined intervals. Sending K1 value is optional.	
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. Sending K2 value is optional.	
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 - Kilovolt Amperes. Sending K4 value is optional.
KH	Kilowatt Hour
	kWh - Kilowatt Hours

	Segment:	**MEA** Measurements (Readings & Time of Use)		

Segment: **MEA** Measurements (Readings & Time of Use)
Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
  1 At least one of MEA03 MEA05 MEA06 or MEA08 is required.
  2 If MEA05 is present, then MEA04 is required.
  3 If MEA06 is present, then MEA04 is required.
  4 If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
  5 Only one of MEA08 or MEA03 may be present.
Semantic Notes:
  1 MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
  1 When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes: The MEA segment is sent for each QTY loop. The MEA will indicate the "time of use" that applies to the QTY. If meter readings are included in the MEA, they will indicate the "time of use" that the meter readings apply to.
HI: Not Used
HU: Required for First Energy only, otherwise not used
IU: Required for FirstEnergy when BPT04 = X5, otherwise not used.
MU: Optional for AEP. May be sent by AEP for TOU Market Transition program
MEA~~PRQ~772~KH~~~42
MEA~~PRQ~12799~K1~~~51

Data Element Summary

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

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

   PRQ   Product Reportable Quantity

	Ref. Des.	Data Element	Name		Attributes
M	MEA03	739	**Measurement Value**	X	R 1/20

The value of the measurement

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.

	Ref. Des.	Data Element	Name		Attributes
M	MEA04	C001	**Composite Unit of Measure**	X	

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

	Ref. Des.	Data Element	Name		Attributes
M	C00101	355	**Unit or Basis for Measurement Code**	M	ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

   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 - Kilovolt Amperes		
		KH		Kilowatt Hour		
				kWh - Kilowatt Hour		

| **C** | **MEA07** | **935** | **Measurement Significance Code** | **O** | **ID 2/2** |

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

NOTE: Other codes (as identified by UIG) can be used to identify quantities measured by the meter, but should not be used to identify tariffed/calculated measurements.
Condition: If time of use meter, this must be sent

41		Off Peak
42		On Peak
43		Intermediate Peak
		Shoulder
51		Totalizer
		Total
71		Low
		(AEP Only)
76		Medium
		(AEP Only)
85		High
		(AEP Only)
97		Maximum
		(AEP Only)

	Segment:	**DTM** Date/Time Reference (Service Period Start)

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:	HI: Not Used
	HU: Required if sending SU loop in 867HU, otherwise not used
	IU: Not Used
	MU: Not Used
	DTM~150~19990101

Data Element Summary

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

Segment:	**DTM** Date/Time Reference (Service Period End)			
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:

HI: Not Used
HU: Required if sending SU loop in 867HU, otherwise not used
IU: Not Used
MU: Not Used
DTM~151~19990131

Data Element Summary

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

Segment:	**PTD** Product Transfer and Resale Detail (Non-Interval Metered Services Detail)
Position:	010
Loop:	PTD Mandatory
Level:	Detail
Usage:	Optional
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:	HI: Not Used
	HU: Required if there are metered services on the account. First Energy does not use, see PTD*SU loop. AEP will send separate PL loops (same meter number) for net metered customers as delivered/consumption (QTY01 = QD or KA) usage & received/generation (QTY01 = 87 or 9H) usage
	IU: Not Used
	MU: Required if there are metered services on the account One PTD loop is required for each meter and/or for each unit of measure on the account.
	PTD~PL

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	PTD01	521	Product Transfer Type Code	M	ID 2/2
			Code identifying the type of product transfer		
			PL Property Level Movement/Sale		

	Segment:	**DTM** Date/Time Reference (Service Period Start)
	Position:	020
	Loop:	PTD Mandatory
	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:		

HI: Not Used
HU: Not Used
IU: Not Used
MU: Required if there are metered services on the account, unless a Meter Exchange Date (DTM~514) is substituted for this code.
DTM~150~19990101

Data Element Summary

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

Segment: **DTM** Date/Time Reference (Service Period End)
Position: 020
Loop: PTD   Mandatory
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: HI: Not Used
HU: Not Used
IU: Not Used
MU: Required if there are metered services on the account, unless a Meter Exchange Date (DTM~514) is substituted for this code.
DTM~151~19990131

Data Element Summary

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

Segment:	**DTM** Date/Time Reference (Meter Exchange Date)			
Position:	020			
Loop:	PTD Mandatory			
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:

HI: Not Used
HU: Not Used
IU: Not Used
MU: Required when a meter is exchanged.
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	Attributes	
M	DTM01	374	**Date/Time Qualifier**	M	ID 3/3
			Code specifying type of date or time, or both date and time		
			514 Transferred		
			Meter Exchange Date		
M	DTM02	373	**Date**	X	DT 8/8
			Date expressed as CCYYMMDD		
			Date expressed as CCYYMMDD		

Segment:		**REF** Reference Identification (Number of Dials)			
Position:		030			
Loop:		PTD	Mandatory		
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:
HI: Not Used
HU: Conditional: if Time of Use (TOU) is being sent, the REF~IX must be sent to distinguish the different TOUs.
IU: Not Used
MU: Required for meters with dials
REF~IX~6.0~KHMON
REF~IX~5.1~KHMON~TU^41
REF~IX~4.2~K1MON~TU^43

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	**M**	**ID 2/3**
			Code qualifying the Reference Identification		
			IX	Item Number	
			Number of dials on the meter displayed as X.Y. The notation X.Y means that the meter has X dials to the left of the decimal point and Y dials to the right.		
M	REF02	127	**Reference Identification**	**X**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Number of Dials		
M	REF03	352	**Description**	**X**	**AN 1/80**
			A free-form description to clarify the related data elements and their content		
			Meter Type. See Meter Type (REF~MT) on 814 Enrollment for valid codes. "COMBO" is not a valid code for this element.		
C	REF04	C040	**Reference Identifier**	**O**	
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier		
			Note this is a composite data element. Populate C04001 and C04002.		
			Condition: if this is a time of use meter, this must be sent		
C	C04001	128	**Reference Identification Qualifier**	**C**	**ID 2/3**
			Code qualifying the Reference Identification		
			Condition: if this is a time of use meter, this must be sent		
			TU	Trial Location Code	
				Time of Use	
C	C04002	127	**Reference Identification**	**C**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			NOTE: Other codes (as identified by UIG) can be used to identify quantities measured by the meter, but should not be used to identify tariffed/calculated measurements.		
			Condition: if this is a time of use meter, this must be sent		
			41	Off Peak	

