

# Portland General Electric Implementation Standard

for

# Electronic Data Interchange

TRANSACTION SET

**810**

Ver/Rel 004010

**Invoice**

## Summary of Changes

<b>November 20, 2002</b>	Initial release
<b>January 31, 2005</b>	Single file/transaction sent per ISA
<b>October 30, 2018</b>	<p>Add comment</p> <ul style="list-style-type: none"><li>• Deleted note: Bi directional transaction passed between the Utility and the Energy Service Supplier providing Bill Ready Data. A transaction will contain data for only one Point of Delivery ID.</li><li>• All references of Point of Delivery ID have been changed to Service Point ID</li><li>• REF01: Reference Identification Qualifier code of 12 is now defined as -Utility assigned account number for end use customer. 10 digits required.</li><li>• REF01: Reference Identification Qualifier code of MG: Deleted from definition the following: Two letters followed by eight digits</li></ul>

# 810 Invoice

Functional Group ID=**IN**

## Introduction:

This Standard for Trial Use contains the format and establishes the data contents of the Invoice Transaction Set (810) for use within the context of an Electronic Data Interchange (EDI) environment. The transaction set can be used to provide for customary and established business and industry practice relative to the billing for goods and services provided.

## 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>
M	010	ST	Transaction Set Header	M	1		
M	020	BIG	Beginning Segment for Invoice	M	1		
	030	NTE	Note/Special Instruction	O	5		
LOOP ID - N1						200	
	070	N1	Name	O	1		
	140	DTM	Date/Time Reference	O	10		

## 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						1	
	010	IT1	Baseline Item Data (Invoice)	O	1		
	120	REF	Reference Identification	O	>1		
	150	DTM	Date/Time Reference	O	10		
LOOP ID - SLN						1	
	200	SLN	Subline Item Detail	O	1		
	230	SAC	Service, Promotion, Allowance, or Charge Information	O	25		
	237	TXI	Tax Information	O	10		

## Summary:

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

## Transaction Set Notes

1. Number of line items (CTT01) is the accumulation of the number of IT1 segments. If used, hash total (CTT02) is the sum of the value of quantities invoiced (IT102) for each IT1 segment.

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

**Data Element Summary**

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	ST01	143	Transaction Set Identifier Code Code uniquely identifying a Transaction Set 810 Invoice	M ID 3/3
M	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 transmit identifying numbers and dates

**Syntax Notes:**  
**Semantic Notes:**

- 1 BIG01 is the invoice issue date.
- 2 BIG03 is the date assigned by the purchaser to purchase order.
- 3 BIG10 indicates the consolidated invoice number. When BIG07 contains code CI, BIG10 is not used.

**Comments:**

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

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	BIG01	373	Date	M DT 8/8
			Date expressed as CCYYMMDD	
			The transaction creation date. This is the date that the transaction was created by the sender's application system.	
M	BIG02	76	Invoice Number	M AN 1/22
			Identifying number assigned by issuer	
			Unique invoice number identifying this bill.	
	BIG07	640	Transaction Type Code	O ID 2/2
			Code specifying the type of transaction	
			CI Consolidated Invoice	
	BIG08	353	Transaction Set Purpose Code	O ID 2/2
			Code identifying purpose of transaction set	
			00 Original	

**Segment:** **NTE** Note/Special Instruction  
**Position:** 030  
**Loop:**  
**Level:** Heading  
**Usage:** Optional  
**Max Use:** 5  
**Purpose:** To transmit information in a free-form format, if necessary, for comment or special instruction

**Syntax Notes:**

**Semantic Notes:**

**Comments:** 1 The NTE segment permits free-form information/data which, under ANSI X12 standard implementations, is not machine processable. The use of the NTE segment should therefore be avoided, if at all possible, in an automated environment.

