

FirstEnergy Implementation Guideline

for

Electronic
Data
Interchange

TRANSACTION SET

810

Invoice to Customer

Ver/Rel 004010

Summary of Changes

March 27, 2001	Initial release.
August 23, 2001	Added N1 loop in the Detail area at positions 240 - 270.
December 6, 2001	Revised the usage of the SLN/SAC loop in the Detail area at positions 200 - 230 to include only one SAC segment in each iteration of the SLN loop.
July 21, 2003	Revised the Note at the TDS segment to provide the option of writing the total statement amount due in the TDS01.
August 20, 2004	Add New Rate segment REF01 = NH and State surcharge tax SAC04 = SUR001
October 18, 2004	Added SAC06 and SAC07 to reflect Late Payment Charge. Added BAL02 PB for the amount due for this bill.
November 18, 2005	Added a new REF01 segment 5B (Supplemental Account number) to the header with the value of the 20 digit Business Partner + Premise in the REF02 segment.
November 18, 2005	For Rate Stabilization (RSP) changes with the January, 2006 billing, Shopping account customers will see this new SAC04.
November 18, 2005	For Rate Stabilization (RSP) changes with the January, 2006 billing, NON-Shopping account customers will see this new SAC04
January 26, 2009	Added new MEA07 code of 12 in MEA loop (Measurements) to account for Distribution Kilowatt value being reported due to 2009 Ohio Rate Case

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810 Invoice

Purpose

This Implementation Guideline contains the format and establishes the data contents of the Invoice Transaction Set (810) as adopted by FirstEnergy for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide a detailed statement of charges due for utility services for a customer account.

Notes

This Implementation Guideline was designed to provide the customary invoice from a local distribution utility (LDC) to the end use customer for energy and services provided by the utility or by the Energy Services Provider.

810 Invoice

Functional Group ID=**IN**

Heading

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	ST	Transaction Set Header	M	1		
Must Use	020	BIG	Beginning Segment for Invoice	M	1		
	050	REF	Reference Identification	O	12		
			LOOP ID - N1			200	
	070	N1	Name	O	1		
	080	N2	Additional Name Information	O	2		
	090	N3	Address Information	O	2		
	100	N4	Geographic Location	O	1		
	120	PER	Administrative Communications Contact	O	3		
	130	ITD	Terms of Sale/Deferred Terms of Sale	O	>1		
	212	BAL	Balance Detail	O	>1		

Detail

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
			LOOP ID - IT1			200000	
	010	IT1	Baseline Item Data (Invoice)	O	1		
	059	MEA	Measurements	O	40		
	120	REF	Reference Identification	O	>1		
Must Use	150	DTM	Date/Time Reference	O	10		
			LOOP ID - SLN			1000	
	200	SLN	Subline Item Detail	O	1		
	230	SAC	Service, Promotion, Allowance, or Charge Information	O	25		
			LOOP ID - N1			200	
	240	N1	Name	O	1		
	250	N2	Additional Name Information	O	2		
	260	N3	Address Information	O	2		
	270	N4	Geographic Location	O	1		

Summary

	<u>Pos. No.</u>	<u>Seg. ID</u>	<u>Name</u>	<u>Req. Des.</u>	<u>Max. Use</u>	<u>Loop Repeat</u>	<u>Notes and Comments</u>
Must Use	010	TDS	Total Monetary Value Summary	M	1		
	020	TXI	Tax Information	O	10		
	070	CTT	Transaction Totals	O	1		n1
Must Use	080	SE	Transaction Set Trailer	M	1		

1. **Segment:** **ST** Transaction Set Header
- Position:** 010
- Loop:**
- Level:** Heading:
- Usage:** Mandatory
- Max Use:** 1
- Purpose:** To indicate the start of a transaction set and to assign a control number
- Syntax Notes:**
- Semantic Notes:** 1 The transaction set identifier (ST01) used by the translation routines of the interchange partners to select the appropriate transaction set definition (e.g., 810 selects the Invoice Transaction Set).
- Comments:**

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set 810 Invoice	M ID 3/3
Must Use	ST02	329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M AN 4/9

Segment: **BIG Beginning Segment for Invoice**

Position: 020

Loop:

Level: Heading:

Usage: Mandatory

Max Use: 1

Purpose: To indicate the beginning of an invoice transaction set and to transmit identifying numbers and dates

Syntax Notes:

Semantic Notes: 1 BIG01 is the invoice issue date.