42	On Peak
43	Intermediate Peak
	Shoulder
51	Totalizer
	Total
71	Low
	(AEP Only)
76	Medium
	(AEP Only)
85	High
	(AEP Only)
97	Maximum
	(AEP Only)

	Segment:	**REF** Reference Identification (Meter Role)		

Segment: **REF** Reference Identification (Meter Role)
Position: 030
Loop: PTD   Mandatory
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: HI: Not Used
         HU: Not Used
         IU: Not Used
         MU: Required if there are metered services on the account
         REF~JH~A

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	REF01	128	**Reference Identification Qualifier**	M ID 2/3

Code qualifying the Reference Identification

        JH   Tag

                            Meter Role

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

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

        A   Additive

                            This consumption contributed to the summarized total (do
                            nothing)

        I   Ignore

                            This consumption did not contribute to the summarized
                            total (do nothing)

        S   Subtractive

                            This consumption must be subtracted from the
                            summarized total

Segment:	**REF**	Reference Identification (Meter Number)		

Segment: **REF** Reference Identification (Meter Number)
Position: 030
Loop: PTD Mandatory
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:
Notes: HI: Not Used
    HU: Required if there are metered services on the account
    IU: Not Used
    MU: Required if there are metered services on the account
    REF~MG~2222277S

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			MG Meter Number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Meter Number		

				Segment:	**REF** Reference Identification (Meter Type)

Segment: **REF** Reference Identification (Meter Type)
Position: 030
Loop: PTD   Mandatory
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: HI: Not Used
HU: Required if there are metered services on the account
IU: Not Used
MU: Required if there are metered services on the account
REF~MT~KHMON

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	REF01	128	**Reference Identification Qualifier**	M ID 2/3

Code qualifying the Reference Identification

MT   Meter Ticket Number

Meter Type

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

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

When REF01 is 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 reported by the metering agent. Valid values can be a
combination of the following values:

Type of Consumption
  K1 Kilowatt Demand (kW)
  K2 Kilovolt Amperes Reactive Demand (kVAR)
  K3 Kilovolt Amperes Reactive Hour (kVARh)
  K4 Kilovolt Amperes (kVA)
  KH Kilowatt Hour (kWh)

Metering Interval Reported for Billing Purposes
  nnn Number of minutes from 001 to 999
  ANN Annual
  BIA Bi-annual
  BIM Bi-monthly
  DAY Daily
  MON Monthly
  QTR Quarterly
  TOU Time of Use

For Example:
  KHMON Kilowatt Hours Per Month
  K1015 Kilowatt Demand per 15 minute interval
"COMBO" cannot be used in this segment.

Segment: **REF** Reference Identification (LO=Load Profile)

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:

> HI: Not Used
> HU: Required for DP&L and Duke Energy Ohio. In the event there are multiple rate classes under an account, the PTD~PL/BC will be looped for each rate class. (AEP & FE sends in PTD~FG loop)
> IU: Not Used
> MU: Not Used
> REF~LO~GS

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes	
Must Use	REF01	128	**Reference Identification Qualifier**		M	ID 2/3
			Code qualifying the Reference Identification			
		LO	Load Planning Number			
			Load profile			
Must Use	REF02	127	**Reference Identification**		X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier			

	Segment:	**REF** Reference Identification (EDU Rate Code)
	Position:	030
	Loop:	PTD Mandatory
	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:		
Notes:		HI: Not Used
		HU: Required for DP&L and Duke Energy Ohio. In the event there are multiple rate classes under an account, the PTD~PL/BC will be looped for each rate class. (AEP & FE sends in PTD~FG loop)
		IU: Not Used
		MU: Required if there are metered services on the account
		REF~NH~RES

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			NH Rate Card Number		
			EDU Rate Code or tariff		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Rate Code or tariff		

| | | | **Segment:** | **REF** Reference Identification (EDU Rate Subclass) |
| | | | |

Segment: **REF** Reference Identification (EDU Rate Subclass)
Position: 030
Loop: PTD   Mandatory
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:
Notes: HI: Not Used
HU: Conditional – send if there are metered services on the account and if it is stored in the EDU system
IU: Not Used
MU: Conditional – send if there are metered services on the account and if it is stored in the EDU system
REF~PR~HEAT
REF~PR~WHA

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			PR Price Quote Number		
			EDU Rate Subclass or Revenue Class - Used to provide further classification of a rate.		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Rate Subclass or Revenue Class		

	Segment:	**QTY** Quantity
	Position:	110
	Loop:	QTY Optional
	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: 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.
HI: Not Used
HU: Required if there are metered services on the account. NOTE: AEP will send separate PL loops (same meter number) for net metered customers as delivered / consumption (QTY01 = QD or KA) usage & received/generation (QTY01 = 87 or 9H) usage
IU: Not Used
MU: Required if there are metered services on the account
QTY~QD~22348~KH

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes	
M	QTY01	673	**Quantity Qualifier**		M	ID 2/2

Code specifying the type of quantity

KA	Estimated	
	Quantity is estimated	
QD	Quantity Delivered	
	Quantity is actual	
87	Actual Quantity Received (Net Metering)	
	Used when the net generation quantity received is actual. (AEP Ohio, DP&L, Duke Energy Ohio & First Energy Only)	
9H	Estimated Quantity Received (Net Metering)	
	Used when the net generation quantity received is estimated. (AEP Ohio, DP&L, Duke Energy Ohio & First Energy Only)	

	Ref. Des.	Data Element	Name		Attributes	
M	QTY02	380	**Quantity**		X	R 1/15

Numeric value of quantity

M	QTY03	C001	**Composite Unit of Measure**		O	

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

Note this is a composite data element, populate C00101

M	C00101	355	**Unit or Basis for Measurement Code**		M	ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

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 - Kilovolt Amperes
KH		Kilowatt Hour
		kWh - Kilowatt Hour

Segment:	**MEA** Measurements (Readings & Time of Use)		
Position:	160		
Loop:	QTY	Optional	
Level:	Detail		
Usage:	Optional		
Max Use:	40		
Purpose:	To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)		
Syntax Notes:	1	At least one of MEA03 MEA05 MEA06 or MEA08 is required.	
	2	If MEA05 is present, then MEA04 is required.	
	3	If MEA06 is present, then MEA04 is required.	
	4	If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.	
	5	Only one of MEA08 or MEA03 may be present.	
Semantic Notes:	1	MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.	
Comments:	1	When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.	

