Ohio Electric

Implementation Guideline

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 FirstEnergy'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 FirstEnergy. 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 FirstEnergy 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 & FirstEnergy) 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 FirstEnergy 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)
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 FirstEnergy net meter QTY01 in PL loop)

Version 2.6.2	Incorporate Change Control 127 (AEP OH Net Meter Reporting)
February 11, 2016	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 (DP&L) 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 (DP&L) 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)".)
Version 2.7.0 July 21, 2020	 Incorporated Change Control 169 to update utilities using Special Meter Configuration (REF*KY) Incorporated Change Control 170 (Administrative Changes - DP&L is using EST and EDT qualifiers to 867HI and 867IU transactions) Updated ANSI X12 looping structure Normalized utility names FirstEnergy, DP&L and AEP
Version 2.7.1 April 14, 2021	 Incorporated Change Control 178 to allow AEP to send Net Meter Indicator on 867 MU and IU. Incorporated Change Control 179 to require FirstEnergy and AEP to add the BB Loop. Incorporated Change Control 184 to allow Duke Energy to send Daily Interval Usage. Administrative Change to clean up N1*8S segment to remove N103 = 9 as it is not used, add EDU DUNS Numbers to N104 and remove code 40 – Receiver from N106 as the EDU is never the receiver of the 867. Administrative Change to clean up the N1*SJ segment to remove code 41 – Sender from N106 as the CRES is never the sender of the 867. Administrative Change to remove references to UIG, an organization that no longer exists. The references were on MEA07.
Version 2.7.2 February 1, 2022	 Incorporated Revised Change Control 174 to provide greater detail around the utility. historical usage request process and the historical usage data available. Incorporated Change Control 181 to add a code in the 867IU to indicate if an account with a transformer loss multiplier is MV90 metered or Smart Metered so suppliers know whether to adjust the interval usage by the transformer loss multiplier percentage.

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.

867HU & 867HIU Matrix	AEP	AES Ohio	Duke	First Energy Ohio
Number of Months HU currently sending via EDI	12	12	12	12
Number of Months HI currently sending via EDI	12	12	12	12
If HU may be obtained outside of EDI, how and how many months and is there a fee?	12 months on Portal No Charge	24 - Available on portal	24 - Available on portal	12 months on Portal No Charge
If HIU may be obtained outside of EDI, how, how many months and is there a fee?	-Non-AMI Customers: 12 months available from Portal -AMI Customers: 24 months available from Portal No Charges	24 - Available via email request - Additional Charges may be applicable	12 months or 24 months available on portal Additional Costs may be applicable	12 months on Portal No Charge

Historical Usage (867HU and 867HIU):

867HU & 867HIU Matrix	AEP	AES Ohio	Duke	First Energy Ohio
Is there a fee for EDI Historical Interval Usage?	No	Yes, See Supplier Tariff for details	Yes, See Supplier Tariff for details	No
If HI requested but account is not interval what happens? Rejected. Accepted with Status Response, no data sent. Accepted but HU sent	Accept without REF*1P and sends 867 HU	Accept with REF*1P and sends 867 HU	Rejects with REF*7G*M76	Accepted but HU sent
Assuming a valid active account, how does each utility handle an HU request when no historical usage is available on the account?	814 HU Accept Response 867 Historical Usage is sent with no PTD*SU loops, only the header information and PTD*FG loop are sent.	814 HU Reject Response REF*7G*HUU*INVAL ID REQUEST FOR USAGE	Rejects with REF*7G*A76 (utility account invalid or not found). When our new system goes live (April 2022) the reject code will be HUU.	REF*1P rejection for HUU sent
If an account is ineligible for enrollment (e.g., low-income customer), is historical usage sent?	Yes, 867HU will be sent.	No, 814 Reject Response is sent with REF*7G*HUU*INVAL ID REQUEST FOR USAGE Note if secondary service the enrollment receives REF*7G*ANE*PIPP ACCOUNTS NOT ELIGIBLE	Yes. When our new system goes live (April 2022), an HU for a PIPP/ineligible account will be rejected with ANE.	Yes
If an enrollment request is rejected for NFI (Not First In) is the secondary HU/HIU Request accepted or rejected?	HU is sent	Rejected for REF*7G*HUU*INVAL ID REQUEST FOR USAGE	Rejected for REF*7G*SSR	Yes

867HU & 867HIU Matrix	AEP	AES Ohio	Duke	First Energy Ohio
If an account changes customer associated with the account, will utility accept an 867 HU or HIU request and send the appropriate 867 HU or HIU	Yes	If no usage is available with the new account yet, the request will be rejected	Initially, no data would be available for a new customer The reject A76 (utility account invalid or not found would be sent.	HU/HIU would not be sent as usage would be for previous customer

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. Upon implementation of Change Control 179 scheduled for 2021, AEP will also send the BB Loop.

DP&L

In the 867MU, for metered services, DP&L 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, DP&L sends a PTD*BC loop. In the 867IU, DP&L 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. Upon implementation of Change Control 179 scheduled for 2021, FirstEnergy will also send the BB Loop.

Daily Usage (867DU):

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Duke Energy Ohio

In the 867DU, Duke sends a PTD*BO and a PTD*DL loop for each meter/unit of measure where the BPT04 = DU.

867 Product Transfer and Resale Report

Functional Group ID=PT

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). Report may be issued by either buyer or seller.

Heading:

М	Pos. <u>No.</u> 010	Seg. <u>ID</u> ST	<u>Name</u> Transaction Set Header	Req. <u>Des.</u> M	<u>Max.Use</u> 1	Loop <u>Repeat</u>	Notes and <u>Comments</u>
М	020	BPT	Beginning Segment for Product Transfer and Resale	М	1		
	050	DTM	Date/Time Reference	0	10		
			LOOP ID - N1			5	
	080	N1	Name	0	1		
	120	REF	Reference Identification	0	12		

Detail:

	Pos. <u>No.</u>	Seg. <u>ID</u>	Name LOOP ID - PTD	Req. <u>Des.</u>	<u>Max.Use</u>	Loop <u>Repeat</u> >1	Notes and <u>Comments</u>
М	010	PTD	Product Transfer and Resale Detail	М	1		
	020	DTM	Date/Time Reference	0	10		
			LOOP ID - QTY			>1	
	110	QTY	Quantity	0	1		
	160	MEA	Measurements	0	40		
	190	REF	Reference Identification	0	>1		
	210	DTM	Date/Time Reference	0	10		

Summary:

	Pos.	Seg.		Req.		Loop	Notes and
	<u>No.</u>	ID	Name	Des.	Max.Use	Repeat	Comments
М	030	SE	Transaction Set Trailer	М	1		

	Segment:	ST т	ransaction Set Header		
	Position:	010			
	Loop:				
	Level:	Heading			
	Usage:	Mandato	ry		
	Max Use:	1			
	Purpose:	To indica	ate the start of a transaction set and to assign a control number	r	
	Syntax Notes:				
	Semantic Notes:	inter	transaction set identifier (ST01) is used by the translation rou change partners to select the appropriate transaction set defin ets the Invoice Transaction Set).		
	Comments:		······································		
	Notes:	Required	l de la companya de l		
		-	-000000001		
			Data Element Summary		
	Ref.	Data			
	Des.	Element	Name	Att	ributes
Μ	ST01	143	Transaction Set Identifier Code	Μ	ID 3/3
			Code uniquely identifying a Transaction Set		
			867 Product Transfer and Resale Report		
\mathbf{M}	ST02	329	Transaction Set Control Number	Μ	AN 4/9
			Identifying control number that must be unique within the tr functional group assigned by the originator for a transaction		ion set

BPT Beginning Segment for Product Transfer and Resale

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	020 Heading Mandato 1 To indica transmit 1 If eit 1 BPT 2 BPT 3 BPT 4 BPT If BPT01	ry ate the beginning of t identifying data ther BPT05 or BPT0 02 identifies the tran 03 identifies the tran 08 identifies the tran 09 is used when it is = '01' (Cancellation	Isfer/resale date. Isfer/resale time. necessary to reference a Previous Repor), then an original 867 must be sent as so	t Number.
		data is av Required		y replacement/corrected data.	
			~199902010001~199		
			~199902010001~199 ~199902020001~199	990131~DD~~~F 990131~DD~~~~1999020100001	
			Doto Flow	ant forman	
	Ref.	Data	Data Lien	nent Summary	
	Des.	Element	<u>Name</u>		<u>Attributes</u>
Μ	BPT01	353	Transaction Set P	-	M ID 2/2
			00	urpose of transaction set Original	
			01	Conveys original readings for the accoreported. Also used for Next Day Inter Energy Ohio only), where "DU" popul Cancellation	val Data (Duke
				Readings previously reported for the a ignored.	ccount are to be
			52	Response to Historical Inquiry	. 1
М	BPT02	127	Reference Identifi	Response to a request for historical me	O AN 1/30
IVI	DF 102	127		tion as defined for a particular Transaction	
				ference Identification Qualifier	si bet of us
			-	on identification number assigned by the umber must be unique over time.	originator of this
				sed as a cross reference to the 810 billing make the other party whole, it will also b	
			digits (0 to 9). Not	nce numbers will only contain uppercase e that punctuation (spaces, dashes, etc.) r	
Μ	BPT03	373	Date		M DT 8/8
			Date expressed as (
			The transaction cre sender's application	ation date - the date that the data was pro	bcessed by the
Μ	BPT04	755	Report Type Code	•	O ID 2/2
			Code indicating the	e title or contents of a document, report o	r supporting item
			C1	Cost Data Summary	
				Indicates transaction is an Interval Dat This will be used when supplier is rece summary and detail interval data on an	eiving both
011	0867 (004010) V2 7 2			only interval meters.	February 1, 2022

			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)
			DU	Daily Usage
				Indicates transaction contains interval data for a one-day period (Next Day Interval 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
С	BPT07	306	Action Code	O ID 1/2
			Code indicating ty	pe of action
			Conditional Page	. 1.0.0. 1. 1.
			Conditional, Requ	ired if final usage reading.
			F	Final usage reading.
			· 1	0
С	BPT09	127	· 1	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.

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	050 Heading Optional 10 To specif 1 At le 2 If D' 3 If eit Required Consolid Optional	TM04 is present, then ther DTM05 or DTM for LDC Consolidat ated Rate Ready in the Usage Cancel		or LI	DC	
	Examples:	DTM*64	9*19990131*2359				
	Ref.	Data	Data Elem	ent Summary			
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Data/Tima Qualifi		<u>Atti</u> M	ribute	
IVI	DIMUI	3/4	Date/Time Qualifi Code specifying type of	date or time, or both date and time	IVI	ID 3	/3
			649	Document Due			
				The date that the non-billing party must ransaction back to the billing party.	st pro	vide tl	ne 810
Μ	DTM02	373	Date Date expressed as CCYY	YMMDD	Х	DT	8/8
Μ	DTM03	337	HHMMSSDD, where H	our clock time as follows: HHMM, or HHMMSS, o = hours (00-23), M = minutes (00-59), S = integer decimal seconds are expressed as follows: D = tent	secon	ds (00-), or 59) and

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments:	080 N1 C Heading Optional 1 To identi 1 At le 2 If eit 1 This orga prov 2 N10 Required	fy a party by type of east one of N102 or N ther N103 or N104 is segment, used alone nizational identificati ide a key to the table 5 and N106 further d	present, then the other is required. , provides the most efficient method of proton. To obtain this efficiency the "ID Code maintained by the transaction processing efine the type of entity in N101.	e" (N	104) must
			Data Flam	ent Summary		
М	Ref. <u>Des.</u> N101	Data <u>Element</u> 98	<u>Name</u> Entity Identifier C Code identifying an		Μ	ributes ID 2/3 perty or an
			individual 8S	Consumer Service Provider (CSP) EDU		
Μ	N102	93	Name Free-form name EDU Name		X	AN 1/60
М	N103	66	Identification Cod	o Qualifiar	X	ID 1/2
IVI	11105	00	Code designating the Code (67)	ne system/method of code structure used fo		
ъл	N104	(7	1 Identification Cod	D-U-N-S Number, Dun & Bradstreet	v	A NI 2/90
Μ	N104	67	Identification Cod Code identifying a		X	AN 2/80
				nber or D-U-N-S + 4 Number		
			002899953	Ohio Power (AEP)		
			006998371	Ohio Edison (FirstEnergy)		
			006999189	Duke Energy Ohio		
			007900293	The Illuminating Company (FirstEnergy	')	
			007901739	Columbus Southern (AEP)		
			007904626	Toledo Edison (FirstEnergy)		
			147212336	Dayton Power & Light		
Μ	N106	98	Entity Identifier C		0	ID 2/3
			individual	organizational entity, a physical location,	, proj	perty or an
			41	Submitter		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments:	080 N1 C Heading Optional 1 To identi 1 At le 2 If eit 1 This orga prov 2 N102 Required N1~SJ~C	east one of N102 or her N103 or N104 segment, used alor nizational identific- ide a key to the tab 5 and N106 further CRES COMPANY	of organization, name, and code	de" (N	(104) must
			Data Ele	ement Summary		
М	Ref. <u>Des.</u> N101	Data <u>Element</u> 98	<u>Name</u> Entity Identifier			<u>ributes</u> ID 2/3
			Code identifying individual SJ	an organizational entity, a physical locatio Service Provider CRES	n, proj	perty or an
Μ	N102	93	Name		Х	AN 1/60
			Free-form name			
			CRES Name			
Μ	N103	66	Identification Co	ode Qualifier	Х	ID 1/2
				the system/method of code structure used	for Ide	entification
			Code (67) 1	D-U-N-S Number, Dun & Bradstreet		
			9	D-U-N-S+4, D-U-N-S Number with F	our Cl	naracter
			,	Suffix		lurueter
Μ	N104	67	Identification Co	ode	Х	AN 2/80
				a party or other code		
				Number or D-U-N-S + 4 Number		
Μ	N106	98	Entity Identifier		0	ID 2/3
			Code identifying individual 40	an organizational entity, a physical locatio Receiver	n, proj	perty or an
			TU			