Comments: 1 BIG07 is used only to further define the type of invoice when needed.

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	BIG01	373	Date Date expressed as CCYYMMDD	M DT 8/8
Must Use	BIG02	76	Invoice Number Identifying number assigned by issuer FirstEnergy will send the 12-digit account number plus additional characters necessary to make the invoice number unique. Only the leading 12-digit account number is to be returned with the payment.	M AN 1/22
Recomm	BIG04	324	Purchase Order Number Identifying number for Purchase Order assigned by the orderer/purchaser Will always be UTILITY, to distinguish utility bills from PO-related invoices	O AN 1/22
Recomm	BIG07	640	Transaction Type Code Code specifying the type of transaction FB Final Bill PR Product (or Service)	O ID 2/2
Recomm	BIG08	353	Transaction Set Purpose Code Code identifying purpose of transaction set 00 Original 01 Cancellation CO Corrected	O ID 2/2

Segment: **REF** **Reference Identification**
Position: 050
Loop:
Level: Heading:
Usage: Optional
Max Use: 12
Purpose: To specify identifying information
Syntax Notes: 1 At least one of REF02 or REF03 is required.
Semantic Notes:
Comments:

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
		11	Account Number	
			Energy Service Provider-assigned account number for the end use customer.	
		12	Billing Account	
			FirstEnergy-assigned account number for the end use customer. This number is also sent in the first 12 digits of the BIG02. This number must be returned with the payment.	
		45	Old Account Number	
			FirstEnergy's previous account number for the end use customer.	
		FI	File Identifier	
			Identifies the FirstEnergy application document number. Used for problem resolution purposes.	
		NH	Rate Card Number	
			Identifies a utility rate class or tariff	
		OI	Original Invoice Number	
			Sent when BIG08 = CO. Identifies the FirstEnergy transaction number of the original invoice.	
		5B	20 digit Business Partner + Premise	
	REF02	127	Reference Identification	X AN 1/30
			Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	

Segment: **N1** **Name**
Position: 070
Loop: N1
Level: Heading:
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes: 1 At least one of N102 or N103 is required.
 2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: 1 This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual	M ID 2/3
			BT Bill To Party Customer	
			MQ Metering Location Service Address	
			RE Remit To Party FirstEnergy	
			SJ Service Provider Energy Service Provider	
	N102	93	Name Free-form name	X AN 1/60
	N103	66	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67)	X ID 1/2
			1 D-U-N-S Number, Dun & Bradstreet	
			92 Assigned by Buyer or Buyer's Agent An identifier assigned by the Customer	
	N104	67	Identification Code Code identifying a party or other code	X AN 2/80
			When N101 = RE, N104 will be the DUNS number of the FirstEnergy company. When N101 = MQ, N104 will be a reference number provided by the Customer.	

Segment: **N2** Additional Name Information
Position: 080
Loop: N1
Level: Heading:
Usage: Optional
Max Use: 2
Purpose: To specify additional names or those longer than 60 characters in length
Syntax Notes:
Semantic Notes:
Comments:

Data Element Summary				
	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N201	93	Name Free-form name	M AN 1/60
	N202	93	Name Free-form name	O AN 1/60

Segment: **N3** Address Information
Position: 090
Loop: N1
Level: Heading:
Usage: Optional
Max Use: 2
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:
Notes: When N101 equals 'MQ', this is the service address

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

Segment: **N4** **Geographic Location**
Position: 100
Loop: N1
Level: Heading:
Usage: Optional
Max Use: 1
Purpose: To specify the geographic place of the named party
Syntax Notes:
Semantic Notes:
Comments:

- 1 A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
- 2 N402 is required only if city name (N401) is in the U.S. or Canada.