Notes: The MEA segment is sent for each QTY loop. The MEA will indicate the "time of use" that applies to the QTY. If meter readings are included in the MEA, they will indicate the "time of use" that the meter readings apply to.

HI: Not Used

HU: Not Used

IU: Not Used

MU: Required if there are metered services on the account

MEA~AA~PRQ~772~KH~10500~11272~42

MEA~AF~PRQ~12799~K1~~12799~51

Data Element Summary

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

Code identifying the broad category to which a measurement applies

AA		Meter reading-beginning actual/ending actual
AE		Meter reading-beginning actual/ending estimated
AF		Actual Total

Recommended for demand because demand usually has only 1 reading. This code will also be used by Duke Energy Ohio if previous reading is not being supplied for units of measure other than demand.

EA		Meter reading-beginning estimated/ending actual
EE		Meter reading-beginning estimated/ending estimated

M	MEA02	738	**Measurement Qualifier**	O ID 1/3

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

PRQ		Product Reportable Quantity

M	MEA03	739	**Measurement Value**	X R 1/20

The value of the measurement

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.

M	MEA04	C001	**Composite Unit of Measure**	X

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

M	C00101	355	**Unit or Basis for Measurement Code**	M ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

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 - Kilovolt Amperes		
		KH	Kilowatt Hour		
			kWh - Kilowatt Hour		

C	MEA05	740	**Range Minimum**	X	R 1/20
			The value specifying the minimum of the measurement range		
			Beginning Reading		
			Required unless MEA01 = AF		

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

C	MEA07	935	**Measurement Significance Code**	O	ID 2/2
			Code used to benchmark, qualify or further define a measurement value		
			NOTE: Other codes (as identified by UIG) can be used to identify quantities measured by the meter, but should not be used to identify tariffed/calculated measurements. Condition: If time of use meter, this must be sent		
		41	Off Peak		
		42	On Peak		
		43	Intermediate Peak		
			Shoulder		
		51	Totalizer		
			Total		
		71	Low		
			(AEP Only)		
		76	Medium		
			(AEP Only)		
		85	High		
			(AEP Only)		
		97	Maximum		
			(AEP Only)		

	Segment:	**MEA** Measurements (Meter Multiplier)

Segment: **MEA** Measurements (Meter Multiplier)
Position: 160
Loop: QTY Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
1. At least one of MEA03 MEA05 MEA06 or MEA08 is required.
2. If MEA05 is present, then MEA04 is required.
3. If MEA06 is present, then MEA04 is required.
4. If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
5. Only one of MEA08 or MEA03 may be present.
Semantic Notes:
1. MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
1. When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes: If no meter multiplier, then populate with "1"

HI: Not Used
HU: Not Used
IU: Not Used
MU: Required if there are metered services on the account
MEA~~MU~1

Data Element Summary

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

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

MU   Multiplier

Meter Multiplier

(Ending Reading - Beginning Reading) * Meter Multiplier = Billed Usage

	Ref. Des.	Data Element	Name	Attributes	
M	MEA03	739	Measurement Value	X	R 1/20

The value of the measurement

Meter Multiplier

			Segment:	**MEA** Measurements (Power Factor)

Segment: **MEA** Measurements (Power Factor)
Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
1   At least one of MEA03 MEA05 MEA06 or MEA08 is required.
2   If MEA05 is present, then MEA04 is required.
3   If MEA06 is present, then MEA04 is required.
4   If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
5   Only one of MEA08 or MEA03 may be present.
Semantic Notes:
1   MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
1   When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes: HI: Not Used
HU: Not Used
IU: Not Used
MU: Required if there are metered services on the account and it is available
MEA~~ZA~.95

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	MEA02	738	**Measurement Qualifier**	O	ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			ZA Power Factor		
			Relationship between watts and volt - amperes necessary to supply electric load		
M	MEA03	739	**Measurement Value**	X	R 1/20
			The value of the measurement		
			Power Factor		

Segment: # MEA Measurements (Transformer Loss Factor)
Position: 160
Loop: QTY Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
1. At least one of MEA03 MEA05 MEA06 or MEA08 is required.
2. If MEA05 is present, then MEA04 is required.
3. If MEA06 is present, then MEA04 is required.
4. If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
5. Only one of MEA08 or MEA03 may be present.

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

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

Notes:
HI: Not Used
HU: Not Used
IU: Not Used
MU: Required if there are metered services on the account and the transformer loss is not measured by the meter
MEA~~CO~1.02

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	MEA02	738	**Measurement Qualifier**	O	ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			CO Core Loss		
			Transformer Loss Factor		
M	MEA03	739	**Measurement Value**	X	R 1/20
			The value of the measurement		
			Transformer Loss Factor		

Segment:			**DTM** Date/Time Reference			

Segment: **DTM** Date/Time Reference
Position: 210
Loop: QTY   Optional
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:
HI: Not Used
HU: Required if there are metered services on the account
IU: Not Used
MU: Not Used
DTM~150~19990219

Data Element Summary

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

Segment:	**DTM** Date/Time Reference			

Segment: **DTM** Date/Time Reference

Position: 210
Loop: QTY   Optional
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: HI: Not Used
           HU: Required if there are metered services on the account
           IU: Not Used
           MU: Not Used
           DTM~151~19990322

Data Element Summary

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

			Segment:	**PTD** Product Transfer and Resale Detail (Interval Meter Services Summary)

Segment: **PTD** Product Transfer and Resale Detail (Interval Meter Services Summary)
Position: 010
Loop: PTD   Optional
Level: Detail
Usage: Optional
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: HI: Duke Energy Ohio may send the PTD~BO loop on 867HIU transactions, otherwise not used
HU: Not Used
IU: Required, First Energy does not use when BPT04 = X5. Note for IU: If EDU is reporting separate on/off peak PTD~BO loops, only one PTD~PM loop should be sent.
MU: Not Used
One PTD loop is required for each meter or for each unit of measure on the account.
PTD~BO

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	PTD01	521	**Product Transfer Type Code**		M ID 2/2
			Code identifying the type of product transfer		
			BO	Designated Items	
				Provides Summary information for each interval meter or unit of measure.	