	Segment:	N1 N	ame (RS - Scheduli	ng Coordinator)			
	Position:	080	unie (NS Schedun				
	Loop:		Optional				
	Level:	Heading					
	Usage:	Optional					
	Max Use:	1					
	Purpose:	To identi	fy a party by type of	organization, name, and code			
	Syntax Notes:		At least one of N102 or N103 is required.				
		2 If eit	ther N103 or N104 is	present, then the other is required.			
	Semantic Notes:						
	Comments:			, provides the most efficient method of pro ion. To obtain this efficiency the "ID Code			
		0		maintained by the transaction processing		,	
				efine the type of entity in N101.	1 0		
	Notes:	Required	when a CRES is using	ng more than one Scheduling Coordinator	· (Not	used by	
		AEP)					
		N1~RS~	SCHEDULING COO	ORDINATOR~1~006193212S			
	Ref.	Data	Data Elem	ent Summary			
	Des.	Element	Name		Affr	ributes	
М	<u>Des.</u> N101	Element 98	<u>Name</u> Entity Identifier C	code	<u>Attr</u> M	<u>ributes</u> ID 2/3	
М	<u>Des.</u> N101		Entity Identifier C Code identifying an	code organizational entity, a physical location,	Μ	ID 2/3	
Μ			Entity Identifier C Code identifying an individual	organizational entity, a physical location,	Μ	ID 2/3	
Μ			Entity Identifier C Code identifying an	organizational entity, a physical location, Receiving Facility Scheduler	Μ	ID 2/3	
Μ	N101	98	Entity Identifier C Code identifying an individual RS	organizational entity, a physical location,	Μ	ID 2/3 perty or an	
M			Entity Identifier C Code identifying an individual RS Name	organizational entity, a physical location, Receiving Facility Scheduler	Μ	ID 2/3	
	N101	98	Entity Identifier C Code identifying an individual RS	organizational entity, a physical location, Receiving Facility Scheduler	M , prop	ID 2/3 perty or an	
	N101	98	Entity Identifier C Code identifying an individual RS Name	organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator	M , prop	ID 2/3 perty or an	
	N101	98	Entity Identifier C Code identifying an individual RS Name Free-form name	a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator	M , prop	ID 2/3 perty or an	
М	N101 N102	98 93	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating th	a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator	M , prop X X	ID 2/3 berty or an AN 1/60 ID 1/2	
М	N101 N102	98 93	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod	a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator e Qualifier	M , prop X X	ID 2/3 berty or an AN 1/60 ID 1/2	
М	N101 N102	98 93	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating the Code (67) 1	a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator e Qualifier he system/method of code structure used for D-U-N-S Number, Dun & Bradstreet	M , prop X X or Ide	ID 2/3 berty or an AN 1/60 ID 1/2 entification	
М	N101 N102	98 93	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating th Code (67)	a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator e Qualifier he system/method of code structure used for	M , prop X X or Ide	ID 2/3 berty or an AN 1/60 ID 1/2 entification	
М	N101 N102	98 93	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating the Code (67) 1	 a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator e Qualifier ne system/method of code structure used for D-U-N-S Number, Dun & Bradstreet D-U-N-S+4, D-U-N-S Number with Fou Suffix 	M , prop X X or Ide	ID 2/3 berty or an AN 1/60 ID 1/2 entification	
м	N101 N102 N103	98 93 66	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating th Code (67) 1 9 Identification Cod	 a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator g Coordinator e Qualifier ne system/method of code structure used for D-U-N-S Number, Dun & Bradstreet D-U-N-S+4, D-U-N-S Number with For Suffix e 	M , prop X x or Ide	ID 2/3 berty or an AN 1/60 ID 1/2 entification aracter	
м	N101 N102 N103	98 93 66	Entity Identifier C Code identifying an individual RS Name Free-form name Name of Scheduling Identification Cod Code designating th Code (67) 1 9 Identification Cod Code identifying a	 a organizational entity, a physical location, Receiving Facility Scheduler Scheduling Coordinator g Coordinator g Coordinator e Qualifier ne system/method of code structure used for D-U-N-S Number, Dun & Bradstreet D-U-N-S+4, D-U-N-S Number with For Suffix e 	M , prop X X or Ide ur Ch X	ID 2/3 berty or an AN 1/60 ID 1/2 entification aracter AN 2/80	

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	080 N1 C Heading Optional 1 To identi 1 At le 2 If eit 1 This orga prov 2 N102 Required N1~8R~4	fy a party by type of organization, name, and code east one of N102 or N103 is required. her N103 or N104 is present, then the other is required. segment, used alone, provides the most efficient method of pro- nizational identification. To obtain this efficiency the "ID Code ide a key to the table maintained by the transaction processing 5 and N106 further define the type of entity in N101.	e" (N	104) must
	D-f	D-4-	Data Element Summary		
	Ref. <u>Des.</u>	Data Element	Name	Attr	ributes
Μ	N101	<u>98</u>	Entity Identifier Code	M	ID 2/3
			Code identifying an organizational entity, a physical location,	, prop	perty or an
			individual		
			8R Consumer Service Provider (CSP) Custo	omer	
			Customer	T 7	
Μ	N102	93	Name	X	AN 1/60
			Free-form name		
C	2102		Customer Name as documented in the sender's application sy		
С	N103	66	Identification Code Qualifier	X	ID 1/2
			Code designating the system/method of code structure used for Code (67)	or Ide	entification
			Condition: Required if available		
			92 Assigned by Buyer or Buyer's Agent		
С	N104	67	Identification Code	X	AN 2/80
-			Code identifying a party or other code	-	
			Store Number		
			Condition: Required if available		

REF	Reference Identification (CRES Account Numb	er)
	Reference fuentification (CRES Account Num	JCI /

Segment:		Reference Identification (CRES Account Number)				
Position:	120					
Loop:	N1 C	Optional				
Level:	Heading					
Usage:	Optional					
Max Use:	12					
Purpose:		fy identifying information				
Syntax Notes:		east one of REF02 or REF03 is required.				
		ther C04003 or C04004 is present, then the other is required				
~		ther C04005 or C04006 is present, then the other is required	1.			
Semantic Notes:	1 REF	F04 contains data relating to the value cited in REF02.				
Comments:			• • • • •			
Notes:		numbers will only contain uppercase letters (A to Z) and D				
	that punctuation (spaces, dashes, etc.) must be excluded, and leading and trailing zeros					
				ing zeros		
	-	part of the account number must be present.	3	ing zeros		
	Required	part of the account number must be present. I if previously sent on the Enrollment or Change.	3			
	Required	part of the account number must be present.	3	ing zeros		
	Required	part of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959	,			
Ref.	Required REF~11~	part of the account number must be present. I if previously sent on the Enrollment or Change.				
Ref. Des.	Required REF~11~ Data	bart of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959 Data Element Summary	-			
Ref. <u>Des.</u> REF01	Required REF~11~	bart of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959 Data Element Summary	Attı	ributes ID 2/3		
Des.	Required REF~11~ Data <u>Element</u>	part of the account number must be present. 1 if previously sent on the Enrollment or Change. ~1394959 Data Element Summary <u>Name</u>	Attı	ributes		
Des.	Required REF~11~ Data <u>Element</u>	part of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959 Data Element Summary <u>Name</u> Reference Identification Qualifier	Attı	ributes		
Des.	Required REF~11~ Data <u>Element</u>	part of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959 Data Element Summary <u>Name</u> Reference Identification Qualifier Code qualifying the Reference Identification	<u>Attı</u> M	ributes		
Des.	Required REF~11~ Data <u>Element</u>	part of the account number must be present. 1 if previously sent on the Enrollment or Change. ~1394959 Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification 11 Account Number	<u>Attı</u> M	ributes		
Des. REF01	Required REF~11~ Data <u>Element</u> 128	part of the account number must be present. 1 if previously sent on the Enrollment or Change. ~1394959 Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification 11 Account Number CRES assigned customer account nu	<u>Attı</u> M umber X	r <u>ibutes</u> ID 2/3 AN 1/30		
Des. REF01	Required REF~11~ Data <u>Element</u> 128	A part of the account number must be present. I if previously sent on the Enrollment or Change. ~1394959 Data Element Summary Mame Reference Identification Qualifier Code qualifying the Reference Identification 11 Account Number CRES assigned customer account nu Reference Identification	<u>Attı</u> M umber X	r <u>ibutes</u> ID 2/3 AN 1/30		
Des. REF01	Required REF~11~ Data <u>Element</u> 128	part of the account number must be present. 1 if previously sent on the Enrollment or Change. ~1394959 Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification 11 Account Number CRES assigned customer account nu Reference Identification 11 Account Number CRES assigned customer account nu Reference Identification Reference Identification	<u>Attı</u> M umber X	r <u>ibutes</u> ID 2/3 AN 1/30		

Μ

REF	Reference Identification	(FDU Account Number)
	Reference Identification	(EDU Account Number)

	Segment:	KEF	Reference Identification (EDU Account Number))
	Position:	120		
	Loop:	N1 (Optional	
	Level:	Heading		
	Usage:	Optional		
	Max Use:	12		
	Purpose:	To specif	fy identifying information	
	Syntax Notes:		east one of REF02 or REF03 is required.	
		2 If eit	ther C04003 or C04004 is present, then the other is req	luired.
		3 If eit	ther C04005 or C04006 is present, then the other is req	luired.
	Semantic Notes:	1 REF	04 contains data relating to the value cited in REF02.	
	Comments:			
	Notes:	Account	numbers will only contain uppercase letters (A to Z) a	nd Digits (0 - 9). Note
		that punc	tuation (spaces, dashes, etc.) must be excluded, and le	ading and trailing zeros
		that are p	part of the account number must be present.	
		Condition	nal - Required for all utilities except AEP, which will	use Service Delivery
		Identifica	ation Number (REF*Q5).	
		REF~12~	-1239485790	
			Data Element Summary	
	Ref.	Data	N	A • 1
	Des.	Element	Name	<u>Attributes</u>
Μ	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			12 Billing Account	
			EDU Account Number	
Μ	REF02	127	Reference Identification	X AN 1/30
		14/		A AN 1/50
		127	Reference information as defined for a particular Tra	11 111 1,000
		127	Reference information as defined for a particular Tra specified by the Reference Identification Qualifier	11 111 1,000
		127	Reference information as defined for a particular Tra specified by the Reference Identification Qualifier EDU Account Number	11 111(1,00

REF Reference Identification (Previous EDU Account Number)

	Segment:	KEF	Reference	Identification (Previous EDU Accou	int Number)	
	Position:	120				
	Loop:	N1 (Optional			
	Level:	Heading				
	Usage:	Optional				
	Max Use:	12				
	Purpose:	To specif	fy identifying	information		
2	Syntax Notes:	1 At le	east one of RE	EF02 or REF03 is required.		
		2 If eit	ther C04003 c	or C04004 is present, then the other is	required.	
		3 If eit	ther C04005 c	or C04006 is present, then the other is	required.	
Sei	mantic Notes:	1 REF	04 contains d	ata relating to the value cited in REF0	2.	
	Comments:					
		that are p Condition all utilitie used by A	part of the acco n: Required i es except AEF	es, dashes, etc.) must be excluded, and ount number must be present. If the account number has changed in t P, which will use Service Delivery Iden	he last 60 days. I	Required for
		_	Dat	a Element Summary		
	Ref.	Data	N .7		A 4	
-	Des.	Element	Name D. f.			ibutes
_	REF01	128		dentification Qualifier	Μ	ID 2/3
			Code qualify	ying the Reference Identification		
			45	Old Account Number		
				EDU's Previous Account Nu	mber	
[REF02	127	Reference I	dentification	X	AN 1/30
			Reference ir	nformation as defined for a particular 7	Fransaction Set or	r as
				the Reference Identification Qualifier		
				bus Account Number		

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	Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	120 N1 C Heading Optional 12 To specifi 1 At le 2 If eit 3 If eit	Dptional fy identifying informa east one of REF02 or ther C04003 or C0400 ther C04005 or C0400 04 contains data relat Used t Used uired quired Used			
			Data Eleme	ent Summary		
	Ref. Des.	Data Element	Name		A ++-	ibutes
М	<u>Des.</u> REF01	<u>128</u>	Reference Identific	cation Oualifier		ID 2/3
				Reference Identification		
			BLT	Billing Type		
				Identifies whether the bill is consolidate	ed by	the EDU
				(LDC) or CRES (ESP), or whether each		
				render their own bill. See REF02 for va	alıd va	alues.
м	RFF02	127	Reference Identific			AN 1/30
Μ	REF02	127	Reference Identific	cation	Х	AN 1/30
М	REF02	127	Reference informati	cation on as defined for a particular Transactior	Х	
Μ	REF02	127	Reference informati	cation	Х	
М	REF02	127	Reference informati specified by the Ref	cation on as defined for a particular Transaction Terence Identification Qualifier	X n Set o	
М	REF02	127	Reference informati specified by the Ref	cation on as defined for a particular Transaction Ference Identification Qualifier Dual Billing Each party bills the customer for its por Energy Supplier Consolidated Billing	X n Set o	
М	REF02	127	Reference informati specified by the Ref DUAL ESP	cation on as defined for a particular Transaction erence Identification Qualifier Dual Billing Each party bills the customer for its por Energy Supplier Consolidated Billing The CRES bills the customer.	X n Set o	
М	REF02	127	Reference informati specified by the Ref DUAL	cation on as defined for a particular Transaction Ference Identification Qualifier Dual Billing Each party bills the customer for its por Energy Supplier Consolidated Billing	X n Set o	

REF Reference Identification (Special Meter Configuration)

Segment:	KEF	Reference Identification (Special Meter Configuration)	
Position:	120		
Loop:	N1 (ptional	
Level:	Heading	-	
Usage:	Optional		
Max Use:	12		
Purpose:	To specif	y identifying information	
Syntax Notes:	1 At le	ast one of REF02 or REF03 is required.	
		her C04003 or C04004 is present, then the other is required.	
	3 If eit	her C04005 or C04006 is present, then the other is required.	
Semantic Notes:	1 REF	04 contains data relating to the value cited in REF02.	
Comments:			
Notes:		Jsed in this position, see PTD*FG Loop	
		Used in this position, see PTD*FG Loop	
		ired for AEP only when net meter is present on an account	
		uired for AEP only when net meter is present on an account	
	DU: Not		
	REF~KY	~NETMETER	
		Data Element Summary	
Ref.	Data	Data Element Summary	
Des.	Element	Name	Attributes
REF01	128	Reference Identification Qualifier	M ID 2/3
		Code qualifying the Reference Identification	
		KY Site Specific Procedures, Terms, and C	onditions
		Special Meter Configuration	
REF02	127	Reference Identification	X AN 1/30
		Reference information as defined for a particular Transaction	
		specified by the Reference Identification Qualifier	
		NETMETER Net metering present	
		THE THE TER THE INCOME PROSENT	

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Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	120 N1 C Heading Optional 12 To specif 1 At le 2 If eit 3 If eit	Dptional Ty identifying inform east one of REF02 or ther C04003 or C040 her C04005 or C040 04 contains data rela Used			
	IU: Requ MU: Req	uired quired			
	DU: Not REF~PC				
		Data Elem	ent Summary		
Ref. Des.	Data Element	Name		Δttı	ributes
<u>Des.</u> REF01	<u>128</u>	Reference Identifi	cation Qualifier		ID 2/3
		Code qualifying the	e Reference Identification		
		PC	Production Code		
			Identifies the party that is to calculate the bill	e cha	rges on the
REF02	127	Reference Identifi	cation	Х	AN 1/30
			ion as defined for a particular Transaction ference Identification Qualifier Each Party calculates its portion of the b The CRES calculates charges for each pa The EDU calculates charges for each pa	oill oarty	or as

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REF	Reference Identification (Q5 = SDID Number)
KEF	Reference Identification (O5 = SDID Number

Segment:		Reference Identification (Q5 = SDID Number)		
Position:	120			
Loop:	N1 O	Dptional		
Level:	Heading	-		
Usage:	Optional			
Max Use:	12			
Purpose:	To specif	fy identifying information		
Syntax Notes:	1 At le	east one of REF02 or REF03 is required.		
	2 If eit	ther C04003 or C04004 is present, then the other is required.		
	3 If eit	ther C04005 or C04006 is present, then the other is required.		
Semantic Notes:	1 REF	04 contains data relating to the value cited in REF02.		
Comments:				
		of the SDID number must be present		zeros that
	are part o Required	of the SDID number must be present. if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH	r tran	
Ref	are part o Required REF~Q5-	if customer is in AEP service territory. Maximum use of 1 per	r tran	
Ref. Des.	are part o Required REF~Q5~ Data	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary		saction
Ref. <u>Des.</u> REF01	are part o Required REF~Q5-	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary <u>Name</u>		
Des.	are part o Required REF~Q5~ Data <u>Element</u>	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary <u>Name</u> Reference Identification Qualifier	Attr	saction
Des.	are part o Required REF~Q5~ Data <u>Element</u>	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary <u>Name</u> Reference Identification Qualifier Code qualifying the Reference Identification	Attr	saction
Des.	are part o Required REF~Q5~ Data <u>Element</u>	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification Q5 Property Control Number	Attr	saction
<u>Des.</u> REF01	are part o Required REF~Q5- Data <u>Element</u> 128	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification Q5 Property Control Number AEP assigned Service Delivery Identification Number	Attr M	saction <u>ibutes</u> ID 2/3
Des.	are part o Required REF~Q5~ Data <u>Element</u>	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification Q5 Property Control Number AEP assigned Service Delivery Identification Number Reference Identification	Attr M	saction <u>ibutes</u> ID 2/3 AN 1/30
<u>Des.</u> REF01	are part o Required REF~Q5- Data <u>Element</u> 128	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification Q5 Property Control Number AEP assigned Service Delivery Identification Number Reference Identification Reference Identification	Attr M	saction <u>ibutes</u> ID 2/3 AN 1/30
<u>Des.</u> REF01	are part o Required REF~Q5- Data <u>Element</u> 128	if customer is in AEP service territory. Maximum use of 1 per ~9876543245678DCH Data Element Summary Name Reference Identification Qualifier Code qualifying the Reference Identification Q5 Property Control Number AEP assigned Service Delivery Identification Number Reference Identification	Attr M	saction <u>ibutes</u> ID 2/3 AN 1/30

Μ

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
Carrate an Netera	provide identifying data
Syntax Notes:	 If either PTD02 or PTD03 is present, then the other is required. 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 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.