Notes: When N101 equals 'MQ', this is part of the service address

Data Element Summary

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

Segment: PER Administrative Communications Contact

Position: 120

Loop: N1

Level: Heading:

Usage: Optional

Max Use: 3

Purpose: To identify a person or office to whom administrative communications should be directed

- Syntax Notes:**
- 1 If either PER03 or PER04 is present, then the other is required.
 - 2 If either PER05 or PER06 is present, then the other is required.
 - 3 If either PER07 or PER08 is present, then the other is required.

Semantic Notes:

Comments:

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	PER01	366	Contact Function Code Code identifying the major duty or responsibility of the person or group named IC Information Contact	M ID 2/2
	PER02	93	Name Free-form name	O AN 1/60
	PER03	365	Communication Number Qualifier Code identifying the type of communication number TE Telephone	X ID 2/2
	PER04	364	Communication Number Complete communications number including country or area code when applicable	X AN 1/80

Segment: **ITD** **Terms of Sale/Deferred Terms of Sale**
Position: 130
Loop:
Level: Heading:
Usage: Optional
Max Use: >1
Purpose: To specify terms of sale
Syntax Notes: 1 If ITD03 is present, then at least one of ITD04 ITD05 or ITD13 is required.
Semantic Notes:
Comments:

Data Element Summary

<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
ITD06	446	Terms Net Due Date Date when total invoice amount becomes due, expressed in format CCYYMMDD Payment due date (if applicable).	O DT 8/8

Segment: **BAL** **Balance Detail**
Position: 212
Loop:
Level: Heading:
Usage: Optional
Max Use: >1
Purpose: To identify the specific monetary balances associated with a particular account
Syntax Notes:
Semantic Notes:
Comments:

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	BAL01	951	Balance Type Code Code indicating the type of balance	M ID 1/2
			M Current Month Balance amounts shown in BAL03 are for this current billing period.	
			P Previous Month Balance of previous period charges prior to applying payments and adjustments for the previous period billing Balance amounts shown in BAL03 are for the period prior to this billing period.	
Must Use	BAL02	522	Amount Qualifier Code Code to qualify amount	M ID 1/3
			PB Billed Amount Total amount due on the period bill	
			J9 Beginning Balance When used with 'M' in BAL01, this is the balance at the beginning of this billing period, after applying payments and adjustments.	
			YB Actual Unpaid Principal Balance When used with 'M' in BAL01, this is the total amount due. This is the sum of this month's charges plus any unpaid amounts from previous periods. When used with 'P' in BAL01, this is the amount of the previous period bill.	
Must Use	BAL03	782	Monetary Amount Monetary amount	M R 1/18

Segment: **IT1** **Baseline Item Data (Invoice)**

Position: 010

Loop: IT1

Level: Detail:

Usage: Optional

Max Use: 1

Purpose: To specify the basic and most frequently used line item data for the invoice and related transactions

- Syntax Notes:**
- 1 If any of IT102 IT103 or IT104 is present, then all are required.
 - 2 If either IT106 or IT107 is present, then the other is required.
 - 3 If either IT108 or IT109 is present, then the other is required.
 - 4 If either IT110 or IT111 is present, then the other is required.

Semantic Notes: 1 IT101 is sequential line item identification.

- Comments:**
- 1 Element 235/234 combinations should be interpreted to include products and/or services. See the Data Dictionary for a complete list of IDs.
 - 2 IT106 through IT125 provide for ten different product/service IDs for each item.

- Notes:**
- 1 The typical usage of the IT1 entails including all usage and charges attributed to one rate; in this case, the IT1 loop is qualified with "RATE" in the IT108/IT109 pair.