Segment:		**DTM** Date/Time Reference (Service Period Start)			
Position:		020			
Loop:		PTD	Optional		
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:		HI: Not Used			
		HU: Not Used			
		IU: Required			
		MU: Not Used			
		DTM~150~19990101			

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	DTM01	374	Date/Time Qualifier		M ID 3/3
			Code specifying type of date or time, or both date and time		
			150	Service Period Start	
			Beginning Read Date		
M	DTM02	373	Date		X DT 8/8
			Date expressed as CCYYMMDD		
			Date expressed CCYYMMDD		

Segment: # DTM Date/Time Reference (Service Period End)
Position: 020
Loop: PTD   Optional
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:
HI: Not Used
HU: Not Used
IU: Required
MU: Not Used
DTM~151~19990131

Data Element Summary

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

Segment:	**REF** Reference Identification (Number of Dials)				
Position:	030				
Loop:	PTD Optional				
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:

HI: Not Used
HU: Not Used
IU: Required
MU: Not Used
REF~IX~6.0~KHMON
REF~IX~4.2~K1MON~TU^43

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			IX Item Number		
			Number of dials on the meter displayed as X.Y. The notation X.Y means that the meter has X dials to the left of the decimal point and Y dials to the right.		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Number of Dials		
M	REF03	352	**Description**	X	AN 1/80
			A free-form description to clarify the related data elements and their content		
			Meter Type. See Meter Type (REF~MT) on 814 Enrollment for valid codes. "COMBO" is not a valid code for this element.		
C	REF04	C040	**Reference Identifier**	O	
			To identify one or more reference numbers or identification numbers as specified by the Reference Qualifier		
			Note this is a composite data element. Populate C04001 and C04002.		
			Condition: if this is a time of use meter, this must be sent		
C	C04001	128	**Reference Identification Qualifier**	C	ID 2/3
			Code qualifying the Reference Identification		
			Condition: if this is a time of use meter, this must be sent		
			TU Trial Location Code		
			Time of Use		
C	C04002	127	**Reference Identification**	C	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Condition: if this is a time of use meter, this must be sent		
			41 Off Peak		
			42 On Peak		
			43 Intermediate Peak		
			Shoulder		
			51 Totalizer		
			Total		

	Segment:	**REF** Reference Identification (Meter Role)
	Position:	030
	Loop:	PTD Optional
	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:	HI: Not Used
		HU: Not Used
		IU: Required
		MU: Not Used
		REF~JH~A

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			JH Tag		
			Meter Role		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			A Additive		
			This consumption contributed to the summarized total (do nothing)		
			I Ignore		
			This consumption did not contribute to the summarized total (do nothing)		
			S Subtractive		
			This consumption must be subtracted from the summarized total		

Segment:		**REF** Reference Identification (Meter Number)			
Position:		030			
Loop:		PTD	Optional		
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 numbers will contain only uppercase letters (A to Z) and digits (0 to 9). Note that punctuation (spaces, dashes, etc.) must be excluded, and significant leading and trailing zeros that are part of the meter number must be present.
HI: Not Used
HU: Not Used
IU: Required
MU: Not Used
REF~MG~2222277S

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			MG Meter Number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Meter Number		

			Segment:	**REF** Reference Identification (Meter Type)

Segment: **REF** Reference Identification (Meter Type)
Position: 030
Loop: PTD   Optional
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: HI: Not Used
HU: Not Used
IU: Required
MU: Not Used
REF~MT~KHMON

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3

Code qualifying the Reference Identification

MT   Meter Ticket Number

Meter Type

	Ref. Des.	Data Element	Name	Attributes	
M	REF02	127	**Reference Identification**	X	AN 1/30

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

When REF01 is 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 reported by the metering agent. Valid values can be a combination of the following values:

Type of Consumption
  K1 Kilowatt Demand (kW)
  K2 Kilovolt Amperes Reactive Demand (kVAR)
  K3 Kilovolt Amperes Reactive Hour (kVARh)
  K4 Kilovolt Amperes (kVA)
  KH Kilowatt Hour (kWh)

Metering Interval Reported for Billing Purposes
  nnn Number of minutes from 001 to 999
  ANN Annual
  BIA Bi-annual
  BIM Bi-monthly
  DAY Daily
  MON Monthly
  QTR Quarterly
  TOU Time of Use

For Example:
  KHMON Kilowatt Hours Per Month
  K1015 Kilowatt Demand per 15 minute interval
"COMBO" cannot be used in this segment.

Segment:	**QTY** Quantity
Position:	110
Loop:	QTY Optional
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:	HI: Not Used
	HU: Not Used
	IU: Required
	MU: Not Used
	QTY~QD~22348~KH

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	QTY01	673	**Quantity Qualifier**		M ID 2/2
			Code specifying the type of quantity		
			KA	Estimated	
				Quantity is estimated	
			QD	Quantity Delivered	
				Quantity is actual	
			87	Actual Quantity Received (Net Metering)	
				Used when the net generation quantity received is actual. (DP&L, Duke Energy Ohio Only)	
			9H	Estimated Quantity Received (Net Metering)	
				Used when the net generation quantity received is estimated. (DP&L, Duke Energy Ohio Only)	
M	QTY02	380	**Quantity**		X R 1/15
			Numeric value of quantity		
M	QTY03	C001	**Composite Unit of Measure**		O
			To identify a composite unit of measure (See Figures Appendix for examples of use)		
			Note this is a composite data element, populate C00101		
M	C00101	355	**Unit or Basis for Measurement Code**		M ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			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 - Kilovolt Amperes	
			KH	Kilowatt Hour	
				kWh - Kilowatt Hour	