MU: Required DU: Not Used

DP&L 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.	Data	•	
Des.	Element	Name	Attributes
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 re-	flect the billing data
		for this account at the unit of measure level.	

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	020 PTD Detail Optional 10 To specifi 1 At left 2 If D' 3 If either HI: No HU: Not	quired quired		
		DTM~15	50~19990101		
			Data Flomant Summawy		
	Ref.	Data	Data Element Summary		
	Des.	Element	Name	Attr	ributes
Μ	DTM01	374	Date/Time Qualifier	-	ID 3/3
М	DTM02	373	Code specifying type of date or time, or both date and time 150 Service Period Start Beginning Read Date Date Date expressed as CCYYMMDD	X	DT 8/8
			Date expressed as CCYYMMDD		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes:	020 PTD Detail Optional 10 To specie 1 At lea	fy pertinent dates and times east one of DTM02 DTM03 or DTM05 is required.		
	Semantic Notes: Comments: Notes:	3 If eit HI: No HU: No IU: Re MU: Re DU: No	quired quired		
			Data Element Summary		
	Ref.	Data			
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifier		ributes ID 3/3
IVI	DIMUI	574	Code specifying type of date or time, or both date and time	TAT	ID 3/3
			151Service Period EndEnding Read Date		
Μ	DTM02	373	Date Date expressed as CCYYMMDD	X	DT 8/8
			Date expressed as CCYYMMDD		

			7		
	Segment:	QTY	Quantity (Billed Kilowatt Hours)		
	Position:	110			
	Loop:	QTY	Optional		
	Level:	Detail			
	Usage:	Optional			
	Max Use:	1			
	Purpose:		fy quantity information		
	Syntax Notes:		east one of QTY02 or QTY04 is required.		
			one of QTY02 or QTY04 may be present.		
	Semantic Notes:	1 QTY	704 is used when the quantity is non-numeric.		
	Comments:				
	Notes:	Billed kV			
		HI: No			
		HU: Not			
			quired		
		MU: Re	•		
		DU: Not			
		QTY~D	1~22348~KH		
			Data Element Summary		
	Ref.	Data			
	Des.	Element	Name	Attr	ributes
Μ	QTY01	673	Quantity Qualifier		ID 2/2
	-		Code specifying the type of quantity		
			D1 Billed		
			Used when quantity in QTY02 is a "Bill	led" c	quantity
Μ	QTY02	380	Quantity	Х	R 1/15
			Numeric value of quantity		
Μ	QTY03	355	Unit or Basis for Measurement Code	Μ	ID 2/2
			Code specifying the units in which a value is being expressed	1, or n	nanner 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
	DU: Not Used
	QTY~D1~223~K1
	Data Element Summary
Ref.	Data
Dec	Element Name Attributes

	Des.	<u>Element</u>	<u>Name</u>		<u>Attr</u>	<u>ributes</u>
Μ	QTY01	673	Quantity Qualifier	•	Μ	ID 2/2
			Code specifying the	e type of quantity		
			D1	Billed		
				Used when quantity in QTY02 is a "Bi	lled" c	luantity
Μ	QTY02	380	Quantity		Χ	R 1/15
			Numeric value of q	uantity		
Μ	QTY03	355	Unit or Basis for N	Aeasurement Code	Μ	ID 2/2
			Code specifying the	e units in which a value is being expresse	d, or n	nanner in
			which a measureme	ent has been taken		
			K1	Kilowatt Demand		

			7			
	Segment:	QTY	Quantity (Measu	red Demand)		
	Position:	110	- •			
	Loop:	QTY	Optional			
	Level:	Detail	-1			
	Usage:	Optional				
	Max Use:	1				
	Purpose:	To specif	fy quantity information	on		
	Syntax Notes:	1	east one of QTY02 or			
	·		-	TY04 may be present.		
	Semantic Notes:	•		quantity is non-numeric.		
	Comments:					
	Notes:	Measure	d Demand - Required	if account measures Demand (KW).		
		HI: No	t Used	· · · · ·		
		HU: Not	t Used			
		IU: Red	quired as per above n	ote		
			quired as per above n			
		DU: Not	t Used			
		QTY~QI	D~223~K1			
			Data Elem	ent Summary		
	Ref.	Data				
	Des.	Element	<u>Name</u>			<u>ributes</u>
Μ	QTY01	673	Quantity Qualifier		Μ	ID 2/2
			Code specifying the			
			KA	Estimated Quantity Delivered		
				Used when the quantity delivered is est	imate	ed
			QD	Quantity Delivered		
				Quantity is actual		
Μ	QTY02	380	Quantity		Х	R 1/15
			Numeric value of qu			
Μ	QTY03	355	Unit or Basis for N		Μ	ID 2/2
				units in which a value is being expressed	, or n	nanner in
			which a measureme			
			K1	Kilowatt Demand		

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	190 QTY Detail Optional 1 To specifi 1 At le 2 If eit 3 If eit 1 REF HI: Not HU: Not IU: Requ	fy identifying information east one of REF02 or REF03 is required. ther C04003 or C04004 is present, then the other is required. ther C04005 or C04006 is present, then the other is required. 04 contains data relating to the value cited in REF02. Used i Used uired for DP&L if there is billed demand on the account quired for DP&L if there is billed demand on the account i Used		
		Data Element Summary		
Ref.	Data	N		•1
<u>Des.</u> REF01	Element 128	<u>Name</u> Reference Identification Qualifier	Attr M	<u>ibutes</u> ID 2/3
REF01	128	Code qualifying the Reference Identification NH Rate Card Number EDU Rate Code or tariff Reference Identification Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier	X	AN 1/30
		EDU Rate Code or tariff		

 \mathbf{M}

Μ

$\label{eq:product} PTD \ \ \ Product \ Transfer \ and \ Resale \ Detail \ (Non-Interval \ Metered \ Services$

Segment:	I I D Froduct fransier and Resaie Detail (Non-Interval Metereu 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 FirstEnergy 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
	DU: Not Used
	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.	Data

Des.	Element	<u>Name</u>	Attr	ributes
PTD01	521	Product Transfer Type Code	Μ	ID 2/2
		Code identifying the type of product transfer		
		SU Summary		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	020 PTD Detail Optional 10 To specifi 1 At le 2 If D' 3 If eit	Mandatory fy pertinent dates and east one of DTM02 D TM04 is present, ther ther DTM05 or DTM	TM03 or DTM05 is required.			
	10005	 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 					
		DU: Not DTM~15	t Used 50~19990101				
	D 4		Data Elem	ent Summary			
	Ref. Des.	Data Element	Name		A ++-	ributes	
Μ	<u>DES.</u> DTM01	<u>374</u>	Date/Time Qualifie	er		ID 3/3	
		••••	-	e of date or time, or both date and time			
			150	Service Period Start			
				Beginning Read Date			
Μ	DTM02	373	Date	5 5	Х	DT 8/8	
			Date expressed as C	CYYMMDD			
			Date expressed as C				
			-				

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	 DTM Date/Time Reference (Service Period End) 020 PTD Mandatory Detail Optional 10 To specify pertinent dates and times 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. 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 				
		DU: Not DTM~15	t Used 51~19990131			
			Data Flem	ent Summary		
	Ref.	Data	Data Ekin	ent Summary		
	Des.	Element				ributes
Μ	DTM01	374	Date/Time Qualifie		Μ	ID 3/3
			1 0 0 0 0	e of date or time, or both date and time		
			151	Service Period End		
			_	Ending Read Date		
Μ	DTM02	373	Date		X	DT 8/8
			Date expressed as C			
			Date expressed as C	CYYMMDD		

Segment:	QTY Quantity
Position:	110
Loop:	QTY Optional
Level:	Detail
0	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 FirstEnergy only, otherwise not used
	IU: Required for FirstEnergy when $BPT04 = X5$, otherwise not used.
	MU: Required if there are metered services on the account
	DU: Not Used
	QTY~QD~22348~KH

Data Element Summary						
М	Ref. <u>Des.</u> QTY01	Data <u>Element</u> 673	<u>Name</u> Quantity Qualifier		<u>Attr</u> M	<u>ibutes</u> ID 2/2
	C ·		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 receiv (DP&L, FirstEnergy & Duke Energy Ohio C		actual.
			9H	Estimated Quantity Received (Net Metering)		
				Used when the net generation quantity receiv	ved is	estimated.
Μ	QTY02	380	Quantity	(DP&L, FirstEnergy & Duke Energy Ohio C	Only) X	R 1/15
IVI	Q1102	300	Numeric value of qu	iantity	Λ	K 1/15
М	QTY03	C001	Composite Unit of 2	-	0	
171	Q1105	0001	-	ivica șu c		
					1. 0	
			• 1	site unit of measure (See Figures Append	dix fo	r examples
			of use)		dix fo	r examples
М	C00101	355	of use)	osite data element, populate C00101	dix fo M	r examples ID 2/2
М	C00101	355	of use) Note this is a compo Unit or Basis for M	osite data element, populate C00101 leasurement Code	М	ID 2/2
М	C00101	355	of use) Note this is a compo Unit or Basis for M	osite data element, populate C00101 Ieasurement Code units in which a value is being expressed	М	ID 2/2
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the	osite data element, populate C00101 Ieasurement Code units in which a value is being expressed nt has been taken Kilowatt Demand	M , or n	ID 2/2 nanner in
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measurement	osite data element, populate C00101 leasurement Code units in which a value is being expressed nt has been taken Kilowatt Demand kW - Represents potential power load n	M , or m neasu	ID 2/2 nanner in red at
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measuremen K1	osite data element, populate C00101 leasurement Code units in which a value is being expressed nt has been taken Kilowatt Demand kW - Represents potential power load n predetermined intervals. Sending K1 va	M , or m neasu	ID 2/2 nanner in red at
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measurement	osite data element, populate C00101 leasurement Code units in which a value is being expressed nt has been taken Kilowatt Demand kW - Represents potential power load n predetermined intervals. Sending K1 va Kilovolt Amperes Reactive Demand	M , or m neasu lue is	ID 2/2 nanner in red at optional.
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measuremen K1	osite data element, populate C00101 leasurement Code units in which a value is being expressed in thas been taken Kilowatt Demand kW - Represents potential power load n predetermined intervals. Sending K1 va Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su	M , or m neasu lue is	ID 2/2 nanner in red at optional.
М	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measuremen K1	osite data element, populate C00101 leasurement Code units in which a value is being expressed nt has been taken Kilowatt Demand kW - Represents potential power load n predetermined intervals. Sending K1 va Kilovolt Amperes Reactive Demand	M , or m neasu lue is ppliec billab	ID 2/2 nanner in red at optional.
Μ	C00101	355	of use) Note this is a compo Unit or Basis for M Code specifying the which a measuremen K1	osite data element, populate C00101 leasurement Code units in which a value is being expressed in has been taken Kilowatt Demand kW - Represents potential power load n predetermined intervals. Sending K1 va Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su specific types of customer's equipment;	M , or m neasu lue is ppliec billab	ID 2/2 nanner in red at optional. I for le when

	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				

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 FirstEnergy 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
	DU: Not Used
	MEA~~PRQ~772~KH~~~42
	MEA~~PRQ~12799~K1~~~51