Data Element Summary

<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
IT101	350	Assigned Identification Alphanumeric characters assigned for differentiation within a transaction set Line item counter	O AN 1/20
IT106	235	Product/Service ID Qualifier Code identifying the type/source of the descriptive number used in Product/Service ID (234) SV Service Rendered	X ID 2/2
IT107	234	Product/Service ID Identifying number for a product or service ELECTRIC	X AN 1/48
IT108	235	Product/Service ID Qualifier Code identifying the type/source of the descriptive number used in Product/Service ID (234) C3 Classification	X ID 2/2
IT109	234	Product/Service ID Identifying number for a product or service RATE UNMET (To designate Unmetered Services)	X AN 1/48

Segment: MEA Measurements**Position:** 059**Loop:** IT1**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 conveys metering data for one period.

Data Element Summary

<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
MEA01	737	Measurement Reference ID Code Code identifying the broad category to which a measurement applies	O ID 2/2
		AA Meter reading-beginning actual/ending actual	
		AB Average Balance	
		Average or contract demand	
		AE Meter reading-beginning actual/ending estimated	
		AF Actual Total	
		BC Billed Actual	
		BN Billed Minimum	
		BO Meter Reading as Billed	
		Used when billing charges are based on contractual agreements or pre-established usage and not on actual usage	
		BR Billed History	
		EA Meter reading-beginning estimated/ending actual	
		EE Meter reading-beginning estimated/ending estimated	
		R1 Opening Reading	
MEA02	738	Measurement Qualifier Code identifying a specific product or process characteristic to which a measurement applies	O ID 1/3
		MU Multiplier	
MEA03	739	Measurement Value The value of the measurement	X R 1/20
MEA04	C001	Composite Unit of Measure To identify a composite unit of measure	
Must Use	C00101	Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	M ID 2/2
		K1 Kilowatt Demand	
		Represents potential power load measured at predetermined intervals	

		K2	Kilovolt Amperes Reactive Demand Reactive power that must be supplied for specific types of customer's equipment; billable when kilowatt demand usage meets or exceeds a defined parameter		
		K3	Kilovolt Amperes Reactive Hour Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters		
		K4	Kilovolt Amperes		
		K5	Kilovolt Amperes Reactive		
		K7	Kilowatt		
		KH	Kilowatt Hour		
		T9	Thousand Kilowatt Hours		
			Megawatt Hours		
C00102	1018	Exponent		O	ID 2/2
			Power to which a unit is raised		
C00103	649	Multiplier		O	ID 2/2
			Value to be used as a multiplier to obtain a new value		
MEA05	740	Range Minimum		X	R 1/20
			The value specifying the minimum of the measurement range Beginning reading		
MEA06	741	Range Maximum		X	R 1/20
			The value specifying the maximum of the measurement range Ending reading or single reading (e.g., demand).		
MEA07	935	Measurement Significance Code		O	ID 2/2
			Code used to benchmark, qualify or further define a measurement value		
		12	Distribution Kilowatt		
		41	Off Peak		
		42	On Peak		
		51	Total		
			Totalizer		

Segment: **REF** **Reference Identification**
Position: 120
Loop: IT1
Level: Detail:
Usage: Optional
Max Use: 12
Purpose: To specify identifying information
Syntax Notes: 1 At least one of REF02 or REF03 is required.
Semantic Notes:
Comments:
Notes:

Data Element Summary				
	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	REF01	128	Reference Identification Qualifier Code qualifying the Reference Identification 46 Old Meter Number Identifies meters being removed MG Meter Number	M ID 2/3
	REF02	127	Reference Identification Reference information as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	X AN 1/30

Segment: **DTM** **Date/Time Reference**

Position: 150

Loop: IT1

Level: Detail:

Usage: Required

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 either DTM05 or DTM06 is present, then the other is required.

Semantic Notes:

Comments:

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	DTM01	374	Date/Time Qualifier Code specifying type of date or time, or both date and time 150 Service Period Start 151 Service Period End	M ID 3/3
	DTM02	373	Date Date expressed as CCYYMMDD	X DT 8/8

Segment:	SLN Subline Item Detail
Position:	200
Loop:	SLN
Level:	Detail:
Usage:	Optional
Max Use:	1
Purpose:	To specify product subline detail item data
Syntax Notes:	
Semantic Notes:	<ol style="list-style-type: none"> 1 SLN01 is the identifying number for the subline item. 2 SLN03 is the configuration code indicating the relationship of the subline item to the baseline item.
Comments:	<ol style="list-style-type: none"> 1 See the Data Element Dictionary for a complete list of IDs. 2 SLN01 is related to (but not necessarily equivalent to) the baseline item number. Example: 1.1 or 1A might be used as a subline number to relate to baseline number 1.
Notes:	The IT1/SLN segment is used to overcome the limitation on the number of IT1/SAC loops. In conformance with the UIG implementation standard, each SLN loop will contain only one SAC. Multiple charges/allowances require multiple SLN loops.