**Notes:** Information to be displayed on the customer's bill.

**Data Element Summary**

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
	<u>Element</u>	<u>Note Reference Code</u>	<u>O ID 3/3</u>
	NTE01	363	
		Code identifying the functional area or purpose for which the note applies	
		ADD	Additional Information
			Use ADD code for Header comments (Max use of 4 for 255 characters total).
		OTH	Other Instructions
			Use OTH for Detail comments (max use of 1 for 35 characters total).
M	NTE02	352	Description M AN 1/80
		A free-form description to clarify the related data elements and their content	

**Segment:** **N1** Name  
**Position:** 070  
**Loop:** N1 Optional  
**Level:** Heading  
**Usage:** Optional  
**Max Use:** 1  
**Purpose:** To identify a party by type of organization, name, and code  
**Syntax Notes:**  
 1 At least one of N102 or N103 is required.  
 2 If either N103 or N104 is present, then the other is required.  
**Semantic Notes:**  
**Comments:**  
 1 This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.  
 2 N105 and N106 further define the type of entity in N101.

**Data Element Summary**

<u>Ref.</u>	<u>Data</u>	<u>Name</u>	<u>Attributes</u>
<u>Des.</u>	<u>Element</u>		
M	N101	98 <b>Entity Identifier Code</b>	M ID 2/3
		Code identifying an organizational entity, a physical location, property or an individual	
		8S Consumer Service Provider (CSP) The Utility.	
		SJ Service Provider Identifies name and address information as pertaining to a service provider for which billing is being rendered The Energy Service Supplier.	
N103	66	<b>Identification Code Qualifier</b>	X ID 1/2
		Code designating the system/method of code structure used for Identification Code (67)	
		9 D-U-N-S+4, D-U-N-S Number with Four Character Suffix	
N104	67	<b>Identification Code</b>	X AN 2/80
		Code identifying a party or other code	

**Segment:** **DTM** Date/Time Reference  
**Position:** 140  
**Loop:**  
**Level:** Heading  
**Usage:** Optional  
**Max Use:** 10  
**Purpose:** To specify pertinent dates and times  
**Syntax Notes:**

- 1 At least one of DTM02 DTM03 or DTM05 is required.
- 2 If DTM04 is present, then DTM03 is required.
- 3 If either DTM05 or DTM06 is present, then the other is required.

**Semantic Notes:**  
**Comments:**

**Data Element Summary**

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	DTM01	374	<b>Date/Time Qualifier</b> Code specifying type of date or time, or both date and time 434 Statement Date on which billing document was created	<b>M ID 3/3</b>
	DTM02	373	<b>Date</b> Date expressed as CCYYMMDD	<b>X DT 8/8</b>



**Segment:** **IT1** **Baseline Item Data (Invoice)**  
**Position:** 010  
**Loop:** IT1 Optional  
**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.
  - 5 If either IT112 or IT113 is present, then the other is required.
  - 6 If either IT114 or IT115 is present, then the other is required.
  - 7 If either IT116 or IT117 is present, then the other is required.
  - 8 If either IT118 or IT119 is present, then the other is required.
  - 9 If either IT120 or IT121 is present, then the other is required.
  - 10 If either IT122 or IT123 is present, then the other is required.
  - 11 If either IT124 or IT125 is present, then the other is required.

- Semantic Notes:**  
**Comments:**
- 1 IT101 is the purchase order line item identification.
  - 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. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

**Data Element Summary**

<u>Ref.</u>	<u>Data</u>	<u>Element</u>	<u>Name</u>	<u>Attributes</u>
IT101		350	<b>Assigned Identification</b> Alphanumeric characters assigned for differentiation within a transaction set	O AN 1/20
IT106		235	<b>Product/Service ID Qualifier</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) SV Service Rendered	X ID 2/2
IT107		234	<b>Product/Service ID</b> Identifying number for a product or service This is the service that was provided. EL Electric Service	X AN 1/48
IT108		235	<b>Product/Service ID Qualifier</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/2
IT109		234	<b>Product/Service ID</b> Identifying number for a product or service METER UNMET	X AN 1/48
IT110		235	<b>Product/Service ID Qualifier</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234) Refer to 004010 Data Element Dictionary for acceptable code values.	X ID 2/2
IT111		234	<b>Product/Service ID</b> Identifying number for a product or service	X AN 1/48
IT112		235	<b>Product/Service ID Qualifier</b> Code identifying the type/source of the descriptive number used in Product/Service ID (234)	X ID 2/2

Refer to 004010 Data Element Dictionary for acceptable code values.