Data Element Summary

Data Element Summary					
	Ref.	Data			
	Des.	Element	Name		Attributes
Μ	MEA02	738	Measurement Qua	lifier	O ID 1/3
			Code identifying a	specific product or process characteristic	to which a
			measurement applie		
			PRQ	Product Reportable Quantity	
Μ	MEA03	739	Measurement Val	ue	X R 1/20
			The value of the me	easurement	
			Represents quantity	of consumption delivered for service pe	riod. Contains the
			difference in the me	eter readings (or as measured by the mete	er) multiplied by
				luding Power Factor.	
Μ	MEA04	C001	Composite Unit of	Measure	X
			* 1	osite unit of measure (See Figures Appen	ndix for examples
	~~~~		of use)		
Μ	C00101	355		Aeasurement Code	M ID 2/2
				e units in which a value is being expresse	d, or manner in
			which a measureme		
			K1	Kilowatt Demand	
				kW - Represents potential power load	measured at
				predetermined intervals	
			K2	Kilovolt Amperes Reactive Demand	
				kVAR - Reactive power that must be s	* *
				specific types of customer's equipment	
				kilowatt demand usage meets or exceed	as a defined
			K3	parameter Kilovolt Amperes Reactive Hour	
			NJ	1	ity aquivalant to
				kVARh - Represents actual electricities kilowatt hours; billable when usage me	
				defined parameters	cts of exceeds
				defined parameters	

			K4	Kilovolt Amperes	
				kVA - Kilovolt Amperes	
			KH	Kilowatt Hour	
				kWh - Kilowatt Hour	
С	<b>MEA07</b>	935	Measurement Sign	nificance Code	O ID 2/2
			Code used to bench	mark, qualify or further define a measure	ement value
			but should not be u	es can be used to identify quantities measures sed to identify tariffed/calculated measure 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:	DT	<b>M</b> Date/Time Reference (Service Period Start)			
	<b>Position:</b>	210				
	Loop:	QTY				
	Level:	Detail				
	Usage:	Optional				
	Max Use:	10				
	Purpose:	To specif	Ty pertinent dates and times			
	Syntax Notes:	1 At le	east one of DTM02 DTM03 or DTM05 is required.			
	-	<b>2</b> If D'	ΓM04 is present, then DTM03 is required.			
		3 If eit	her DTM05 or DTM06 is present, then the other is required.			
	Semantic Notes:					
	<b>Comments:</b>					
	Notes:	HI: Not Used				
		HU: Required if sending SU loop in 867HU, otherwise not used				
		IU: Not Used				
		MU: Not Used				
		DU: Not Used				
		DTM~150~19990101				
	Data Element Summary					
	Ref.	Data	N	• • •	•1	
	Des.	<u>Element</u>	<u>Name</u>		ributes	
Μ	DTM01	374	Date/Time Qualifier	Μ	ID 3/3	
			Code specifying type of date or time, or both date and time			
			150 Service Period Start			
			Beginning Read Date			
Μ	DTM02	373	Date	Х	DT 8/8	
			Date expressed as CCYYMMDD			
			Date expressed as CCYYMMDD			

	Segment:	<b>DTM</b> Date/Time Reference (Service Period End)					
	Position:	210					
	Loop:	QTY					
	Level:	Detail					
	Usage:	Optional					
	Max Use:	10					
	Purpose:	-	fy pertinent dates and times				
	Syntax Notes:		east one of DTM02 DTM03 or DTM05 is required.				
			TM04 is present, then DTM03 is required.				
		3 If eit	ther 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					
		DU: Not Used					
		DTM~15	DTM~151~19990131				
	Data Element Summary						
	Ref.	Data					
	Des.	<b>Element</b>	<u>Name</u>	Attr	ributes		
Μ	<b>DTM01</b>	374	Date/Time Qualifier	Μ	ID 3/3		
			Code specifying type of date or time, or both date and time				
			151 Service Period End				
			Ending Read Date				
Μ	<b>DTM02</b>	373	Date	Χ	DT 8/8		
			Date expressed as CCYYMMDD				
			Date expressed as CCYYMMDD				

#### Segment:

# **PTD** Product Transfer and Resale Detail (Non-Interval Metered Services

6	
	<b>Detail</b> )
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.
~J	2 If either PTD04 or PTD05 is present, then the other is required.
Semantic Notes:	
<b>Comments:</b>	
Notes:	HI: Not Used
	<ul> <li>HU: Required if there are metered services on the account. FirstEnergy 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 &amp; received/generation (QTY01 = 87 or 9H) usage</li> <li>IU: Not Used</li> <li>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.</li> <li>DU: Not Used</li> <li>PTD~PL</li> </ul>

		Data Licin	cht Summary		
Ref.	Data				
Des.	<u>Element</u>	Name		Attr	ibutes
PTD01	521	Product Transfer	Гуре Соде	Μ	ID 2/2
		Code identifying the type of product transfer			
		PL	Property Level Movement/Sale		

## **DTM** Date/Time Reference (Service Period Start)

Segment:	DIN	Date/Time Reference (Service Period Start)				
Position:	020					
Loop:	PTD	Mandatory				
Level:	Detail					
Usage:	Optional					
Max Use:	10					
Purpose:	-	y pertinent dates and times				
Syntax Notes:		ast one of DTM02 DTM03 or DTM05 is required.				
		ΓM04 is present, then DTM03 is required.				
G (1 )	3 If eit	her 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.					
	DU: Not Used					
	DTM~15	0~19990101				
		Data Element Summary				
Ref.	Data	•				
Des.	<b>Element</b>	Name	<b>Attributes</b>			
<b>DTM01</b>	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				

Μ

**DTM02** 

373

Date

Date expressed as CCYYMMDD Date expressed as CCYYMMDD

Μ

X DT 8/8

## **DTM** Date/Time Reference (Service Period End)

Position:020Loop:PTDMandatoryLevel:DetailUsage:OptionalMax Use:10Purpose:To specify pertinent dates and timesSyntax Notes:1A t least one of DTM02 DTM03 or DTM05 is required.2If DTM04 is present, then DTM03 is required.Semantic Notes:INotes:HI: Not Used
Level:DetailUsage:OptionalMax Use:10Purpose:To specify pertinent dates and timesSyntax Notes:1At least one of DTM02 DTM03 or DTM05 is required.2If DTM04 is present, then DTM03 is required.3If either DTM05 or DTM06 is present, then the other is required.Semantic Notes: Comments:
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:
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:
Purpose: Syntax Notes:To specify pertinent dates and timesSyntax Notes:1At least one of DTM02 DTM03 or DTM05 is required.2If DTM04 is present, then DTM03 is required.3If either DTM05 or DTM06 is present, then the other is required.Semantic Notes: Comments:
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:
<ul> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>Semantic Notes: Comments:</li> </ul>
3 If either DTM05 or DTM06 is present, then the other is required. Semantic Notes: Comments:
Semantic Notes: Comments:
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.
DU: Not Used
DTM~151~19990131
Data Element Summary
Ref. Data
Des. Element Name Attributes
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

Μ

**DTM02** 

373

Date

Date expressed as CCYYMMDD Date expressed as CCYYMMDD

М

X DT 8/8

## ртм

Segment:	<b>DIM</b> 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.					
	<b>3</b> 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.					
	DU: Not Used					
	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.	Data					
Des.	<u>Element</u> <u>Name</u>	<u>Attributes</u>				
<b>DTM</b> 01		M ID 3/3				
	Code specifying type of date or time, or both date and time					
	514 Transferred					
	Mator Exchange Date					

	Des.	Element	<u>Name</u>		Attr	ributes	
Μ	DTM01	374	Date/Time Qualifie	er	Μ	ID 3/3	
			Code specifying typ	be of date or time, or both date and time			
			514	Transferred			
				Meter Exchange Date			
Μ	DTM02	373	Date		Х	DT 8/8	
			Date expressed as C	CYYMMDD			
			Date expressed as C	CYYMMDD			

## **REF** Reference Identification (Number of Dials)

Segment:	KEF	Reference Iden	tification (Number of Dials)		
<b>Position:</b>	030				
Loop:	PTD	Mandatory			
Level:	Detail				
Usage:	Optional				
Max Use:		20			
Purpose:		ecify identifying information			
Syntax Notes:		east one of REF02 or REF03 is required.			
		If either C04003 or C04004 is present, then the other is required.			
			4006 is present, then the other is requir	ed.	
Semantic Notes:	1 REF	04 contains data re	elating to the value cited in REF02.		
Comments:	III. N. (	TT J			
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				
	distinguish the different TOUs. IU: Not Used				
	MU: Required for meters with dials				
	DU: Not Used				
	REF~IX~6.0~KHMON				
	REF~IX~5.1~KHMON~TU^41				
		~4.2~K1MON~TU			
D.f		Data Ele	ement Summary		
Ref.	Data	N			•1
Des.	Element	Name D f			ributes
REF01	128		ification Qualifier	Μ	ID 2/3
		Code qualifying	the Reference Identification		
		IX	Item Number		
			Number of dials on the meter displ	layed as X.	.Y. The
			notation X.Y means that the meter		ls to the left
			of the decimal point and Y dials to	the right.	
REF02	127	<b>Reference Ident</b>	ification	Х	AN 1/30
			nation as defined for a particular Transa	ection Set of	or as
			Reference Identification Qualifier		
		Number of Dials			
REF03	352	Description		Х	AN 1/80

			specified by the Reference Identification Qualifier				
			Number of Di				
Μ	REF03	352	Description			Х	AN 1/80
			A free-form d	escription to clarify the rel	ated data elements an	d thei	ir content
				See Meter Type (REF~M7 not a valid code for this el	· · · · · · · · · · · · · · · · · · ·	for va	lid codes.
С	REF04	C040	<b>Reference Id</b>	entifier		0	
			•	ne or more reference numb he Reference Qualifier	ers or identification n	umbe	rs as
			Note this is a	composite data element. H	Populate C04001 and O	C0400	02.
			Condition: if	this is a time of use meter,	this must be sent		
С	C04001	128	<b>Reference Id</b>	entification Qualifier		С	ID 2/3
			Code qualifyi	ng the Reference Identification	ation		
			Condition: if	this is a time of use meter,	this must be sent		
			TU	Trial Location Cod	le		
				Time of Use			
С	C04002	127	<b>Reference Id</b>	entification		С	AN 1/30
				ormation as defined for a phe Reference Identification		Set of	r as
				r codes can be used to iden t be used to identify tariffe	• •	•	

Condition: if this is a time of use meter, this must be sent

Off Peak

41

Μ

 $\mathbf{M}$ 

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: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	030 PTD Detail Optional 20 To specifi 1 At le 2 If eit 3 If eit 1 REF HI: Not HU: Not IU: Not	Mandatory fy identifying inform east one of REF02 or ther C04003 or C040 ther C04005 or C040 04 contains data rela Used Used Used quired if there are most t Used		
	-	Data Elem	ent Summary	
Ref. Des.	Data Element	Name		<u>Attributes</u>
REF01	128	Reference Identifi	-	M ID 2/3
			e Reference Identification	
		JH	Tag	
			Meter Role	T
I REF02	127		ion as defined for a particular Transactio ference Identification Qualifier Additive	
		I S	This consumption contributed to the su nothing) Ignore This consumption did not contribute to total (do nothing) Subtractive	
		0	This consumption must be subtracted f summarized total	rom the

Μ

Μ

Segment: Position: Loop:	<b>REF</b> 030 PTD	<b>Reference Identification (Meter Number)</b> Mandatory		
Level:	Detail			
Usage:	Optional			
Max Use: Purpose:	I To specif	y identifying information		
Syntax Notes:	-	east one of REF02 or REF03 is required.		
Syntax Hotes.		ther C04003 or C04004 is present, then the other is required.		
		her C04005 or C04006 is present, then the other is required.		
Semantic Notes:		04 contains data relating to the value cited in REF02.		
Comments: Notes:	HI: Not			
	IU: Not MU: Re DU: Not	equired if there are metered services on the account		
		Data Element Summary		
Ref.	Data			
Des.	Element			ributes
REF01	128	Reference Identification Qualifier	N	ID 2/3
		Code qualifying the Reference Identification		
		MG Meter Number		
REF02	127	Reference Identification	X	AN 1/30
		Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier Meter Number	1 Set o	or as

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	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	030 PTD Detail Optional 20 To specifi 1 At le 2 If eit 3 If eit 1 REF HI: Not HU: Rec IU: Not MU: Rec DU: Not	uired if there are metered services on the account Used quired if there are metered services on the account	
			~KHWON	
	Ref.	Data	Data Element Summary	
	Des.	Element	Name	<u>Attributes</u>
Μ	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			MT Meter Ticket Number	
м	DEEAJ	127	Meter Type Reference Identification	X AN 1/30
Μ	REF02	127	Reference information as defined for a particular Transac	
			<ul> <li>Reference information as defined for a particular Transac specified by the Reference Identification Qualifier</li> <li>When REF01 is MT, the meter type is expressed as a five first two characters are the type of consumption, the last t the metering interval reported by the metering agent. Valicombination of the following values:</li> <li>Type of Consumption <ul> <li>K1 Kilowatt Demand (kW)</li> <li>K2 Kilovolt Amperes Reactive Demand (kVAR)</li> <li>K3 Kilovolt Amperes Reactive Hour (kVARh)</li> <li>K4 Kilovolt Amperes (kVA)</li> <li>KH Kilowatt Hour (kWh)</li> </ul> </li> <li>Metering Interval Reported for Billing Purposes nnn Number of minutes from 001 to 999 <ul> <li>ANN Annual</li> <li>BIA Bi-annual</li> <li>BIM Bi-monthly</li> <li>DAY Daily</li> <li>MON Monthly</li> <li>QTR Quarterly</li> <li>TOU Time of Use</li> </ul> </li> <li>For Example: <ul> <li>KHMON Kilowatt Hours Per Month</li> <li>K1015 Kilowatt Demand per 15 minute interval</li> <li>"COMBO" cannot be used in this segment.</li> </ul> </li> </ul>	e-character field. The hree characters are

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

	Segment.		Reference fuentimention (10-Loud Frome)			
	<b>Position:</b>	030				
	Loop:	PTD				
	Level:	Detail	Detail			
	Usage:	Optional				
	Max Use:	20				
	Purpose:	To specif	To specify identifying information			
Synt	tax Notes:					
			her C04003 or C04004 is present, then the other is require			
			her C04005 or C04006 is present, then the other is require	ed.		
Seman	tic Notes:	1 REF	04 contains data relating to the value cited in REF02.			
C	omments:					
	Notes:		tUsed			
			juired for DP&L and Duke Energy Ohio. In the event the		1	
			nder an account, the PTD~PL/BC will be looped for each	rate class.	(AEP &	
	FirstEnergy sends in PTD~FG loop)					
	IU: Not Used					
		MU: No				
		DU: Not				
		REF~LO~GS				
	Def	D-4-	Data Element Summary			
	Ref.	Data Element	Nome	V14	A 44	
Must Use	<u>Des.</u> REF01	Element 128	Name Reference Identification Quelifier		<u>Attributes</u> ID 2/3	
Must Use	KEFUI	120	<b>Reference Identification Qualifier</b>	IVI	ID 2/3	
			Code qualifying the Reference Identification			
			LO Load Planning Number			
			Load profile			
Must Use	REF02	127	Reference Identification		AN 1/30	
			Reference information as defined for a particular Transac	ction Set o	or as	
			specified by the Reference Identification Qualifier			

# **REF** Reference Identification (EDU Rate Code)

Segment:	<b>REF</b> Reference Identification (EDU Rate Code)				
<b>Position:</b>	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.				
	<b>3</b> If either C04005 or C04006 is present, then the other is required.				
Semantic Notes:	<b>1</b> REF04 contains data relating to the value cited in REF02.				
<b>Comments:</b>					
Notes:	HI: Not Used				
	HU: Required for DP&L and Duke Energy Ohio. In the event there are				
	classes under an account, the PTD~PL/BC will be looped for each rate cl	lass. (AEP &			
	FirstEnergy sends in PTD~FG loop)				
	.,				
	IU: Not Used				
	IU: Not Used MU: Required if there are metered services on the account				
	IU: Not Used MU: Required if there are metered services on the account DU: Not Used				
	IU: Not Used MU: Required if there are metered services on the account				
	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES				
Ref.	IU: Not Used MU: Required if there are metered services on the account DU: Not Used				
	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data	Attributes			
Ref. <u>Des.</u> REF01	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data <u>Element</u> Name	<u>Attributes</u> M ID 2/3			
Des.	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data <u>Element Name</u>				
Des.	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data Element Name 128 Reference Identification Qualifier				
Des.	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data <u>Element</u> <u>Name</u> 128 Reference Identification Qualifier Code qualifying the Reference Identification				