Segment:	**MEA** Measurements (Meter Reads)			

Segment: # MEA Measurements (Meter Reads)

Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
  1   At least one of MEA03 MEA05 MEA06 or MEA08 is required.
  2   If MEA05 is present, then MEA04 is required.
  3   If MEA06 is present, then MEA04 is required.
  4   If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
  5   Only one of MEA08 or MEA03 may be present.
Semantic Notes:
  1   MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
  1   When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes:
HI: Not Used
HU: Not Used
IU: Conditional: Send if interval meter has associated monthly begin/end readings.
MU: Not Used
MEA~AF~~~KH~02500~04000~51

Data Element Summary

Ref. Des.	Data Element	Name		Attributes
M	**MEA01**	**737**	**Measurement Reference ID Code**	**O ID 2/2**
			Code identifying the broad category to which a measurement applies	
		AA	Meter reading-beginning actual/ending actual	
		AE	Meter reading-beginning actual/ending estimated	
		AF	Actual Total	
			Recommended for demand because demand usually has only 1 reading. This code will also be used by Duke Energy Ohio if previous reading is not being supplied for units of measure other than demand.	
		EA	Meter reading-beginning estimated/ending actual	
		EE	Meter reading-beginning estimated/ending estimated	
M	**MEA04**	**C001**	**Composite Unit of Measure**	**X**
			To identify a composite unit of measure (See Figures Appendix for examples of use)	
M	**C00101**	**355**	**Unit or Basis for Measurement Code**	**M ID 2/2**
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	
		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 - Kilovolt Amperes		
		KH	Kilowatt Hour		
			kWh - Kilowatt Hour		
C	**MEA05**	**740**	**Range Minimum**	**X**	**R 1/20**
			The value specifying the minimum of the measurement range		
			Beginning Reading if applicable		
			Condition: Required unless MEA01 = "AF"		
M	**MEA06**	**741**	**Range Maximum**	**X**	**R 1/20**
			The value specifying the maximum of the measurement range		
			Ending reading or single reading		

Segment:	**MEA** Measurements (Meter Multiplier)			

Segment: **MEA** Measurements (Meter Multiplier)
Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
    1   At least one of MEA03 MEA05 MEA06 or MEA08 is required.
    2   If MEA05 is present, then MEA04 is required.
    3   If MEA06 is present, then MEA04 is required.
    4   If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
    5   Only one of MEA08 or MEA03 may be present.
Semantic Notes:
    1   MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
    1   When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes: If no meter multiplier, then populate with "1".

HI: Not Used
HU: Not Used
IU: Required
MU: Not Used
MEA~~MU~1

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	MEA02	738	**Measurement Qualifier**	O	ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			MU Multiplier		
			Meter Multiplier		
			(Ending Reading - Beginning Reading) * Meter Multiplier = Billed Usage		
M	MEA03	739	**Measurement Value**	X	R 1/20
			The value of the measurement		
			Meter Multiplier		

Segment: **MEA** **Measurements (Power Factor)**
Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
1   At least one of MEA03 MEA05 MEA06 or MEA08 is required.
2   If MEA05 is present, then MEA04 is required.
3   If MEA06 is present, then MEA04 is required.
4   If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
5   Only one of MEA08 or MEA03 may be present.
Semantic Notes:
1   MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
1   When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes:
HI: Not Used
HU: Not Used
IU: Required if available
MU: Not Used
MEA~~ZA~.95

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	MEA02	738	**Measurement Qualifier**	O	ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			ZA Power Factor		
			Relationship between watts and volt - amperes necessary to supply electric load		
M	MEA03	739	**Measurement Value**	X	R 1/20
			The value of the measurement		
			Power Factor		

Segment: **MEA** Measurements (Transformer Loss Factor)

Position: 160
Loop: QTY   Optional
Level: Detail
Usage: Optional
Max Use: 40
Purpose: To specify physical measurements or counts, including dimensions, tolerances, variances, and weights (See Figures Appendix for example of use of C001)
Syntax Notes:
1   At least one of MEA03 MEA05 MEA06 or MEA08 is required.
2   If MEA05 is present, then MEA04 is required.
3   If MEA06 is present, then MEA04 is required.
4   If MEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required.
5   Only one of MEA08 or MEA03 may be present.
Semantic Notes:
1   MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
Comments:
1   When citing dimensional tolerances, any measurement requiring a sign (+ or -), or any measurement where a positive (+) value cannot be assumed, use MEA05 as the negative (-) value and MEA06 as the positive (+) value.
Notes:
HI: Not Used
HU: Not Used
IU: Required when the transformer loss is not measured by the meter
MU: Not Used
MEA~~CO~1.02

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	MEA02	738	**Measurement Qualifier**	O	ID 1/3
			Code identifying a specific product or process characteristic to which a measurement applies		
			CO Core Loss		
			Transformer Loss Factor		
M	MEA03	739	**Measurement Value**	X	R 1/20
			The value of the measurement		
			Transformer Loss Factor		

Segment:		**PTD** Product Transfer and Resale Detail (Interval Meter Services Detail)			
Position:		010			
Loop:		PTD	Mandatory		
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:		HI: Required			

HI: Required
HU: Not Used
IU: Required if the CRES requests detail interval information on the Enrollment or Change. One PTD loop is required for each meter and/or each unit of measure on the account.
Note for IU: If EDU is reporting separate on/off peak PTD~BO loops, only one PTD~PM loop should be sent. PTD~PM loop is optional when BPT01 = 01 (867IU Cancel)
MU: Not Used.
PTD~PM

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	PTD01	521	**Product Transfer Type Code**	M	ID 2/2

Code identifying the type of product transfer

PM   Physical Meter Information

Provides detail information for each interval meter or unit of measure.