**IT113**

**234**

**Product/Service ID**

**X AN 1/48**

Identifying number for a product or service

**Segment:** **REF** Reference Identification  
**Position:** 120  
**Loop:** IT1 Optional  
**Level:** Detail  
**Usage:** Optional  
**Max Use:** >1  
**Purpose:** To specify identifying information  
**Syntax Notes:** 1 At least one of REF02 or REF03 is required.  
 2 If either C04003 or C04004 is present, then the other is required.  
 3 If either C04005 or C04006 is present, then the other is required.  
**Semantic Notes:** 1 REF04 contains data relating to the value cited in REF02.  
**Comments:**

**Data Element Summary**

	<u>Ref. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	REF01	128	Reference Identification Qualifier	M ID 2/3
			Code qualifying the Reference Identification	
			11 Account Number Number identifies a telecommunications industry account ESS assigned account number for end use customer.	
			12 Billing Account Account number under which billing is rendered Utility assigned account number for end use customer. 10 digits required.	
			LU Location Number Service Point ID (SPID). 10 digits required	
			MG Meter Number Only used for inbound from ESS to Utility.	
	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:** **DTM** **Date/Time Reference**  
**Position:** 150  
**Loop:** IT1 Optional  
**Level:** Detail  
**Usage:** Optional  
**Max Use:** 10  
**Purpose:** To specify pertinent dates and times  
**Syntax Notes:**

- 1 At least one of DTM02 DTM03 or DTM05 is required.
- 2 If DTM04 is present, then DTM03 is required.
- 3 If either DTM05 or DTM06 is present, then the other is required.

**Semantic Notes:**  
**Comments:**  
**Notes:** There should be two DTM segments, one for start date and one for end date.

**Data Element Summary**

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

**Segment:** **SLN** Subline Item Detail

**Position:** 200

**Loop:** SLN Optional

**Level:** Detail

**Usage:** Optional

**Max Use:** 1

**Purpose:** To specify product subline detail item data

**Syntax Notes:**

- 1 If either SLN04 or SLN05 is present, then the other is required.
- 2 If SLN07 is present, then SLN06 is required.
- 3 If SLN08 is present, then SLN06 is required.
- 4 If either SLN09 or SLN10 is present, then the other is required.
- 5 If either SLN11 or SLN12 is present, then the other is required.
- 6 If either SLN13 or SLN14 is present, then the other is required.
- 7 If either SLN15 or SLN16 is present, then the other is required.
- 8 If either SLN17 or SLN18 is present, then the other is required.
- 9 If either SLN19 or SLN20 is present, then the other is required.
- 10 If either SLN21 or SLN22 is present, then the other is required.
- 11 If either SLN23 or SLN24 is present, then the other is required.
- 12 If either SLN25 or SLN26 is present, then the other is required.
- 13 If either SLN27 or SLN28 is present, then the other is required.

**Semantic Notes:**

- 1 SLN01 is the identifying number for the subline item.
- 2 SLN02 is the identifying number for the subline level. The subline level is analogous to the level code used in a bill of materials.
- 3 SLN03 is the configuration code indicating the relationship of the subline item to the baseline item.
- 4 SLN08 is a code indicating the relationship of the price or amount to the associated segment.

**Comments:**

- 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.
- 3 SLN09 through SLN28 provide for ten different product/service IDs for each item. For example: Case, Color, Drawing No., U.P.C. No., ISBN No., Model No., or SKU.

**Notes:** Additional SLN loops are used to convey multiple line items for the Service Point ID.

**Data Element Summary**

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

**Segment:** **SAC** Service, Promotion, Allowance, or Charge Information

**Position:** 230

**Loop:** SLN Optional

**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:**
- 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.
  - 5 If SAC11 is present, then SAC10 is required.
  - 6 If SAC13 is present, then at least one of SAC02 or SAC04 is required.
  - 7 If SAC14 is present, then SAC13 is required.
  - 8 If SAC16 is present, then SAC15 is required.

- Semantic Notes:**
- 1 If SAC01 is "A" or "C", then at least one of SAC05, SAC07, or SAC08 is required.
  - 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 is 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.
  - 5 SAC13 is used in conjunction with SAC02 or SAC04 to provide a specific reference number as identified by the code used.
  - 6 SAC14 is used in conjunction with SAC13 to identify an option when there is more than one option of the promotion.
  - 7 SAC16 is used to identify the language being used in SAC15.