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	SLN01	350	Assigned Identification Alphanumeric characters assigned for differentiation within a transaction set Used as a loop counter	M AN 1/20
Must Use	SLN03	662	Relationship Code Code indicating the relationship between entities A Add	M ID 1/1

Segment:	SAC	Service, Promotion, Allowance, or Charge Information
Position:	230	
Loop:	SLN	
Level:	Detail:	
Usage:	Optional	
Max Use:	25	
Purpose:	To request or identify a service, promotion, allowance, or charge; to specify the amount or percentage for the service, promotion, allowance, or charge	
Syntax Notes:	<ol style="list-style-type: none"> 1 At least one of SAC02 or SAC03 is required. 2 If either SAC03 or SAC04 is present, then the other is required. 3 If either SAC06 or SAC07 is present, then the other is required. 4 If either SAC09 or SAC10 is present, then the other is required. 	
Semantic Notes:	<ol style="list-style-type: none"> 1 If SAC01 is "A" or "C", then at least one of SAC05, SAC07, or SAC08 is required. The value of the SAC01 indicator is not to be used to indicate the sign of the amount in SAC05. 2 SAC05 is the total amount for the service, promotion, allowance, or charge. If SAC05 is present with SAC07 or SAC08, then SAC05 takes precedence. 3 SAC08 is the allowance or charge rate per unit. 4 SAC10 and SAC11 are the quantity basis when the allowance or charge quantity is different from the purchase order or invoice quantity. SAC10 and SAC11 used together indicate a quantity range, which could be a dollar amount, that is applicable to service, promotion, allowance, or charge. 	
Comments:	<ol style="list-style-type: none"> 1 SAC04 may be used to uniquely identify the service, promotion, allowance, or charge. In addition, it may be used in conjunction to further the code in SAC02. 	
Notes:	In conformance with the UIG implementation standard, each SLN loop will contain only one SAC. Multiple charges/allowances require multiple SLN loops.	

Data Element Summary

Ref. Des.	Data Element	Name	Attributes
Must Use	SAC01	248 Allowance or Charge Indicator	M ID 1/1
		Code which indicates an allowance or charge for the service specified	
		A Allowance	
		C Charge	
		N No Allowance or Charge	
		The amount in the SAC05 should be ignored when summing the invoice total.	
	SAC02	1300 Service, Promotion, Allowance, or Charge Code	X ID 4/4
		Code identifying the Service, Promotion, Allowance, or Charge	
		F950 Rate Code	
	SAC03	559 Agency Qualifier Code	X ID 2/2
		Code identifying the agency assigning the code values	
		EU Electric Utilities	
		Use this code until the DM for code UT to indicate the UIG is approved.	
	SAC04	1301 Agency Service, Promotion, Allowance, or Charge Code	X AN 1/10
		Agency maintained code identifying the service, promotion, allowance, or charge	
		BAS001 Customer Charge	
		Charge associated with the monthly cost of maintaining, reading, etc. customer's account	
		DIS001 Distribution Charge	
		Charge associated with the distribution of energy	