			Segment:	**REF** Reference Identification (Meter Number)

Segment: **REF** Reference Identification (Meter Number)
Position: 030
Loop: PTD   Mandatory
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:
Notes:

HI: Required
HU: Not Used
IU: Required
MU: Not Used
REF~MG~2222277S

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			MG Meter Number		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			Meter Number		

Segment:	**QTY** Quantity			
Position:	110			
Loop:	QTY	Optional		
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:

HI: Required
HU: Not Used
IU: Required if CRES requests detail interval information on the Enrollment or Change
MU: Not Used
QTY~QD~22348

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	QTY01	673	**Quantity Qualifier**	M	ID 2/2

Code specifying the type of quantity

KA	Estimated	
	Quantity is estimated	
QD	Quantity Delivered	
	Quantity is actual	
20	Unavailable	
	Used when meter data is not available to fill the intervals FirstEnergy only	
87	Actual Quantity Received (Net Metering)	
	Used when the net generation quantity received is actual. (DP&L, FirstEnergy & Duke Energy Ohio Only)	
9H	Estimated Quantity Received (Net Metering)	
	Used when the net generation quantity received is estimated. (DP&L, FirstEnergy & Duke Energy Ohio Only)	

	Ref. Des.	Data Element	Name	Attributes	
M	QTY02	380	**Quantity**	X	R 1/15

Numeric value of quantity

	Ref. Des.	Data Element	Name	Attributes	
M	QTY03	C001	**Composite Unit of Measure**	O	

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

Note this is a composite data element, populate C00101

	Ref. Des.	Data Element	Name	Attributes	
M	C00101	355	**Unit or Basis for Measurement Code**	M	ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

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 - Kilovolt Amperes
	KH	Kilowatt Hour
		kWh - Kilowatt Hour

	Segment:	**DTM** Date/Time Reference (Interval End Time)
	Position:	210
	Loop:	QTY Optional
	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:	HI: Required

HU: Not Used

IU: Required if the CRES requests detail interval information on the Enrollment or Change

MU: Not Used

DTM~194~19990115~1500~ET

DTM~194~19990115~1500~ES

DTM~194~19990629~2315~ED

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	DTM01	374	Date/Time Qualifier	M	ID 3/3

Code specifying type of date or time, or both date and time

194	Period End

The date/time of the end of the interval

	Ref. Des.	Data Element	Name	Attributes	
M	DTM02	373	Date	X	DT 8/8

Date expressed as CCYYMMDD

	Ref. Des.	Data Element	Name	Attributes	
M	DTM03	337	Time	X	TM 4/8

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, where H = Hours and M = Minutes in Eastern Prevailing Time (ET). For this transaction, since X12 does not allow 2400 for time, 2359 will be used to indicate midnight. For example, midnight between October 15th and October 16th will be reflected as 2359 of October 15th.

	Ref. Des.	Data Element	Name	Attributes	
M	DTM04	623	Time Code	O	ID 2/2

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

ED	Eastern Daylight Time (Duke Energy OH and FirstEnergy only)
ES	Eastern Standard Time (Duke Energy OH and FirstEnergy Only)
ET	Eastern Time

Segment:		**PTD** Product Transfer and Resale Detail (Unmetered Services)			

Segment: **PTD** Product Transfer and Resale Detail (Unmetered Services)
Position: 010
Loop: PTD   Mandatory
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: HI: Not Used
HU: Conditional – at least one of the PTD~BC loop must be sent if there are unmetered services on the account
IU: Not Used
MU: Conditional – at least one of the PTD~BC loop must be sent if there are unmetered services on the account
PTD~BC

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
M	PTD01	521	**Product Transfer Type Code**	**M ID 2/2**
			Code identifying the type of product transfer	
			BC Issue - Other Agency	
			Unmetered Services Summary	

Segment: # DTM Date/Time Reference (Service Period Start)

Position: 020
Loop: PTD   Mandatory
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: HI: Not Used
HU: Conditional – at least one set of DTMs (DTM~150 and DTM~151) must be sent in position 020 and/or 210
IU: Not Used
MU: Required if there are unmetered service on the account
DTM~150~19990101

Data Element Summary

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

	Segment:	**DTM** Date/Time Reference (Service Period End)		
	Position:	020		
	Loop:	PTD Mandatory		
	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:	HI: Not Used		

HU: Conditional – at least one set of DTMs (DTM~150 and DTM~151) must be sent in position 020 and/or 210

IU: Not Used

MU: Required if there are unmetered service on the account

DTM~151~19990131

Data Element Summary

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

Segment: # REF Reference Identification (LO=Load Profile)

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: HI: Not Used
HU: Required for DP&L and Duke Energy Ohio. In the event there are multiple rate classes under an account, the PTD~PL/BC will be looped for each rate class. (AEP & FE sends in PTD~FG loop)
IU: Not Used
MU: Not Used
REF~LO~GS

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			LO Load Planning Number		
			Load profile		
Must Use	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		

			Segment:	**REF** Reference Identification (EDU Rate Code)

Segment: **REF** Reference Identification (EDU Rate Code)
Position: 030
Loop: PTD   Mandatory
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:
Notes: HI: Not Used
HU: Required for DP&L and Duke Energy Ohio. In the event there are multiple rate classes under an account, the PTD~PL/BC will be looped for each rate class. (AEP & FE sends in PTD~FG loop)

IU: Not Used
MU: Required if there are metered services on the account
REF~NH~RES

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	**ID 2/3**
			Code qualifying the Reference Identification		
			NH Rate Card Number		
			EDU Rate Code or tariff		
M	REF02	127	**Reference Identification**	X	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Rate Code or tariff		

				Segment:	**REF** Reference Identification (EDU Rate Subclass)

Segment: **REF** Reference Identification (EDU Rate Subclass)
Position: 030
Loop: PTD Mandatory
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:
Notes: HI: Not Used
HU: Conditional – send if there are metered services on the account and if it is stored in the EDU system
IU: Not Used
MU: Conditional – send if there are metered services on the account and if it is stored in the EDU system
REF~PR~HEAT
REF~PR~WHA

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3

Code qualifying the Reference Identification

  PR   Price Quote Number

          EDU Rate Subclass or Revenue Class - Used to provide further classification of a rate.

	Ref. Des.	Data Element	Name		Attributes
M	REF02	127	**Reference Identification**	X	AN 1/30

Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier
EDU Rate Subclass or Revenue Class

	Segment:	**REF** Reference Identification (Product Type)
	Position:	030
	Loop:	PTD Mandatory
	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: HI: Not Used
HU: Required
IU: Not Used
MU: Required if there are unmetered service on the account
REF~PRT~LIGHT

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			PRT Product Type		
			EDU Defined Unmetered Service Type		
M	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			This describes the type of device that this measurement loop references (for instance, a specific wattage of an outdoor light). The valid codes will be defined on each EDU Web Site.		