Des.	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data Element Name 128 Reference Identification Qualifier Code qualifying the Reference Identification NH Rate Card Number EDU Rate Code or tariff				
Des. REF01	IU: Not Used MU: Required if there are metered services on the account DU: Not Used REF~NH~RES Data Element Summary Data Element Name 128 Reference Identification Qualifier Code qualifying the Reference Identification NH Rate Card Number EDU Rate Code or tariff	M ID 2/3 X AN 1/30			

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#### REF Dof (EDU Data Subal т 1

Segment: <b>REF</b> Reference Identification (EDU Rate Subclass)					
Position: 030					
Loop: PTD Mandatory	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.					
<b>Semantic Notes:</b> 1 REF04 contains data relating to the value cited in REF02.					
Comments: Notes: HI: Not Used					
the EDU system IU: 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 DU: Not Used REF~PR~HEAT				
Data Element Summary Ref. Data					
	atos				
	D 2/3				
Code qualifying the Reference Identification					
PR Price Quote Number					
EDU Rate Subclass or Revenue Class - Used to	nrovide				
	provide				
further classification of a rate.	N 1/30				
further classification of a rate.MREF02127Reference IdentificationXA	N 1/30				
further classification of a rate.	N 1/30				

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes:	QTY Quantity 110 QTY Optional Detail Optional 1 To specify quantity information 1 At least one of QTY02 or QTY04 is required. 2 Only one of QTY02 or QTY04 may be present.
Semantic Notes: Comments:	<ul> <li>1 QTY04 is used when the quantity is non-numeric.</li> </ul>
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 DU: Not Used QTY~QD~22348~KH

	DC		Data Eleme	ent Summury		
	Ref. Des.	Data Element	Name		Attr	ibutes
Μ	QTY01	673	Quantity Qualifier			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 receiv (AEP, DP&L, Duke Energy Ohio & FirstEnergy		
			9H	Estimated Quantity Received (Net Metering)		July)
				Used when the net generation quantity receiv		
М	QTY02	380	Quantity	(AEP, DP&L, Duke Energy Ohio & FirstEne		Dnly) <b>R 1/15</b>
	Q1102	200	Numeric value of qu	antity		K 1/10
М	QTY03	C001	Composite Unit of 1	-	0	
	<b>X</b> 00	0001	-	site unit of measure (See Figures Append		or examples
			of use)			I III
			Note this is a compo	osite data element, populate C00101		
Μ	C00101	355	Unit or Basis for M	leasurement Code	Μ	ID 2/2
			1 1 0	units in which a value is being expressed	, or n	nanner in
			which a measuremen	nt has been taken		
			K I	Kilowatt Demand		
			K1	Kilowatt Demand kW - Represents potential power load n	าคลรม	ured at
			KI	kW - Represents potential power load n	neasu	ired at
			К1 К2		neasu	ired at
				kW - Represents potential power load n predetermined intervals Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su	pplie	d for
				kW - Represents potential power load n predetermined intervals Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su specific types of customer's equipment;	pplie billał	d for ble when
				kW - Represents potential power load n predetermined intervals Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su specific types of customer's equipment; kilowatt demand usage meets or exceeds	pplie billał	d for ble when
				kW - Represents potential power load n predetermined intervals Kilovolt Amperes Reactive Demand kVAR - Reactive power that must be su specific types of customer's equipment;	pplie billał	d for ble when

	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

### MEA Measurements (Readings & Time of Use)

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Segment:	<b>IVIL</b> A 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.
	<b>3</b> 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:	<b>1</b> MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
<b>Comments:</b>	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
	DU: Not Used
	MEA~AA~PRQ~772~KH~10500~11272~42
	MEA~AF~PRQ~12799~K1~~12799~51

#### Ref. Data Des. Element Attributes Name М **MEA01** O ID 2/2737 **Measurement Reference ID Code** 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 Μ **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 Μ **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. Μ **MEA04** C001 **Composite Unit of Measure** Х To identify a composite unit of measure (See Figures Appendix for examples of use) Μ 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 m	neasu	red at
				predetermined intervals		
			K2	Kilovolt Amperes Reactive Demand		
				kVAR - Reactive power that must be sup specific types of customer's equipment; l		
				kilowatt demand usage meets or exceeds	a de	fined
				parameter		
			K3	Kilovolt Amperes Reactive Hour		
				kVARh - Represents actual electricity kilowatt hours; billable when usage meet	-	
			17.4	defined parameters		
			K4	Kilovolt Amperes		
			1711	kVA - Kilovolt Amperes		
			KH	Kilowatt Hour		
G		= 40	D 10.1	kWh - Kilowatt Hour	<b>T</b> 7	D 1/00
С	MEA05	740	Range Minimum	a · · · · · · · · · · · · · · · · · · ·	X	R 1/20
				ng the minimum of the measurement range		
			Beginning Reading			
			Required unless M	EA01 = AF		-
Μ	MEA06	741	Range Maximum	ng the maximum of the measurement range	X	R 1/20
			1 0	single reading (demand).		
С	MEA07	935	Measurement Sig		0	ID 2/2
		755		mark, qualify or further define a measuren	•	-
v			coue used to beller	mark, quanty of farmer define a measuren		
č			NOTE: Other code	es can be used to identify quantities measur		
~			but should not be u	es can be used to identify quantities measur sed to identify tariffed/calculated measurer of use meter, this must be sent	red by	y the meter,
-			but should not be u	sed to identify tariffed/calculated measurer of use meter, this must be sent	red by	y the meter,
÷			but should not be u Condition: If time of	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak	red by	y the meter,
-			but should not be u Condition: If time of 41	sed to identify tariffed/calculated measurer of use meter, this must be sent	red by	y the meter,
č			but should not be u Condition: If time o 41 42	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak	red by	y the meter,
÷			but should not be u Condition: If time o 41 42	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak	red by	y the meter,
U U U U U U U U U U U U U U U U U U U			but should not be u Condition: If time of 41 42 43	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder	red by	y the meter,
U U U U U U U U U U U U U U U U U U U			but should not be u Condition: If time of 41 42 43	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer	ed by	y the meter,
-			but should not be u Condition: If time o 41 42 43 51	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low	ed by	y the meter,
-			but should not be u Condition: If time o 41 42 43 51	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total	ed by	y the meter,
÷			but should not be u Condition: If time o 41 42 43 51 71	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low (AEP Only)	ed by	y the meter,
÷			but should not be u Condition: If time o 41 42 43 51 71	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low (AEP Only) Medium	ed by	y the meter,
č			but should not be u Condition: If time of 41 42 43 51 71 76	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low (AEP Only) Medium (AEP Only)	ed by	y the meter,
-			but should not be u Condition: If time of 41 42 43 51 71 76	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low (AEP Only) Medium (AEP Only) High	ed by	y the meter,
č			but should not be u Condition: If time of 41 42 43 51 71 76 85	sed to identify tariffed/calculated measurer of use meter, this must be sent Off Peak On Peak Intermediate Peak Shoulder Totalizer Total Low (AEP Only) Medium (AEP Only) High (AEP Only)	ed by	y the meter,

Segment:	MEA Measurements (Meter Multiplier)
Position:	160
Loop:	QTY Optional
Level:	Detail
Usage:	Optional
Max Use:	40
<b>Purpose:</b>	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.
	<b>3</b> 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.
<b>Comments:</b>	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
	DU: Not Used
	MEA~~MU~1

	D C		Data Elen	kin Summary	
	Ref.	Data			
	Des.	<b>Element</b>	<u>Name</u>		<b>Attributes</b>
Μ	MEA02	738	Measurement Qua	alifier	O ID 1/3
			Code identifying a	specific product or process characteristic	to which a
			measurement applie	es	
			MU	Multiplier	
				Meter Multiplier	
				(Ending Reading - Beginning Reading)	* Meter
				Multiplier = Billed Usage	
Μ	MEA03	739	Measurement Val	ue	X R 1/20
			The value of the me	easurement	
			Meter Multiplier		

Segment:	MEA Measurements (Power Factor)	
<b>Position:</b>	160	
Loop:	QTY Optional	
Level:	Detail	
Usage:	Optional	
Max Use:	40	
Purpose:	To specify physical measurements or counts, including dimension	ons, 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 requi	ired.
	2 If MEA05 is present, then MEA04 is required.	
	<b>3</b> If MEA06 is present, then MEA04 is required.	
	4 If MEA07 is present, then at least one of MEA03 MEA05 or	r 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	nd MEA06.
<b>Comments:</b>	1 When citing dimensional tolerances, any measurement require any measurement where a positive (+) value cannot be assured	
	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 i	it is available
	DU: Not Used	
	MEA~~ZA~.95	
	D-4- El-	
Def	Data Element Summary	
Ref.	Data Floment Nome	A theilanton
M MEA02	Element Name	<u>Attributes</u>

М	<u>Des.</u> MEA02	Element 738		specific product or process characteristic	Attributes O ID 1/3 to which a	
			measurement applie ZA	<ul> <li>Power Factor</li> <li>Relationship between watts and volt - a necessary to supply electric load</li> </ul>	mperes	
Μ	MEA03	739	Measurement Valu The value of the me Power Factor		X R 1/20	

# MEA Measurements (Transformer Loss 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.
	<b>3</b> 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:	<b>1</b> MEA04 defines the unit of measure for MEA03, MEA05, and MEA06.
<b>Comments:</b>	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
	DU: Not Used
	MEA~~CO~1.02

	Def	Data	Data Liem	ent Summary		
Μ	Ref. <u>Des.</u> MEA02	Data <u>Element</u> 738	<u>Name</u> Measurement Qua	lifier	<u>Atta</u> O	<u>ributes</u> ID 1/3
			Code identifying a s measurement applie CO	pecific product or process characteristic s Core Loss	to wh	ich a
				Transformer Loss Factor		
Μ	MEA03	739	Measurement Valu	ie	Х	R 1/20
			The value of the me	asurement		
			Transformer Loss F	actor		
Optional	MEA04	355	Unit or Basis for M	leasurement Code	Μ	ID 2/2
			Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken AM AMI Meter			nanner in
				Interval data should NOT be adjusted b	y ME	A03 value
			MV	MV90 Meter	•	
				Interval data should be adjusted by ME	A03 v	alue

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>DTM Date/Time Reference</li> <li>210</li> <li>QTY Optional</li> <li>Detail</li> <li>Optional</li> <li>10</li> <li>To specify pertinent dates and times</li> <li>1 At least one of DTM02 DTM03 or DTM05 is required.</li> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>HI: Not Used</li> <li>HU: Required if there are metered services on the account</li> <li>IU: Not Used</li> <li>MU: Not Used</li> <li>DU: Not Used</li> <li>DU: Not Used</li> <li>DTM~150~19990219</li> </ul>				
	Dſ	D (	Data Elem	ent Summary		
	Ref. Des.	Data Element	Name		A tti	<u>ributes</u>
Μ	<u>DES.</u> DTM01	<u>374</u>	Date/Time Qualifie	er		ID 3/3
			Code specifying typ	be of date or time, or both date and time		
			150	Service Period Start		
				Beginning Read Date		
Μ	<b>DTM02</b>	373	Date		Х	DT 8/8
			Date expressed as C	CYYMMDD		
			Date expressed as C	CCYYMMDD		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>DTM Date/Time Reference</li> <li>210</li> <li>QTY Optional</li> <li>Detail</li> <li>Optional</li> <li>10</li> <li>To specify pertinent dates and times</li> <li>1 At least one of DTM02 DTM03 or DTM05 is required.</li> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>HI: Not Used</li> <li>HU: Required if there are metered services on the account</li> <li>IU: Not Used</li> <li>MU: Not Used</li> <li>DU: Not Used</li> <li>DU: Not Used</li> <li>DTM~151~19990322</li> </ul>				
	Ref.	Data	Data Eleme	ent Summary		
	Des.	Data Element	Name		Attı	<u>ributes</u>
Μ	DTM01	374	Date/Time Qualifie	er	M	ID 3/3
			Code specifying typ	e of date or time, or both date and time		
			151	Service Period End		
				Ending Read Date		
Μ	DTM02	373	Date		Х	DT 8/8
			Date expressed as C			
			Date expressed as C	CYYMMDD		

Segment: Position: Loop: Level: Usage: Max Use:	PTD Product Transfer and Resale Detail (Interval Meter Services Summary) 010 PTD Optional Detail Optional 1 To indicate the start of detail information and the tempfor (see the formation of the start
Purpose:	To indicate the start of detail information relating to the transfer/resale of a product and provide identifying data
Syntax Notes:	<ol> <li>If either PTD02 or PTD03 is present, then the other is required.</li> <li>If either PTD04 or PTD05 is present, then the other is required.</li> </ol>
Semantic Notes: Comments:	
Notes:	<ul> <li>HI: Duke Energy Ohio may send the PTD~BO loop on 867HIU transactions, otherwise not used</li> <li>HU: Not Used</li> <li>IU: Required, FirstEnergy 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.</li> <li>MU: Not Used</li> <li>DU: Required</li> <li>One PTD loop is required for each meter or for each unit of measure on the account.</li> <li>PTD~BO</li> </ul>

			Data Elem	ent Summary	
М	Ref. <u>Des.</u> PTD01	Data <u>Element</u> 521	<u>Name</u> Product Transfer	Type Code	<u>Attributes</u> M ID 2/2
			Code identifying th	e type of product transfer	
			BO	Designated Items	
				Provides Summary information for each or unit of measure.	h interval meter

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>DTM Date/Time Reference (Service Period Start)</li> <li>020</li> <li>PTD Optional</li> <li>Detail</li> <li>Optional</li> <li>10</li> <li>To specify pertinent dates and times</li> <li>1 At least one of DTM02 DTM03 or DTM05 is required.</li> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>HI: Not Used</li> <li>HU: Not Used</li> <li>IU: Required</li> <li>MU: Not Used</li> <li>DU: Required</li> <li>DU: Required</li> <li>DTM-150~19990101</li> </ul>				
	_	_	Data Elem	ent Summary		
	Ref.	Data	•			<b>.</b>
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifi	a <b>r</b>	Attr M	<u>ributes</u> ID 3/3
111	DIMOI	5/4		be of date or time, or both date and time	141	10 5/5
			150	Service Period Start		
			100	Beginning Read Date		
М	DTM02	373	Date		X	DT 8/8
			Date expressed as C	CCYYMMDD		
			Date expressed CC			
			1			

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>DTM Date/Time Reference (Service Period End)</li> <li>020</li> <li>PTD Optional</li> <li>Detail</li> <li>Optional</li> <li>10</li> <li>To specify pertinent dates and times</li> <li>1 At least one of DTM02 DTM03 or DTM05 is required.</li> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>HI: Not Used</li> <li>HU: Not Used</li> <li>IU: Required</li> <li>MU: Not Used</li> <li>DU: Required</li> <li>DU: Required</li> <li>DTM~151~19990131</li> </ul>				
		_	Data Elem	ent Summary		
	Ref.	Data	N		• • •	••
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifie	<b>.</b>	Attr M	<u>ibutes</u> ID 3/3
TAT		5/7		be of date or time, or both date and time	TAT	11 515
			151	Service Period End		
			1.51	Beginning Read Date		
М	DTM02	373	Date	Beginning Keat Date	X	DT 8/8
TAT	17111102	515	Date expressed as C	CYYMMDD	1	<b>DI</b> 0/0
			Date expressed as C			
			Date expressed as C			

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments:	030 PTD Detail Optional 20 To specifi <b>1</b> At le <b>2</b> If eit <b>3</b> If eit	Reference Identification (Number of Dials)         Optional         Y identifying information         east one of REF02 or REF03 is required.         her C04003 or C04004 is present, then the other is required.         her C04005 or C04006 is present, then the other is required.         04 contains data relating to the value cited in REF02.			