	over wires and utility poles to a home or business
DMD001	Demand Charge Billing demand taken each month as the highest interval(s) registration
DMD002	Contract Demand Charge The minimum demand charge that a customer contracts for during a period of time
DMD006	Off Peak Demand usage during off peak hours
DMD007	On Peak Demand usage during on peak hours
DMD009	Adjusted Demand usage adjustment
ENC001	Energy Charge Charge for energy used
ENC003	Off Peak Charge Charge for energy used during off peak hours
ENC036	ESP Charge ESP energy charge for LDC consolidated billing On Peak Charge for energy used during on peak hours
FFR001	Non metered Service, Excluding Lights Charges for non metered services
GEN001	Generation Charge Charge for generation of electricity only
GEN004	Generation - Billed Charge for billed generation only, as of January 2006, this will only be seen in OH by shopping customers
MAD002	Minimum kWh Minimum kWh that can be billed under tariff or rate schedule
MAD004	Minimum Demand Charge Minimum kW that can be billed under tariff or rate schedule
MSC022	Competition Transition Charge Charge to recover cost related to PUC approved, pre-restructuring investments in generating facilities and power purchase contracts
MSC024	Societal Benefit Charge The non-bypassable charge or contribution to state-mandated assistance programs for low-income customers and energy efficiency efforts, which has always been part of utility bills.
ODL001	Outdoor Lighting Flat rate charge for outdoor lighting
ODL002	Street Lighting Flat rate charge for street lighting
ODL003	Traffic Signals Flat rate charge for traffic signals
SUR001	State Sur Charge State Sur Charge TAX
TRN001	Transmission Charge The cost of conveying energy from power plants to energy distributors over high-voltage lines. as of January 2006, this will only be seen in OH by non-shopping customers

Monetary amount

The code used in SAC01 does not indicate the sign of the amount in SAC05. The amount shown in SAC05 may be either positive or negative; if negative, the minus sign, " - ", will be transmitted.

SAC06 378 Allowance/Charge Percent Qualifier X ID 1/1

Code indicating on what basis allowance or charge percent is calculated

9

Late Payment Charge Base Amount

Used to indicate a late charge percentage

SAC07 332 Percent X R 1/6

Percent expressed as a percent

Used to express the percentage of the total load that is being supplied by the ESP. This is the multiplication of two fields that are on the 814 transaction, AMT*7N (Participating Interest) and AMT*QY (Eligible Load). Present as a percent: e.g. 75% should be expressed as 75, or, 67.67% should be expressed as 67.67.

SAC08 118 Rate O R 1/9

Rate expressed in the standard monetary denomination for the currency specified

SAC09	355	Unit or Basis for Measurement Code Code specifying the units in which a value is being expressed, or manner in which a measurement has been taken	X	ID 2/2
		K1 Kilowatt Demand Represents potential power load measured at predetermined intervals		
		K2 Kilovolt Amperes Reactive Demand Reactive power that must be supplied for specific types of customer's equipment; billable when kilowatt demand usage meets or exceeds a defined parameter		
		K3 Kilovolt Amperes Reactive Hour Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters		
		K4 Kilovolt Amperes		
		K5 Kilovolt Amperes Reactive		
		K7 Kilowatt		
		KH Kilowatt Hour		
		T9 Thousand Kilowatt Hours		
SAC10	380	Quantity Numeric value of quantity	X	R 1/15
SAC15	352	Description A free-form description to clarify the related data elements and their content	X	AN 1/80

Segment: **N1** **Name**
Position: 240
Loop: N1
Level: Detail:
Usage: Optional
Max Use: 1
Purpose: To identify a party by type of organization, name, and code
Syntax Notes: 1 At least one of N102 or N103 is required.
2 If either N103 or N104 is present, then the other is required.
Semantic Notes:
Comments: 1 This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N101	98	Entity Identifier Code Code identifying an organizational entity, a physical location, property or an individual MQ Metering Location Service Address	M ID 2/3
	N102	93	Name Free-form name	X AN 1/60
	N103	66	Identification Code Qualifier Code designating the system/method of code structure used for Identification Code (67) 92 Assigned by Buyer or Buyer's Agent An identifier assigned by the Customer	X ID 1/2
	N104	67	Identification Code Code identifying a party or other code A reference number provided by the Customer.	X AN 2/80

Segment: **N2** Additional Name Information
Position: 250
Loop: N1
Level: Detail:
Usage: Optional
Max Use: 2
Purpose: To specify additional names or those longer than 60 characters in length
Syntax Notes:
Semantic Notes:
Comments:

Data Element Summary				
	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	N201	93	Name Free-form name	M AN 1/60
	N202	93	Name Free-form name	O AN 1/60

Segment: **N3** Address Information
Position: 260
Loop: N1
Level: Detail:
Usage: Optional
Max Use: 2
Purpose: To specify the location of the named party
Syntax Notes:
Semantic Notes:
Comments:
Notes: The service address

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

Segment: **N4** **Geographic Location**
Position: 270
Loop: N1
Level: Detail:
Usage: Optional
Max Use: 1
Purpose: To specify the geographic place of the named party
Syntax Notes:
Semantic Notes:
Comments: 1 A combination of either N401 through N404, or N405 and N406 may be adequate to specify a location.
2 N402 is required only if city name (N401) is in the U.S. or Canada.
Notes: The service address

Data Element Summary

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

Segment: **TDS** Total Monetary Value Summary
Position: 010
Loop:
Level: Summary:
Usage: Mandatory
Max Use: 1
Purpose: To specify the total invoice discounts and amounts
Syntax Notes:
Semantic Notes: 1 TDS01 is the total amount of invoice (including charges, less allowances) before terms discount (if discount is applicable).

Comments:

Notes: TDS01 is the total amount due for the **current period charges only** and equals the algebraic sum of the amounts in the TXI02 and SAC05 segments. If this amount is negative, we send the minus sign. **The TDS01 amount does not include unpaid amounts from prior periods. The BAL segment contains the total amount due.**

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	TDS01	610	Amount Monetary amount	M N2 1/15

Segment: **TXI** Tax Information
Position: 020
Loop:
Level: Summary:
Usage: Optional
Max Use: 10
Purpose: To specify tax information
Syntax Notes: 1 At least one of TXI02 TXI03 or TXI06 is required.
 2 If either TXI04 or TXI05 is present, then the other is required.
 3 If TXI08 is present, then TXI03 is required.
Semantic Notes: 1 TXI02 is the monetary amount of the tax.
 2 TXI03 is the tax percent expressed as a decimal.
 3 TXI07 is a code indicating the relationship of the price or amount to the associated segment.
Comments:
Notes: Taxes included in this position are account/invoice level taxes.

Data Element Summary				
Ref. Des.	Data Element	Name	Attributes	
Must Use	TXI01	963 Tax Type Code Code specifying the type of tax	M	ID 2/2
		GR Gross Receipts Tax		
		SP State Tax		
		Other than Gross Receipts or Sales tax.		
		ST State Sales Tax		
TXI02	782	Monetary Amount Monetary amount	X	R 1/18
TXI03	954	Percent Percentage expressed as a decimal Present as a decimal , e.g., 75% should be expressed as .75	X	R 1/10
TXI07	662	Relationship Code Code indicating the relationship between entities	O	ID 1/1
		A Add		
		O Information Only The amount in the TXI02 should be ignored when summing the invoice total; e.g., gross receipts tax or state tax.		

Segment: **CTT** Transaction Totals
Position: 070
Loop:
Level: Summary:
Usage: Optional
Max Use: 1
Purpose: To transmit a hash total for a specific element in the transaction set
Syntax Notes:
Semantic Notes:
Comments: 1 This segment is intended to provide hash totals to validate transaction completeness and correctness.

Data Element Summary

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	CTT01	354	Number of Line Items Total number of line items in the transaction set The number of IT1 segments.	M N0 1/6

Segment: **SE** Transaction Set Trailer

Position: 080

Loop:

Level: Summary:

Usage: Mandatory

Max Use: 1

Purpose: To indicate the end of the transaction set and provide the count of the transmitted segments (including the beginning (ST) and ending (SE) segments)

Syntax Notes:

Semantic Notes:

Comments: 1 SE is the last segment of each transaction set.

Data Element Summary

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
Must Use	SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M NO 1/10
Must Use	SE02	329	Transaction Set Control Number Identifying control number that must be unique within the transaction set functional group assigned by the originator for a transaction set	M AN 4/9