Segment: # QTY Quantity
Position: 110
Loop: QTY   Optional
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:
HI: Not Used
HU: Required
IU: Not Used
MU: Required if there are unmetered service on the account
QTY~QD~22348~KH

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
M	QTY01	673	**Quantity Qualifier**	M	ID 2/2

Code specifying the type of quantity

QD   Quantity Delivered

Quantity is actual

Whether unmetered services are estimated, calculated, or actual, they will be coded as actual.

M	QTY02	380	**Quantity**	X	R 1/15

Numeric value of quantity

This represents the consumption quantity per device

M	QTY03	C001	**Composite Unit of Measure**	O	

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

Note this is a composite data element, populate C00101

M	C00101	355	**Unit or Basis for Measurement Code**	M	ID 2/2

Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken

EA   Each

Ea

KH   Kilowatt Hour

kWh

Segment:		# DTM Date/Time Reference		

Position: 210
Loop: QTY Optional
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: HI: Not Used
HU: Conditional – at least one set of DTMs (DTM~150 and DTM~151) must be sent in position 020 and/or 210
IU: Not Used
MU: Not Used
DTM~150~19990219

Data Element Summary

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

Segment:	**DTM** Date/Time Reference			
Position:	210			
Loop:	QTY	Optional		
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:	HI: Not Used			

Notes:

HI: Not Used

HU: Conditional – at least one set of DTMs (DTM~150 and DTM~151) must be sent in position 020 and/or 210

IU: Not Used

MU: Not Used

DTM~151~19990322

Data Element Summary

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

	Segment:	**PTD** Product Transfer and Resale Detail (FG=Scheduling Determinants)
	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:	HI: Required for PJM Customers; otherwise not used
		HU: Required for PJM Customers; otherwise not used
		IU: Not Used
		MU: Not Used
		This PTD Loop will be used to provide Scheduling Determinants, such as the Capacity Contribution (a.k.a. Load Responsibility) and Transmission Contribution for PJM customers.
	Examples:	PTD*FG

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	PTD01	521	**Product Transfer Type Code**	M ID 2/2
			Code identifying the type of product transfer	

            FG   Flowing Gas Information

                                   Scheduling Determinants: This loop will provide information required by PJM.

Segment: **REF** Reference Identification (BF=LDC Bill Cycle)

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:	HI: Required
	HU: Required
	IU: Not Used
	MU: Not Used
	REF~BF~15

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	REF01	128	**Reference Identification Qualifier**	**M**	**ID 2/3**
			Code qualifying the Reference Identification		
			BF LDC Bill Cycle		
Must Use	REF02	127	**Reference Identification**	**X**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		

Segment: **REF** Reference Identification (KY=Special Meter Configuration)

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: HI: Required for AEP Ohio when net meter is present on an account (will be required if/when FirstEnergy implements HI)

HU: Required for AEP Ohio & First Energy when net meter is present on an account

IU: Not Used

MU: Not Used

REF~KY~NETMETER

Data Element Summary

	Ref. Des.	Data Element	Name		X12 Attributes
Must Use	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			KY Site Specific Procedures, Terms, and Conditions Special Meter Configuration		
Must Use	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			NETMETER Net metering present		

				Segment:	**REF** Reference Identification (LO=Load Profile)

Segment: **REF** Reference Identification (LO=Load Profile)
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: HI: Required if available
HU: Required for AEP and First Energy (DP&L and Duke send in PTD~PL/BC loops)
IU: Not Used
MU: Not Used
REF~LO~GS

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
			LO Load Planning Number Load profile		
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 (NH=LDC Rate Class)

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:	HI: Required
	HU: Required for AEP and First Energy (DP&L and Duke send in PTD~PL/BC loops)
	IU: Not Used
	MU: Not Used
	REF~NH~GS1

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	REF01	128	**Reference Identification Qualifier**	M	ID 2/3
			Code qualifying the Reference Identification		
			NH LDC Rate Code		
Must Use	REF02	127	**Reference Identification**	X	AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		

Segment:	**REF** Reference Identification (LF=Loss Factor)		

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:	HI: Required for First Energy companies (if/when HI supported) & AEP Ohio; optional for DP&L and Duke Energy Ohio
	HU: Required for First Energy companies & AEP Ohio; optional for DP&L and Duke Energy Ohio IU: Not Used
	MU: Not Used
	REF~LF~2

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes	
Must Use	**REF01**	**128**	**Reference Identification Qualifier**	**M**	**ID 2/3**
			Code qualifying the Reference Identification		
			LF Load Planning Number		
			Loss Factor		
Must Use	**REF02**	**127**	**Reference Identification**	**X**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		

			Segment:	**REF** Reference Identification (PR = EDU Rate Subclass)

Segment: **REF** Reference Identification (PR = EDU Rate Subclass)
Position: 030
Loop: PTD   Mandatory
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:
Notes: HI: Conditional – send if there are metered services on the account if it is stored in the EDU system
       HU: Conditional – send if there are metered services on the account and if it is stored in the EDU system
       IU: Not Used
       MU: Not Used
       REF~PR~HEAT
       REF~PR~WHA

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
M	REF01	128	**Reference Identification Qualifier**		M ID 2/3
			Code qualifying the Reference Identification		
			PR	Price Quote Number	
			EDU Rate Subclass or Revenue Class - Used to provide further classification of a rate.		
M	REF02	127	**Reference Identification**		X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			EDU Rate Subclass or Revenue Class		

Segment:	**REF** Reference Identification (SV=Service Voltage)			
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: HI: Required for First Energy companies (if/when HI supported) & AEP Ohio; optional for DP&L and Duke Energy
HU: Required for First Energy companies & AEP Ohio; optional for DP&L and Duke Energy Ohio
IU: Not Used
MU: Not Used
REF~SV~SECONDARY