Comments:         Notes:       HI: Not Used         HU: Not Used         IU: Required         MU: Not Used         DU: Required         REF~IX~6.0~KHMON         REF~IX~4.2~K1MON~TU^43					
	_	Data Element Summary			
Ref. <u>Des.</u> REF01	Data <u>Element</u> 128	<u>Name</u> Reference Identification Qualifier		<u>ributes</u> ID 2/3	
		Code qualifying the Reference Identification         IX       Item Number         Number of dials on the meter displayed notation X.Y means that the meter has 2 of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the net of the decimal point and Y dials to the decimal point and Y dials to the decimal point and Y dials to the decimal point a	X dial		
REF02	127	Reference Identification Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier Number of Dials	X	<b>AN 1/30</b> or as	
REF03	352	Description	X	AN 1/80	
		A free-form description to clarify the related data elements a Meter Type. See Meter Type (REF~MT) on 814 Enrollment "COMBO" is not a valid code for this element.	t for v		
REF04	C040	<b>Reference Identifier</b> To identify one or more reference numbers or identification is specified by the Reference Qualifier Note this is a composite data element. Populate C04001 and Condition: if this is a time of use meter, this must be sent			
C04001	128	Reference Identification Qualifier	С	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			

C04002

127

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С

С

С

**Reference Identification** 

41

42

43

51

Time of Use

specified by the Reference Identification Qualifier Condition: if this is a time of use meter, this must be sent

Off Peak

On Peak

Shoulder

Totalizer

Intermediate Peak

Reference information as defined for a particular Transaction Set or as

C AN 1/30

#### Total

Segment:	REF	Reference Iden	tification (Meter Role)	
Position:	030			
Loop:	PTD	Optional		
Level:				
Usage:	-			
Max Use:				
Purpose:	1	fy identifying infor		
Syntax Notes:			or REF03 is required.	ino d
			4004 is present, then the other is requi 4006 is present, then the other is requi	
Semantic Notes:			elating to the value cited in REF02.	litu.
Comments:	I KLI	04 contains data re	stating to the value chee in REF 02.	
Notes:	HI: Not	Used		
	HU: Not	Used		
	IU: Requ	uired		
	MU: No			
	DU: Req			
	REF~JH	~A		
		D-4- El-		
Ref.	Data	Data Ele	ement Summary	
Kei. Des.	Element	Name		Attributes
REF01	<u>128</u>		ification Qualifier	M ID 2/3
			the Reference Identification	112 120 210
		JH	Tag	
		J11	Meter Role	
DEEAA	107	<b>Reference Identi</b>		<b>T</b> T <b>A N</b> T <b>4</b> (20)
REF02	127	Keterence Ident		
				X AN 1/30
		Reference inform	ation as defined for a particular Trans	
		Reference inform specified by the F	nation as defined for a particular Trans Reference Identification Qualifier	
		Reference inform	ation as defined for a particular Trans Reference Identification Qualifier Additive	saction Set or as
		Reference inform specified by the F	ation as defined for a particular Trans Reference Identification Qualifier Additive This consumption contributed to t	saction Set or as
		Reference inform specified by the F	ation as defined for a particular Trans Reference Identification Qualifier Additive	saction Set or as
		Reference inform specified by the F A	aation as defined for a particular Trans Reference Identification Qualifier Additive This consumption contributed to t (do nothing) Ignore This consumption did not contribu	saction Set or as
		Reference inform specified by the F A	aation as defined for a particular Trans Reference Identification Qualifier Additive This consumption contributed to t (do nothing) Ignore	saction Set or as
		Reference inform specified by the F A I	aation as defined for a particular Trans Reference Identification Qualifier Additive This consumption contributed to t (do nothing) Ignore This consumption did not contribu- total (do nothing)	exaction Set or as the summarized total ute to the summarized

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#### REF Refer Identification (Motor N mh ----)

Segment:	<b>REF</b> 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	d.
	<b>3</b> If either C04005 or C04006 is present, then the other is required	d.
Semantic Notes:	<b>1</b> REF04 contains data relating to the value cited in REF02.	
<b>Comments:</b>		
Notes:	Meter numbers will contain only uppercase letters (A to Z) and digi punctuation (spaces, dashes, etc.) must be excluded, and significant zeros that are part of the meter number must be present. HI: Not Used HU: Not Used IU: Required MU: Not Used DU: Required REF~MG~2222277S	
	Data Element Summary	
Ref.	Data	
Des.	<u>Element</u> <u>Name</u>	<b>Attributes</b>
REF01	128 Reference Identification Qualifier	$\overline{M}$ ID $2/3$

	Des.	<u>Element</u>	<u>Name</u>		Att	<u>ributes</u>
Μ	REF01	128	Reference Io	dentification Qualifier	Μ	ID 2/3
			Code qualify	ing the Reference Identification		
			MG	Meter Number		
Μ	REF02	127	<b>Reference</b> Io	dentification	Х	AN 1/30
				formation as defined for a particular Transaction the Reference Identification Qualifier	on Set o	or as
			Meter Numb	ber -		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments:	030 PTD Detail Optional 20 To specif <b>1</b> At le <b>2</b> If eit <b>3</b> If eit	Reference Identification (Meter Type) Optional Y identifying information east one of REF02 or REF03 is required. her C04003 or C04004 is present, then the other is required her C04005 or C04006 is present, then the other is required 04 contains data relating to the value cited in REF02.	
	Notes:	HI: Not HU: Not IU: Requ MU: No DU: Req REF~MT	Used hired t Used	
			Data Element Summary	
	Ref.	Data Element		A +++++-+
Μ	<u>Des.</u> REF01	Element 128	<u>Name</u> Reference Identification Qualifier	Attributes M ID 2/3
			Code qualifying the Reference Identification	
			MT Meter Ticket Number	
			Meter Type	
Μ	REF02	127	Reference Identification	X AN 1/30
			<ul> <li>Reference information as defined for a particular Transactispecified by the Reference Identification Qualifier</li> <li>When REF01 is MT, the meter type is expressed as a five-first two characters are the type of consumption, the last the metering interval reported by the metering agent. Valicombination of the following values:</li> <li>Type of Consumption <ul> <li>K1 Kilowatt Demand (kW)</li> <li>K2 Kilovolt Amperes Reactive Demand (kVAR)</li> <li>K3 Kilovolt Amperes Reactive Hour (kVARh)</li> <li>K4 Kilovolt Amperes (kVA)</li> <li>KH Kilowatt Hour (kWh)</li> </ul> </li> <li>Metering Interval Reported for Billing Purposes <ul> <li>nnn Number of minutes from 001 to 999</li> <li>ANN Annual</li> <li>BIA Bi-annual</li> <li>BIM Bi-monthly</li> <li>DAY Daily</li> <li>MON Monthly</li> <li>QTR Quarterly</li> <li>TOU Time of Use</li> </ul> </li> <li>For Example: <ul> <li>KHMON Kilowatt Hours Per Month</li> <li>K1015 Kilowatt Demand per 15 minute interval</li> <li>"COMBO" cannot be used in this segment.</li> </ul> </li> </ul>	character field. The ree characters are

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>110</li> <li>QTY</li> <li>Detail</li> <li>Optional</li> <li>1</li> <li>To specifi</li> <li>1 At let</li> <li>2 Only</li> <li>1 QTY</li> <li>HI: Not</li> <li>HU: Not</li> <li>IU: Requ</li> <li>MU: Not</li> <li>DU: Req</li> </ul>	fy quantity informatic east one of QTY02 or 7 one of QTY02 or Q 704 is used when the Used t Used uired t Used			
			Data Elem	ent Summary		
М	Ref. <u>Des.</u> QTY01	Data <u>Element</u> 673	<u>Name</u> Quantity Qualifier			<u>ibutes</u> 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)		. 1
				Used when the net generation quantity received (DP&L, Duke Energy Ohio Only)	ved 1s	actual.
			9H	Estimated Quantity Received (Net Metering		
				Used when the net generation quantity received (DP&L, Duke Energy Ohio Only)	ived is	estimated.
Μ	QTY02	380	Quantity	(Di &L, Duke Energy Onio Oniy)	X	R 1/15
	C C		Numeric value of qu	antity		
Μ	QTY03	C001	Composite Unit of	•	0	
	-		-	site unit of measure (See Figures Appen	ndix fo	or examples
			of use)			
<b>7 7</b>	000404			osite data element, populate C00101	3.5	ID 4/2
Μ	C00101	355	Unit or Basis for M			ID 2/2
			Code specifying the which a measureme	units in which a value is being expressed at has been taken	ı, or n	nanner in
			K1	Kilowatt Demand		
				kW - Represents potential power load n	neasui	red at
				predetermined intervals		
			K2	Kilovolt Amperes Reactive Demand		
				kVAR - Reactive power that must be su specific types of customer's equipment;		
				kilowatt demand usage meets or exceed		
				parameter		
			K3	Kilovolt Amperes Reactive Hour		
				kVARh - Represents actual electricity e	-	
				kilowatt hours; billable when usage med defined parameters	ets or	exceeds
			K4	Kilovolt Amperes		
				kVA - Kilovolt Amperes		
			KH	Kilowatt Hour		

kWh - Kilowatt Hour

Segment:	MEA Measurements (Meter Reads)
<b>Position:</b>	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.
	<b>3</b> 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.
<b>Comments:</b>	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
	DU: Required
	MEA~AF~~~KH~02500~04000~51

			Data Elem	ent Summary	
	Ref.	Data			<b>.</b> .
	Des.	<u>Element</u>	Name		Attributes
Μ	MEA01	737	Measurement Refe		O ID 2/2
			Code identifying th	e broad category to which a measurement	applies
			AA	Meter reading-beginning actual/ending	actual
			AE	Meter reading-beginning actual/ending	estimated
			AF	Actual Total	
			EA	Recommended for demand because dem only 1 reading. This code will also be a Energy Ohio if previous reading is not 1 for units of measure other than demand. Meter reading-beginning estimated/end	used by Duke being supplied
					•
			EE	Meter reading-beginning estimated/end	ing estimated
Μ	MEA04	C001	Composite Unit of	Measure	X
			• •	osite unit of measure (See Figures Appen	dix for examples
	000101		of use)		
Μ	C00101	355		Aeasurement Code	M ID 2/2
				e units in which a value is being expressed	l, or manner in
			which a measureme K1	ent has been taken Kilowatt Demand	
			K1		• • • • • • • • • • • • • •
				kW - Represents potential power load n predetermined intervals	heasured at
			K2	Kilovolt Amperes Reactive Demand	
				kVAR - Reactive power that must be su	pplied for
				specific types of customer's equipment;	billable when
				kilowatt demand usage meets or exceed	s a defined
			17.0	parameter	
			K3	Kilovolt Amperes Reactive Hour	
				kVARh - Represents actual electricity e	•
				kilowatt hours; billable when usage mee	ets of exceeds
				defined parameters	

			K4	Kilovolt Amperes		
				kVA - Kilovolt Amperes		
			KH	Kilowatt Hour		
				kWh - Kilowatt Hour		
С	MEA05	740	Range Minimum		Х	R 1/20
		The value sp	The value specifyin	g the minimum of the measurement range		
			Beginning Reading	if applicable		
			Condition: Require	d unless MEA01 = "AF"		
Μ	MEA06	741	Range Maximum		Х	R 1/20
			The value specifyin	g the maximum of the measurement range		
		ingle reading				

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			Data Elem	ent Summary	
М	Ref. <u>Des.</u> MEA02	Data <u>Element</u> 738	<u>Name</u> Measurement Qua	lifier	Attributes O ID 1/3
			Code identifying a s measurement applie	specific product or process characteristic	to which a
			MU	Multiplier	
				Meter Multiplier	
				(Ending Reading - Beginning Reading)	* Meter
				Multiplier = Billed Usage	
Μ	MEA03	739	Measurement Valu	ie	X R 1/20
			The value of the me	easurement	
			Meter Multiplier		

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>160</li> <li>QTY</li> <li>Detail</li> <li>Optional</li> <li>40</li> <li>To specification and weige</li> <li>1 At lefter Arrows</li> <li>2 If M</li> <li>3 If M</li> <li>4 If M</li> <li>5 Only</li> <li>1 MEA</li> <li>1 When any mega</li> <li>HI: Not</li> <li>HU: Not</li> <li>IU: Required MU: Not</li> </ul>	fy physical measurements or counts, including dimensions, tolerances, v phts (See Figures Appendix for example of use of C001) east one of MEA03 MEA05 MEA06 or MEA08 is required. IEA05 is present, then MEA04 is required. IEA06 is present, then MEA04 is required. IEA07 is present, then at least one of MEA03 MEA05 or MEA06 is required one of MEA08 or MEA03 may be present. A04 defines the unit of measure for MEA03, MEA05, and MEA06. en citing dimensional tolerances, any measurement requiring a sign (+ or measurement where a positive (+) value cannot be assumed, use MEA05 ative (-) value and MEA06 as the positive (+) value. Used t Used uired if available ot Used puired if available	iired.
	_	Data Element Summary	
Ref.	Data Flomont	Nome Attaihu	tos
<u>Des.</u> MEA02	Element 738		<u>1/3</u>
		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	_, .
MEA03	739		1/20
		The value of the measurement	
		Power Factor	

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# MEA Measurements (Transformer Loss Factor)

Segment:	ME	Measurements (Transforme	er Loss Factor)		
Position:	160	~	,		
Loop:	QTY Optional				
Level:	Detail	- F			
Usage:	Optional				
Max Use:	40				
Purpose:	To specif	physical measurements or cour	nts, including dimensions, toleranc	es, variances,	
-		its (See Figures Appendix for ex			
Syntax Notes:		ast one of MEA03 MEA05 MEA			
·		EA05 is present, then MEA04 is			
	<b>3</b> If M	EA06 is present, then MEA04 is	required.		
	4 If M	EA07 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 MEA	04 defines the unit of measure for	or MEA03, MEA05, and MEA06.		
<b>Comments:</b>			any measurement requiring a sign		
			) value cannot be assumed, use MI	EA05 as the	
	-	ive (-) value and MEA06 as the	positive (+) value.		
Notes:	HI: Not				
	HU: Not				
	-	ired when the transformer loss is	not measured by the meter		
	MU: No				
	DU: Required when the transformer loss is not measured by the meter				
	MEA~~C	0~1.02			
		Data Element Summa	<b>PW</b>		
Ref.	Data	Duta Element Summa	.,		
Des.	Element	Name	Att	ributes	
MEA02	738	Measurement Qualifier	0	ID 1/3	
		Code identifying a specific prod	luct or process characteristic to wh	nich a	
		measurement applies			
		CO Core Loss			
		Transform	er Loss Factor		
MEA03	739	Measurement Value	X	R 1/20	
1112/103	107		А	IX 1/20	
	The value of the measurement				

Transformer Loss Factor

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Segment:	${f PTD}$ Product Transfer and Resale Detail (Interval Meter Services Detail)
<b>Position:</b>	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:	
<b>Comments:</b>	
Notes:	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
	DU: Not Used
	PTD~PM

## **Data Element Summary**

	Data Eleme	ent Summary	
Data Flement	Name		Attributes
<u>521</u>		Гуре Code	M ID 2/2
	Code identifying the	e type of product transfer	
	PM	Physical Meter Information	
		Provides detail information for each int unit of measure.	erval meter or
	Element	DataElementName521Product Transfer TCode identifying the	Element       Name         521       Product Transfer Type Code         Code identifying the type of product transfer         PM       Physical Meter Information         Provides detail information for each int

Segment: Position: Loop:	030 PTD	<b>Reference Identification (Meter Number)</b> Mandatory			
Level:	Detail				
Usage:	Optional				
Max Use:	1 To an aif				
Purpose:		y identifying information			
Syntax Notes:		ast one of REF02 or REF03 is required. her C04003 or C04004 is present, then the other is required.			
	3 If eit	her C04005 or C04006 is present, then the other is required.			
Semantic Notes: Comments:	1 REF	04 contains data relating to the value cited in REF02.			
Notes:	HI: Required HU: Not Used IU: Required MU: Not Used DU: Not Used REF~MG~2222277S				
Ref.	Data	Data Element Summary			
Des.	Element	Name	Attr	ibutes	
REF01	128	Reference Identification Qualifier	M	ID 2/3	
		Code qualifying the Reference Identification MG Meter Number			
REF02	127	<b>Reference Identification</b> Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier	X Set o	<b>AN 1/30</b> or as	
		Meter Number			

М