- Comments:**
- 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.
  - 2 In some business applications, it is necessary to advise the trading partner of the actual dollar amount that a particular allowance, charge, or promotion was based on to reduce ambiguity. This amount is commonly referred to as "Dollar Basis Amount". It is represented in the SAC segment in SAC10 using the qualifier "DO" - Dollars in SAC09.

**Data Element Summary**

Ref.	Data Element	Name	Attributes
M	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	
	SAC03	559 Agency Qualifier Code	X ID 2/2
		Code identifying the agency assigning the code values	
		EU Electric Utilities	
	SAC04	1301 Agency Service, Promotion, Allowance, or Charge Code	X AN 1/10
		Agency maintained code identifying the service, promotion, allowance, or charge	
		PGE send rate code '-' and service category. For example: 583H-- MWHT."	
	SAC05	610 Amount	O N2 1/15
		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, "-", must be transmitted.	

**SAC09 355 Unit or Basis for Measurement Code X ID 2/2**

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

- EA Each
- HR Hours
- K1 Kilowatt Demand
- K3 Represents potential power load measured at predetermined intervals  
Kilovolt Amperes Reactive Hour
- K5 Represents actual electricity equivalent to kilowatt hours; billable when usage meets or exceeds defined parameters  
Kilovolt Amperes Reactive
- K7 Measure of electrical power  
Kilowatt
- KH Measure of electrical power  
Kilowatt Hour
- T9 Thousand Kilowatt Hours
- UN Unit

**SAC10 380 Quantity X R 1/15**

Numeric value of quantity

**SAC13 127 Reference Identification X AN 1/30**

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

**SAC15 352 Description X AN 1/80**

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

**Segment:** **TXI Tax Information**  
**Position:** 237  
**Loop:** SLN Optional  
**Level:** Detail  
**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:** The TXI segment is used for inbound to Utility for ESS Public Purpose Charges for PGE Bills All only.

**Data Element Summary**

Ref.	Data	Name	Attributes
<u>Des.</u>	<u>Element</u>	<u>Name</u>	
M	TXI01	963 Tax Type Code	M ID 2/2
		Code specifying the type of tax	
		SU Sales and Use Tax	
		ZZ Tax on Equipment and Service provided	
		ZZ Mutually Defined	
		Used for ESS Public Purpose Charges (for dual billing only).	
	TXI02	782 Monetary Amount	X R 1/18
		Monetary amount	
	TXI10	350 Assigned Identification	O AN 1/20
		Alphanumeric characters assigned for differentiation within a transaction set	
		This is PGE tax code that is dependent upon location. For example:	
		108 Public Purpose Charge	
		COP City of Portland	



**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).
- 2 TDS02 indicates the amount upon which the terms discount amount is calculated.
- 3 TDS03 is the amount of invoice due if paid by terms discount due date (total invoice or installment amount less cash discount).
- 4 TDS04 indicates the total amount of terms discount.

**Comments:**

- 1 TDS02 is required if the dollar value subject to discount is not equal to the dollar value of TDS01.

**Notes:** TDS01 is the total amount due for this invoice and must equal the algebraic sum of the amounts in the TXI02 and SAC05 segments. TDS must be positive. The amount can be zero if the ESS has an outstanding balance due even if there are no current transactions.

**Data Element Summary**

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

**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:** 1 If either CTT03 or CTT04 is present, then the other is required.  
 2 If either CTT05 or CTT06 is present, then the other is required.  
**Semantic Notes:**  
**Comments:** 1 This segment is intended to provide hash totals to validate transaction completeness and correctness.

**Data Element Summary**

	<u>Ref.</u> <u>Des.</u>	<u>Data</u> <u>Element</u>	<u>Name</u>	<u>Attributes</u>
M	CTT01	354	Number of Line Items Total number of line items in the transaction set	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. Des.</u>	<u>Data Element</u>	<u>Name</u>	<u>Attributes</u>
M	SE01	96	Number of Included Segments Total number of segments included in a transaction set including ST and SE segments	M N0 1/10
M	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