Data Element Summary

	Ref. Des.	Data Element	Name	X12 Attributes	
Must Use	**REF01**	**128**	**Reference Identification Qualifier**	**M**	**ID 2/3**
			Code qualifying the Reference Identification		
		SV	Service Charge Number		
			Service Voltage		
Must Use	**REF02**	**127**	**Reference Identification**	**X**	**AN 1/30**
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier		
			PRIMARY		
			SECONDARY		
			Actual service voltage transmission value (Ex: 34.5kV)		

Segment:	**QTY** Quantity (KC=Peak Load Contribution)
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:	HI: Required for PJM Customers; otherwise not used
	HU: Required for PJM Customers; otherwise not used
	IU: Not Used
	MU: Not Used
	Each QTY/MEA/DTM loop conveys consumption information about one metering period. The value provided is at the Account or Service Delivery Identifier Number level for AEP.
	Zero values may be sent if the EDU is, in fact, stating that there is no contribution for this customer's account
Example:	QTY*KC*752*K1

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes	
Must Use	QTY01	673	**Quantity Qualifier**	M	ID 2/2
			Code specifying the type of quantity		
			KC Net Quantity Decrease		
			Peak Load Contribution, (a.k.a. Capacity Contribution, 5CP, or Load Responsibility): Peak load contributions provided to PJM for Installed Capacity calculation (coincident with PJM Peak).		
Must Use	QTY02	380	**Quantity**	X	R 1/15
			Numeric value of quantity		
Must Use	QTY03	355	**Unit or Basis for Measurement Code**	M	ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken		
			K1 Kilowatt Demand		
			Represents potential power load measured at predetermined intervals		

Segment:	**DTM** Date/Time Reference (007=PLC Effective Date)	
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:	HI: Required for PJM Customers; otherwise not used	
	HU: Required for PJM Customers; otherwise not used	
	IU: Not Used	
	MU: Not Used	

The QTY/DTM loop may be sent twice depending on the time of year the Historical Usage is being provided. (PLC is effective June 1 - May 31) One iteration will show the current PLC and a second iteration will show the PLC that will be effective in the period defined in the DTM segment. Currently the EDUs change the PLC effective June 1st. Once the EDUs are aware of what the next effective PLC will be (typically in December) they should begin providing it on transactions.

For example, in February 2014 the PLC values would be reported as:
QTY*KC*476*K1
DTM*007****RD8*20130601-20140531
QTY*KC*450*K1
DTM*007****RD8*20140601-20150531

Whereas in September 2014 the PLC value would include only one loop because the following year's PLC is undetermined:
QTY*KC*450*K1
DTM*007****RD8*20140601-20140531

Ohio EDU Implementation of this segment as per EDI CC 108:
AEP – 3Q 2014
DP&L and Duke Energy Ohio – by 12/31/14
FirstEnergy - TBD

Example:	DTM*007****RD8*20070601-20080531	

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	**DTM01**	**374**	**Date/Time Qualifier**	**M**	**ID 3/3**
			Code specifying type of date, or time, or both date and time		
			007 Effective PLC Effective Date		
Must Use	**DTM05**	**1250**	**Date/Time Period Format Qualifier**	**X**	**ID 2/3**
			Code indicating the date format, time format, or date and time format		
			RD8 Range of Dates Expressed in Format CCYYMMDD-CCYYMMDD		
Must Use	**DTM06**	**1251**	**Date/Time Period**	**X**	**AN 1/35**
			Expressed as CCYYMMDD-CCYYMMDD		

Segment:	**QTY** Quantity (KZ=Network Service Peak Load)		
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:	HI: Required for PJM Customers; otherwise not used		
	HU: Required for PJM Customers; otherwise not used		
	IU: Not Used		
	MU: Not Used		
	Each QTY/MEA/DTM loop conveys consumption information about one metering interval. The value provided is at the Account or Service Delivery Identifier Number level for AEP		
	Zero values may be sent if the EDU is, in fact, stating that there is no contribution for this customer's account.		
Example:	QTY*KZ*752*K1		

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	QTY01	673	**Quantity Qualifier** Code specifying the type of quantity	M ID 2/2
			KZ Corrective Action Requests - Written	
			Network Service Peak Load (a.k.a. Transmission Contribution or 1CP): Customer's peak load contribution provided to PJM for the Transmission Service calculation (coincident with LDC peak).	
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: DTM Date/Time Reference (007=NSPL Effective Date)

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:	HI: Required for PJM Customers; otherwise not used

HU: Required for PJM Customers; otherwise not used
IU: Not Used
MU: Not Used

NSPL is for January 1 - December 31

The QTY/DTM loop may be sent twice when the Utility is providing both the current NSPL and the NSPL that will be effective for a subsequent period. This will occur for short period of time between when the future value is sent via the 814C and the effective date of the future value.

For example, you may receive either two loops:
QTY*KZ*476*K1
DTM*007****RD8*20130101-20131231
QTY*KZ*450*K1
DTM*007****RD8*20140101-20141231

Or just one:
QTY*KZ*450*K1
DTM*007****RD8*20140101-20141231

Ohio EDU Implementation of this segment as per EDI CC 108:
AEP – 3Q 2014
DP&L and Duke Energy Ohio – by 12/31/14
FirstEnergy - TBD

Example: DTM*007****RD8*20070601-20080531

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	DTM01	374	**Date/Time Qualifier**	M	ID 3/3
			Code specifying type of date, or time, or both date and time		
			007 Effective		
			NSPL Effective Date		
Must Use	DTM05	1250	**Date/Time Period Format Qualifier**	X	ID 2/3
			Code indicating the date format, time format, or date and time format		
			RD8 Range of Dates Expressed in Format		
			CCYYMMDD-CCYYMMDD		
Must Use	DTM06	1251	**Date/Time Period**	X	AN 1/35
			Expressed as CCYYMMDD-CCYYMMDD		

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.
Notes:	Required
	SE~28~000000001

Data Element Summary

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

This foregoing document was electronically filed with the Public Utilities

Commission of Ohio Docketing Information System on

5/13/2019 10:55:10 AM

in

Case No(s). 19-0666-EL-EDI

Summary: Application EDI Implementation Guideline for Ohio - 867 Usage electronically filed by Mr. Joseph D Lindsay on behalf of Ohio EDI Working Group