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>110</li> <li>QTY</li> <li>Detail</li> <li>Optional</li> <li>1</li> <li>To specifi</li> <li>1 At let</li> <li>2 Only</li> <li>1 QTY</li> <li>HI: Required</li> <li>HU: Not</li> </ul>	04 is used when the o ired Used ired if CRES requests Used Used		ment	or Change
			Data Flema	ent Summary		
	Ref.	Data	Data Elenk			
	Des.	<b>Element</b>	Name		Attı	ributes
Μ	QTY01	673	<b>Quantity Qualifier</b>		Μ	ID 2/2
			Code specifying the			
			KA	Estimated		
				Quantity is estimated		
			QD	Quantity Delivered		
				Quantity is actual		
			20	Unavailable		
				Used when meter data is not available to	fill	the
			87	intervals FirstEnergy only Actual Quantity Received (Net Metering	•)	
			07	Used when the net generation quantity re-		ed is
				actual. (DP&L, FirstEnergy & Duke Energy		
			9H	Estimated Quantity Received (Net Meter		
				Used when the net generation quantity re		
				estimated. (DP&L, FirstEnergy & Duke	Ene	rgy Ohio
Μ	QTY02	380	Quantity	Only)	X	R 1/15
IVI	Q1102	500	Numeric value of qu	iantity	1	K 1/15
Μ	QTY03	C001	Composite Unit of	•	0	
T4 <b>T</b>	Q1103	0.001	-	site unit of measure (See Appendix for e	-	les of use)
			• •	site data element, populate C00101	Aunt	les of use)
Μ	C00101	355	Unit or Basis for M		Μ	ID 2/2
171	COULDI	555		units in which a value is being expressed		
			which a measurement	• •	, 01 1	
			K1	Kilowatt Demand		
				kW - Represents potential power load n	neasu	ired at
				predetermined intervals		
			K2	Kilovolt Amperes Reactive Demand		
				kVAR - Reactive power that must be sup		
				specific types of customer's equipment;		
				kilowatt demand usage meets or exceeds parameter	a de	enned
			K3	Kilovolt Amperes Reactive Hour		
				_	juiva	lent to
				kilowatt hours; billable when usage mee	-	
				defined parameters		
					-	

 K4
 Kilovolt Amperes

 kVA - Kilovolt Amperes

 KH
 Kilowatt Hour

 kWh - Kilowatt Hour

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments:	210 QTY Detail Optional 10 To specif <b>1</b> At le <b>2</b> If D'	Date/Time Reference (Interval End Time) Optional fy pertinent dates and times east one of DTM02 DTM03 or DTM05 is required. TM04 is present, then DTM03 is required. ther DTM05 or DTM06 is present, then the other is required.		
	Notes:	MU: Not DU: Not DTM~19 DTM~19	Used ired if the CRES requests detail interval information on the Used	Enrolln	nent or Change
	Ref.	Data	Data Element Summary		
М	Rei. <u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifier Code specifying type of date or time, or both date and time	Μ	ributes ID 3/3
			194 Period End		
			The date/time of the end of the interva		
Μ	DTM02	373	Date	Х	DT 8/8
			Date expressed as CCYYMMDD		
Μ	DTM03	337	<b>Time</b> Time expressed in 24-hour clock time as follows: HHMM, HHMMSSD, or HHMMSSDD, where $H = hours (00-23)$ , 1 59), $S = integer seconds (00-59) and DD = decimal secondare expressed as follows: D = tenths (0-9) and DD = hundreHHMM, where H = Hours and M = Minutes in Eastern PreFor this transaction, since X12 does not allow 2400 for timto indicate midnight. For example, midnight between OctoOctober 16th will be reflected as 2359 of October 15th.$	M = mi s; decin edths (( vailing e, 2359	nutes (00- nal seconds 00-99) 5 Time (ET). 9 will be used th and
Μ	DTM04	623	Time CodeCode identifying the time. In accordance with International Organization standard 8601, time can be specified by a + o in hours in relation to Universal Time Coordinate (UTC) ti restricted character, + and - are substituted by P and M in ti EDEDEastern Daylight Time (DPL, Duke E FirstEnergy)ESEastern Standard Time (DPL, Duke E FirstEnergy)ETEastern Time (AEP)	r - and me; sin he code nergy (	an indication ace + is a es that follow OH and

Segment:	<b>PTD</b> 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:	<b>1</b> 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:	
<b>Comments:</b>	
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
	DU: Not Used

### **Data Element Summary**

PTD~BC

	Ref.	Data	Data Ele	ment Summary		
	Des.	<u>Element</u>	Name		Attr	ibutes
М	PTD01	521	Product Transfer	r Type Code	Μ	ID 2/2
			Code identifying t	the type of product transfer		
			BC	Issue - Other Agency		
				Unmetered Services Summary		

 $\mathbf{M}$ 

DTM	Date/Time Reference	(Service Period Start)

Segment:	<b>DINI</b> Date/Time Reference (Service Period Start)						
<b>Position:</b>	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.						
	<b>3</b> If either DTM05 or DTM06 is present, then the other is required.						
Semantic Notes:							
<b>Comments:</b>							
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						
	DU: Not Used						
	DTM~150~19990101						
	Data Element Summary						
Ref.	Data						
Des.	<u>Element</u> <u>Name</u> <u>Attributes</u>						
DTM01	374 Date/Time Qualifier M ID 3/3						
	Code specifying type of date or time, or both date and time						
	150 Some Danied Start						

150 Service Period Start **DTM02** 373 Date Date expressed as CCYYMMDD Date expressed as CCYYMMDD

Μ

Μ

X DT 8/8

:	DTM Date/	<b>Fime Reference (Service Period End)</b>
•		The Reference (Bervice Ferrou 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.	
	<b>3</b> If either DTM05 or DTM06 is present, then the other is required.	
Semantic Notes:		
<b>Comments:</b>		
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	
	DU: Not Used	
	DTM~151~19990131	
	Data Element Summary	
Ref.	Data	
Des.	Element Name Attributes	
DTM01	374Date/Time QualifierMID 3/3	
	Code specifying type of date or time, or both date and time	

Service Period End

151

Date expressed as CCYYMMDD Date expressed as CCYYMMDD

Date

373

Μ

**DTM02** 

Μ

X DT 8/8

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

	Segment.		Reference fuction (EO-Eoud Frome)					
	Position:	030						
	Loop:	PTD	PTD					
	Level:	Detail						
	Usage:	Optional						
	Max Use:	20						
	Purpose:		fy identifying information					
Synt	tax Notes:		east one of REF02 or REF03 is required.					
			ther C04003 or C04004 is present, then the other is required.					
G			ther C04005 or C04006 is present, then the other is required.					
Seman	tic Notes:	1 REF	04 contains data relating to the value cited in REF02.					
C	omments:							
	Notes:	HI: Not U	Used					
		HU: Req	uired for DP&L and Duke Energy Ohio. In the event there a	re mu	ltiple rate			
		classes u	nder an account, the PTD~PL/BC will be looped for each rat	e class	. (AEP &			
		FirstEner	gy sends in PTD~FG loop)					
		IU: Not I	Used					
		MU: Not	Used					
		DU: Not	Used					
		REF~LO	0~GS					
			Data Element Summary					
	Ref.	Data	2					
	Des.	Element	Name	X12	Attributes			
Must Use	REF01	128	Reference Identification Qualifier	Μ	ID 2/3			
			Code qualifying the Reference Identification					
		LO Load Planning Number						
			Load profile					
			1					
Must Use	REF02	127	Reference Identification	Х	AN 1/30			
			Reference information as defined for a particular Transaction					
			specified by the Reference Identification Qualifier					
	sponnee of the recommendation comments							

# **REF** Reference Identification (EDU Rate Code)

Segment:	KEF	Reference Iden	ification (EDU Rate (	Code)				
Position:	030							
Loop:	PTD	Mandatory						
Level:	Detail							
Usage:	Optional							
Max Use:	1							
Purpose:		y identifying infor						
Syntax Notes:			or REF03 is required.					
			004 is present, then the					
			006 is present, then the					
Semantic Notes:	1 REF	04 contains data re	lating to the value cited	1 in REF02.				
Comments:	TTT NT / T	T 1						
Notes:	HI: Not U			T (1 ) (1		• •		
			d Duke Energy Ohio.			•		
			e PTD~PL/BC will be	looped for each rate of	class.	(AEP &		
		gy sends in PTD~I	G loop)					
	IU: Not U							
		MU: Required if there are metered services on the account						
		DU: Not Used						
	REF~NH	I~RES						
		Data Ele	ment Summary					
Ref.	Data							
Des.	<u>Element</u>	<u>Name</u>				ributes		
REF01	128	<b>Reference Identi</b>	fication Qualifier		Μ	ID 2/3		
		Code qualifying t	ne Reference Identifica	tion				
		NH	Rate Card Number					
			EDU Rate Code or	tariff				
REF02	127	<b>Reference Identi</b>	fication		Х	AN 1/30		
		Reference inform	ation as defined for a p	articular Transaction	Set o	or as		
			eference Identification					
		EDU Rate Code of						

Μ

# **REF** Reference Identification (EDU Rate Subclass)

Segment:	KEF	Reference Identi	fication (EDU Rate Subclass)				
Position:	030						
Loop:	PTD	Mandatory					
Level:	Detail	-					
Usage:	Optional						
Max Use:	1						
Purpose:	To specif	fy identifying inform	nation				
Syntax Notes:	1 At le	east one of REF02 of	r REF03 is required.				
		ther C04003 or C040	004 is present, then the other is requ	uired.			
			006 is present, then the other is requ	uired.			
Semantic Notes:	1 REF	04 contains data rela	ating to the value cited in REF02.				
<b>Comments:</b>							
Notes:	HI: Not U						
			ere are metered services on the acco	ount and if it is stored in			
	the EDU	•					
	IU: Not U						
			ere are metered services on the acc	ount and if it is stored in			
	the EDU system						
	DU: Not						
	REF~PR						
	REF~PR	~WHA					
		Data Elen	nent Summary				
Ref.	Data						
Des.	<u>Element</u>	<u>Name</u>		<b>Attributes</b>			
I REF01	128	<b>Reference Identif</b>	ication Qualifier	M ID 2/3			
		Code qualifying th	e Reference Identification				
		PR	Price Quote Number				
			EDU Rate Subclass or Revenue	Class - Used to provide			
			further classification of a rate.				
I REF02	127	<b>Reference Identif</b>	ication	X AN 1/30			
			tion as defined for a particular Tran	saction Set or as			
		specified by the De	formance Identification Qualifian				
		· ·	eference Identification Qualifier s or Revenue Class				

Μ

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	030 PTD Detail Optional 20 To specifi 1 At le 2 If eit 3 If eit 1 REF HI: Not V HU: Req IU: Not V	nal ecify identifying information at least one of REF02 or REF03 is required. Feither C04003 or C04004 is present, then the other is required. Feither C04005 or C04006 is present, then the other is required. EF04 contains data relating to the value cited in REF02. ot Used Required ot Used Required if there are unmetered service on the account					
Ref. Des. BEE01	Data <u>Element</u>	Data Element Summary <u>Name</u>		ributes			
REF01	128	Reference Identification QualifierCode qualifying the Reference IdentificationPRTProduct Type	М	ID 2/3			
		EDU Defined Unmetered Service Type		AN 1/30			
REF02	REF02       127       Reference Identification       X         Reference information as defined for a particular Transaction Set or specified by the Reference Identification Qualifier       This describes the type of device that this measurement loop refere instance, a specific wattage of an outdoor light). The valid codes we defined on each EDU Web Site.						

Μ

			_						
	Segment:	QTY	Quantity						
	Position:	110	-						
	Loop:	QTY Optional							
	Level:	Detail							
	Usage:	Optional							
	Max Use:								
	Purpose:	To specify quantity information							
	Syntax Notes:	<ol> <li>At least one of QTY02 or QTY04 is required.</li> <li>Only one of OTY02 or OTY04 may be present.</li> </ol>							
	Semantic Notes: Comments:	<ul> <li>2 Only one of QTY02 or QTY04 may be present.</li> <li>1 QTY04 is used when the quantity is non-numeric.</li> </ul>							
	Notes:	HI: Not I	Jsed						
		HU: Req							
		IU: Not I							
				re unmetered service on the account					
		DU: Not							
		QTY~QI	D~22348~KH						
	Ref.	Data	Data	Element Summary					
	Des.	<u>Element</u>	Name		<b>Attributes</b>				
Μ	<u>Des.</u> QTY01	<u>673</u>	Quantity Qua	alifier	M ID 2/2				
	21101	010		ng the type of quantity					
			QD	Quantity Delivered					
			<u> </u>	Quantity is actual					
				Quality is actual					
				Whether unmetered services are estin	nated, calculated,				
				or actual, they will be coded as actual					
Μ	QTY02	380	Quantity		X R 1/15				
			Numeric valu	e of quantity					
			This represent	ts the consumption quantity per device					
Μ	QTY03	C001	Composite U	nit of Measure	0				
			To identify a	composite unit of measure (See Figures App	endix for examples				
			of use)						
			Note this is a	composite data element, populate C00101					
Μ	C00101	355	Unit or Basis	for Measurement Code	M ID 2/2				
			Code specifyi	ng the units in which a value is being express	sed, or manner in				
				urement has been taken					
			EA	Each					
			KH	Kilowatt Hour					
				kWh					

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	<ul> <li>DTM Date/Time Reference</li> <li>210</li> <li>QTY Optional</li> <li>Detail</li> <li>Optional</li> <li>10</li> <li>To specify pertinent dates and times</li> <li>1 At least one of DTM02 DTM03 or DTM05 is required.</li> <li>2 If DTM04 is present, then DTM03 is required.</li> <li>3 If either DTM05 or DTM06 is present, then the other is required.</li> <li>HI: Not Used</li> <li>HU: Conditional – at least one set of DTMs (DTM~150 and DTM~151) must be sent in position 020 and/or 210</li> <li>IU: Not Used</li> <li>MU: Not Used</li> <li>DU: Not Used</li> <li>DU: Not Used</li> <li>DU: Not Used</li> <li>DU: Not Used</li> <li>DTM~150~19990219</li> </ul>				
	<b>D</b> 4		Data Element Summary			
	Ref.	Data Element	Nome	A 44-		
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifier	Atti M	<u>ributes</u> ID 3/3	
TAT	DIMUI	5/4	Code specifying type of date or time, or both date and time	TAT	10 3/3	
			150 Service Period Start			
			Beginning Read Date			
Μ	DTM02	373	Date	Х	DT 8/8	
			Date expressed as CCYYMMDD			
			Date expressed as CCYYMMDD			

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	210 QTY Detail Optional 10 To specifi <b>1</b> At le <b>2</b> If D' <b>3</b> If eit HI: Not V HU: Com position V IU: Not V MU: Not V DU: Not	ditional – at least one set of DTMs (DTM~150 and DTM~151 020 and/or 210 Jsed Used	) mus	st be sent in
	<b>D</b> 4		Data Element Summary		
	Ref.	Data Flomont	Nomo	A ++-	ributos
М	<u>Des.</u> DTM01	Element 374	<u>Name</u> Date/Time Qualifier	<u>Attra M</u>	<u>ributes</u> ID 3/3
	2 - 1.101		Code specifying type of date or time, or both date and time		
			151 Service Period End		
М	DTM02	373	Ending Read Date	X	DT 8/8
TAT	D111102	575	Date expressed as CCYYMMDD	1	<b>DI</b> 0/0
			Date expressed as CCYYMMDD		

Segment:	<b>PTD</b> 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:	
<b>Comments:</b>	
Notes:	HI: Required for PJM Customers; otherwise not used
	HU: Required for PJM Customers; otherwise not used
	IU: Not Used
	MU: Not Used
	DU: 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 Elem	ent Summary	
Must Use	Ref. <u>Des.</u> PTD01	Data <u>Element</u> 521	<u>Name</u> Product Transfer Code identifying th	<b>Type Code</b> e type of product transfer	<u>Attributes</u> M ID 2/2
			FG	Flowing Gas Information Scheduling Determinants: This loop information required by PJM.	will provide

#### OHIO867 (004010) V2.7.2

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

	beginent.		Kererence identification (DI – LDC Din Cycic)		
	Position:	030			
	Loop:	PTD			
	Level:	Detail			
	Usage:	Optional			
	Max Use:	20			
	<b>Purpose:</b>	To specif	y identifying information		
Synt	ax Notes:	1 At le	east one of REF02 or REF03 is required.		
-		2 If eit	her C04003 or C04004 is present, then the other is required.		
		3 If eit	her C04005 or C04006 is present, then the other is required.		
Seman	tic Notes:	1 REF	04 contains data relating to the value cited in REF02.		
C	omments:		-		
	Notes:	HI: Requ	ired		
		HU: Req	uired		
		IU: Not I	Jsed		
		MU: Not	Used		
		DU: Not	Used		
		REF~BF	~15		
			Data Element Summary		
	Ref.	Data			
	Des.	<u>Element</u>	<u>Name</u>	Att	<u>ributes</u>
Must Use	REF01	128	Reference Identification Qualifier	Μ	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		
			specified by the Reference Identification Qualifier		01 40
			specifica of the reference raciality and a called		

	Segment:	REF	Reference Identi	ification (KY=Special Meter Configur	ation)	
	Position:	030				
	Loop:	PTD				
	Level:	Detail				
	Usage:	Optional				
	Max Use:	20				
	<b>Purpose:</b>	To specif	fy identifying infor	mation		
Synt	ax Notes:	1 At le	east one of REF02	or REF03 is required.		
-		2 If eit	ther C04003 or C04	4004 is present, then the other is required	l.	
		3 If eit	ther C04005 or C04	4006 is present, then the other is required	1.	
Seman	tic Notes:	1 REF	04 contains data re	lating to the value cited in REF02.		
C	omments:					
Notes: HI: Required for AEP, DP&L and FirstEnergy when net meter is present on an accoun HU: Required for AEP, DP&L & FirstEnergy when net meter is present on an accoun IU: Not Used in this position, see Header MU: Not Used in this position, see Header DU: Not Used REF~KY~NETMETER						
			Data Ele	ment Summary		
	Ref.	Data				
	Des.	<u>Element</u>	<u>Name</u>		<u>X12</u>	<u>Attributes</u>
Must Use	REF01	128		fication Qualifier	Μ	ID 2/3
			Code qualifying t	he Reference Identification		
			KY	Site Specific Procedures, Terms, and Special Meter Configuration	Condi	tions
Must Use	REF02	127	<b>Reference Identi</b>		Х	AN 1/30
				ation as defined for a particular Transact reference Identification Qualifier	ion Set	or as
			NETMETER	Net metering present		

NETMETER Net metering present

Synt	Segment: Position: Loop: Level: Usage: Max Use: Purpose: ax Notes: tic Notes: omments: Notes:	Detail Optional 20 To specify identifying information				
	Ref.	Data	Data Element Summary			
Must Use	Ref. <u>Des.</u> REF01	Data <u>Element</u> 128	<u>Name</u> <b>Reference Identification Qualifier</b> Code qualifying the Reference Identification	<u>X12</u> M	2 <u>Attributes</u> ID 2/3	
Must Use	REF02	127	LO Load Planning Number Load profile Reference Identification Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier	X on Set	<b>AN 1/30</b> or as	

# **REF** Reference Identification (NH=LDC Rate Class)

	Segment:	<b>REF</b> Reference Identification (NH=LDC Rate Class)					
	Position:	030					
	Loop:	PTD					
	Level:	Detail					
	Usage:	Optional					
	Max Use:	20					
	<b>Purpose:</b>	To specif	fy identifying information				
Synt	tax Notes:	1 At le	east one of REF02 or REF03 is required.				
		2 If eit	ther C04003 or C04004 is present, then the other is required.				
			ther C04005 or C04006 is present, then the other is required.				
Seman	tic Notes:	1 REF	04 contains data relating to the value cited in REF02.				
C	omments:						
	Notes:		HI: Required				
			HU: Required for AEP and FirstEnergy (DP&L and Duke send in PTD~PL/BC loops)				
			IU: Not Used				
		MU: Not					
		DU: Not					
		REF~NF	I~GSI				
			Data Element Summary				
	Ref.	Data	·				
	Des.	<b>Element</b>	<u>Name</u>	<b>Attributes</b>			
Must Use	REF01	128	<b>Reference Identification Qualifier</b>	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	on Set or as			
			specified by the Reference Identification Qualifier				

Segment:	<b>REF</b> 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.
	<b>3</b> 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.
<b>Comments:</b>	
Notes:	HI: Required for FirstEnergy companies (if/when HI supported) & AEP; optional for
	DP&L and Duke Energy Ohio
	HU: Required for FirstEnergy companies & AEP; optional for DP&L and Duke Energy
	Ohio IU: Not Used
	MU: Not Used
	DU: Not Used
	REF~LF~2
D f	Data Element Summary
Ref.	Data
Des.	<u>Element</u> <u>Name</u> <u>X12 Attributes</u>

	2000	Liemene	1 (mille			
Must Use	REF01	128	<b>Reference Identification Qualifier</b> Code qualifying the Reference Identification		Μ	ID 2/3
			LF	Load Planning Number		
				Loss Factor		
Must Use	REF02	127	<b>Reference Identif</b>	fication	Х	AN 1/30
			Reference information as defined for a particular Transaction Set or as Identification Qualifier		cified l	by the Reference

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Segment:	<b>REF</b> 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.
	<b>3</b> If either C04005 or C04006 is present, then the other is required.
Semantic Notes:	<b>1</b> REF04 contains data relating to the value cited in REF02.
<b>Comments:</b>	
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
	DU: Not Used
	REF~PR~HEAT
	REF~PR~WHA

### **Data Element Summary**

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

## **REF** Reference Identification (SV=Service Voltage)

	Segment:	KEF	Reference	Identification (SV=Service Voltage)			
	<b>Position:</b>	030	030				
	Loop:	PTD					
	Level:	Detail					
	Usage:	Optional					
	Max Use:	20					
	Purpose:	To specif	fy identifying	ginformation			
Syı	ntax Notes:	1 At le	east one of RI	EF02 or REF03 is required.			
		2 If eit	ther C04003	or C04004 is present, then the other is requ	ired.		
		3 If eit	ther C04005	or C04006 is present, then the other is requ	ired.		
Sema	ntic Notes:						
(	Comments:						
	Notes:	HI: Requ	ired for First	Energy companies (if/when HI supported)	& AEP; op	tional for	
DP&L and Duke Energy							
		HU: Req	uired for Firs	stEnergy companies & AEP; optional for D	P&L and D	Juke Energy	
		Ohio					
		IU: Not V	Used				
		MU: Not	Used				
		DU: Not	Used				
		REF~SV	~SECONDA	IRY			
			Dat	ta Element Summary			
	Ref.	Data		·			
	Des.	Element	Name		X12	Attributes	
Must Use	REF01	128	<b>Reference</b>	Identification Qualifier	Μ	ID 2/3	
			Code qualifyin	ng the Reference Identification			
			SV	Service Charge Number			
				Service Voltage			
Must Use	REF02	127	<b>Reference</b>	Identification	Х	AN 1/30	
				rmation as defined for a particular Transaction Set or	as specified b	y 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
<b>Purpose:</b>	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.
<b>Comments:</b>	
Notes:	HI: Required for PJM Customers; otherwise not used
	HU: Required for PJM Customers; otherwise not used
	IU: Not Used
	MU: Not Used
	DU: 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
L	

	Data Element Summary					
	Ref.	Data				
	Des.	<u>Element</u>	<u>Name</u>	Attributes		
Must Use	QTY01	673	<b>Quantity Qualifier</b>	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	<b>Quantity</b> Numeric value of qu	X R 1/15		
Must Use	QTY03	355	<b>Unit or Basis for M</b> Code specifying the which a measurement	units in which a value is being expressed, or manner in		
			K1	Kilowatt Demand Represents potential power load measured at predetermined intervals		

	Segment:	DTN	<b>A</b> Date/Time Refere	nce (007=PLC Effective Date)					
	Position:	210		ince (007-1 De Enecute Date)					
	Loop:	QTY							
	Level:	Detail							
	Usage:	Optional							
	Max Use:	10							
	Purpose:		To specify pertinent dates and times						
Syn	tax Notes:			TM03 or DTM05 is required.					
			FM04 is present, then						
Somo	ntic Notes:	3 If eit	ner D1 M05 or D1 M0	6 is present, then the other is required.					
	comments:								
_	Notes:		uired for PJM Custom	ers; otherwise not used ers; otherwise not used					
		MU: Not							
		DU: Not							
		Usage is current P defined i	being provided. (PLC LC and a second itera in the DTM segment. C	ent twice depending on the time of year C is effective June 1 - May 31) One iter tion will show the PLC that will be effe Currently the EDUs change the PLC effe	ration ctive ective	will show the in the period 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								
		~	C*450*K1						
		DTM*00	7****RD8*20140601	-20150531					
		following	g year's PLC is undeter	e PLC value would include only one loo rmined:	op bec	cause the			
		~	C*450*K1 7****RD8*20140601	-20140531					
		Ohio ED AEP – 30	-	his segment as per EDI CC 108:					
		DP&L ar	nd Duke Energy Ohio 1999 - TBD	- by 12/31/14					
	Example:	DTM*00	7****RD8*20070601	-20080531					
			Data Eleme	nt Summary					
	Ref.	Data	<b>N</b> 7			•••			
	Des.	<u>Element</u>	Name		Attr	<u>ibutes</u>			
Must Use	DTM01	374	<b>Date/Time Qualifier</b> Code specifying type	<b>r</b> e of date, or time, or both date and time	М	ID 3/3			
				Effective PLC Effective Date					
Must Use	<b>DTM05</b>	1250	Date/Time Period Fo	ormat Qualifier	X	ID 2/3			
			Code indicating the o	late format, time format, or date and tin	ne for	mat			
			RD8	Range of Dates Expressed in Format					
N. 4 T		1051		CCYYMMDD-CCYYMMDD	v	A NI 1/05			
Must Use	DTM06	1251	<b>Date/Time Period</b> Expressed as CCVV	MMDD-CCYYMMDD	Х	AN 1/35			
			Expressed as CC I I.						

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.
<b>Comments:</b>	
Notes:	HI: Required for PJM Customers; otherwise not used
	HU: Required for PJM Customers; otherwise not used
	IU: Not Used
	MU: Not Used
	DU: 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.	Data				
	Des.	<u>Element</u>	<u>Name</u>		<u>Attributes</u>	
Must Use	QTY01	673	Quantity Qualifier		M ID 2/2	
			Code specifying the	type of quantity		
			KZ	Corrective Action Requests - Written		
				Network Service Peak Load (a.k.a. Tra	ansmission	
				Contribution or 1CP): Customer's pea	ak load contribution	
				provided to PJM for the Transmission	Service calculation	
				(coincident with LDC peak).		
Must Use	QTY02	380	Quantity		X R 1/15	
			Numeric value of qu	antity		
Must Use	QTY03	355	Unit or Basis for M	leasurement Code	M ID 2/2	
			Code specifying the	units in which a value is being expresse	ed, or manner in	
			which a measurement	nt has been taken		
			K1	Kilowatt Demand		
				Represents potential power load measure	ured at	
				predetermined intervals		

# Segment: **DTM** Date/Time Reference (007=NSPL Effective Date)

Segment: <b>D</b> TM Date/Time Reference (007=NSPL Effective Date)						
Position: 210						
	Loop: QTY					
	Level:	Detail				
	Usage:	Optional				
	Max Use:	10 T				
Sum	Purpose:		fy pertinent dates and times			
Syn	tax Notes:		east one of DTM02 DTM03 or DTM05 is required. TM04 is present, then DTM03 is required.			
			ther DTM05 or DTM06 is present, then the other is required.			
Semai	ntic Notes:	0 1101	the D 11105 of D 11100 is present, then the other is required.			
	omments:					
	Notes:	-	t Used			
		NSPL is	for January 1 - December 31			
The QTY/DTM loop may be sent twice when the Utility is providing both the current N 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 value.					r for short period	
			nple, you may receive either two loops:			
		~	Z*476*K1			
			)7****RD8*20130101-20131231 Z*450*K1			
			)7****RD8*20140101-20141231			
	Or just one: QTY*KZ*450*K1 DTM*007****RD8*20140101-20141231					
		Ohio ED	U Implementation of this segment as per EDI CC 108:			
		AEP - 3	Q 2014			
			nd Duke Energy Ohio – by 12/31/14 rgy - TBD			
	Example:	DTM*00	)7****RD8*20070601-20080531			
			Data Element Summary			
	Ref.	Data	0			
	Des.	Element	Name	Attr	<u>ibutes</u>	
Marge Lag	DTM01	274	Date/Time Qualifier	М	ID 2/2	
Must Use	DTM01	374	<b>Date/Time Qualifier</b> Code specifying type of date, or time, or both date and time	M	ID 3/3	
			007 Effective	·		
			NSPL Effective Date			
Must Use	DTM05	1250	Date/Time Period Format Qualifier	Χ	ID 2/3	
			Code indicating the date format, time format, or date and time	me for	mat	
			RD8 Range of Dates Expressed in Format			
			CCYYMMDD-CCYYMMDD			
Must Use	DTM06	1251	Date/Time Period	Х	AN 1/35	
			Expressed as CCYYMMDD-CCYYMMDD			

Segment:	$\mathbf{PTD}$ Product Transfer and Resale Detail (Daily Usage)					
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:						
<b>Comments:</b>						
Notes:	HI: Not Used					
	HU: Not Used					
	IU: Not Used					
	MU: Not Used					
	DU: Required					
	PTD*DL					

## Data Element Summary

			Data Litin	chi Summary	
М	Ref. <u>Des.</u> PTD01	Data <u>Element</u> 521	<u>Name</u> Product Transfer 1	Гуре Code	Attributes M ID 2/2
			Code identifying the	e type of product transfer	
			DL	Daily Usage	
				Provides detail information for each int unit of measure for a single day.	erval meter or

Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes:	030 PTD Detail Optional 1 To specif 1 At le 2 If eit	Reference Identification (Meter Number) Mandatory y identifying information east one of REF02 or REF03 is required. her C04003 or C04004 is present, then the other is required.					
Semantic Notes: Comments: Notes:	<ul> <li>3 If either C04005 or C04006 is present, then the other is required.</li> <li>1 REF04 contains data relating to the value cited in REF02.</li> <li>HI: Not Used</li> <li>HU: Not Used</li> <li>IU: Not Used</li> <li>MU: Not Used</li> <li>DU: Required</li> <li>REF~MG~2222277S</li> </ul>						
		Data Element Summary					
Ref.	Data						
Des.	Element			ributes			
REF01	128	Reference Identification Qualifier Code qualifying the Reference Identification MG Meter Number	Μ	ID 2/3			
REF02	127	<b>Reference Identification</b> Reference information as defined for a particular Transaction specified by the Reference Identification Qualifier Meter Number	X Set o	<b>AN 1/30</b> or as			

М

М

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	QTY Quantity 110 QTY Optional Detail Optional 1 To specify quantity information 1 At least one of QTY02 or QTY04 is required. 2 Only one of QTY02 or QTY04 may be present. 1 QTY04 is used when the quantity is non-numeric. HI: Not Used HU: Not Used HU: Not Used IU: Not Used MU: Not Used DU: Required QTY~QD~22348				
			Data Elem	ent Summary		
	Ref.	Data		•		
м	Des.	Element	Name			ributes
Μ	QTY01	673	Quantity Qualifier		Μ	ID 2/2
			Code specifying the			
			KA	Estimated		
				Quantity is estimated		
			QD	Quantity Delivered		
			07	Quantity is actual	``	
			87	Actual Quantity Received (Net Metering Used when the net generation quantity r		red is
			9H	actual. Estimated Quantity Received (Net Mete	ring)	
			911	Used when the net generation quantity r estimated.		
Μ	<b>QTY02</b>	380	Quantity		Х	R 1/15
	-		Numeric value of qu	Jantity		
Μ	QTY03	C001	Composite Unit of	-	0	
			To identify a compo	osite unit of measure (See Appendix for e	xamp	oles of use)
			• •	osite data element, populate C00101	-	
Μ	C00101	355	Unit or Basis for M	leasurement Code	Μ	ID 2/2
			Code specifying the which a measureme KH	units in which a value is being expressed nt has been taken Kilowatt Hour	l, or n	nanner in
			K11	kWh - Kilowatt Hour		
				K wii - Kilowall Hour		

	Segment: Position: Loop: Level: Usage: Max Use: Purpose: Syntax Notes: Semantic Notes: Comments: Notes:	210 QTY Detail Optional 10 To specif <b>1</b> At le <b>2</b> If D' <b>3</b> If eit HI: Not U HU: Not U HU: Not U MU: Not U DU: Req DTM~19	Used Jsed Used		
		DIMPI			
М	Ref. <u>Des.</u> DTM01	Data <u>Element</u> 374	Data Element Summary <u>Name</u> Date/Time Qualifier	<u>Attı</u> M	ributes 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		
Μ	DTM02	373	Date	X	DT 8/8
			Date expressed as CCYYMMDD		
M M	DTM03 DTM04	337 623	<b>Time</b> Time expressed in 24-hour clock time as follows: HHMM, or HHMMSSD, or HHMMSSDD, where H = hours (00-23), M 59), S = integer seconds (00-59) and DD = decimal seconds; are expressed as follows: D = tenths (0-9) and DD = hundred HHMM, where H = Hours and M = Minutes in Eastern Preva For this transaction, since X12 does not allow 2400 for time, to indicate midnight. For example, midnight between Octobe October 16th will be reflected as 2359 of October 15th. <b>Time Code</b> Code identifying the time. In accordance with International S	= min decin lths (0 ailing 2359 er 15t <b>O</b> Standa	nutes (00- nal seconds )0-99) Time (ET). will be used h and ID 2/2 ards
			Organization standard 8601, time can be specified by a + orin hours in relation to Universal Time Coordinate (UTC) timerestricted character, + and - are substituted by P and M in theEDEastern Daylight Time (DPL, Duke Energy)ESEastern Standard Time (DPL, Duke Energy)FirstEnergy)FirstEnergy)	e; sin code ergy (	ce + is a s that follow DH and

Segment: Position: Loop: Level: Usage: Max Use:	SE T 030 Summary Mandato 1					
Purpose: Syntax Notes: Semantic Notes: Comments:	<ul> <li>To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)</li> <li>1 SE is the last segment of each transaction set.</li> </ul>					
Notes:	Required SE~28~000000001 Data Element Summary					
Ref.	Data					
Des. SE01	Element 96		<u>Attributes</u> M N0 1/10			
SE01	329	Total number of segments included in a transaction set includin segments	g ST and SE M AN 4/9 faction set			

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## This foregoing document was electronically filed with the Public Utilities

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## Case No(s). 22-0277-EL-EDI

Summary: Application EDI Implementation Guidelines for Ohio Transaction Set 867 Usage electronically filed by Mr. Thomas E Rankin on behalf of Ohio EDI Working Group