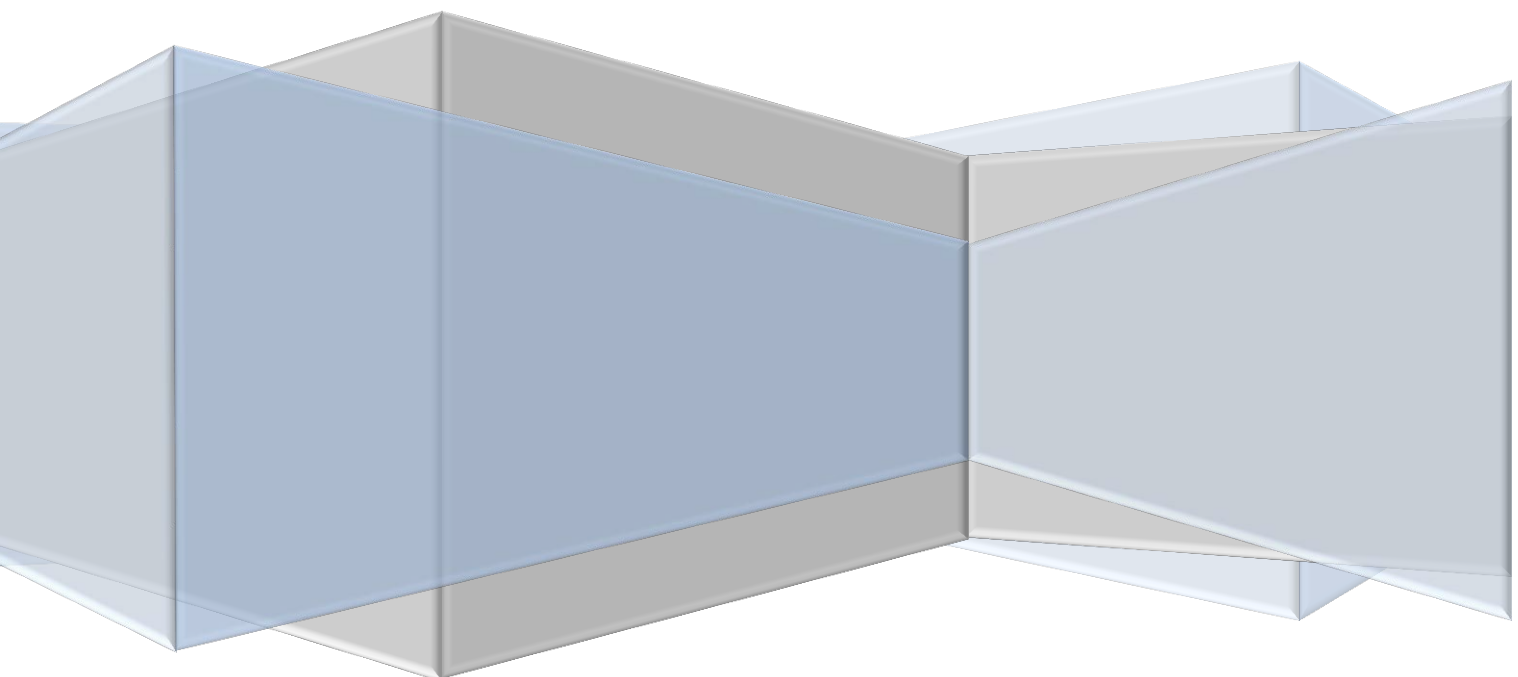# 810 EDI Electric CCA Implementation Guide and Data Dictionary

ANSI X12 – 810 version 4010

UDC Consolidated Billing

Summary of Changes

Version	Date	Author(s)	Revision Notes
1.0	06/27/2018	Loida Mateo-Rivera	Initial draft
2.0	07/31/2018	Loida Mateo-Rivera	Updated EDI 810 table with segments that will and maybe used by SDG&E.
3.0	08/14/2018	Anil Teegala	Updated SAC10 and SAC15 for changes

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SDG&E EDI Profile
(**For the inbound EDI 810 Version 4010 UDC Consolidated Billing Only**)

Company Name	San Diego Gas & Electric 8306 Century Park Court San Diego, CA 92123

Contacts:

EDI Business Contact: Phone: (858) 654-8371	Name: Angela LaCerva Email: ESPAdmin@semprautilities.com
Billing Contact: Phone: (858) 654-8371	Name: Angela LaCerva Email: ESPAdmin@semprautilities.com

SDG&E Telecommunications Information:

Envelope Qualifier	Production: **01**	**Test: 14**
Envelope ID (ISA)	Production: **006911457**	Test: **006911457TST**
Group ID (GS) for inbound EDI810v4010 Consolidated Billing only	Production: **006911457UDC41**	Test: **006911457UDC41**
Test/Production Indicator (ISA15)	Production: **P**	Test: **T**

Delimiters	Segment	Hex 7E or ~
	Element	Hex 2A or *
	Sub-element	Hex 3E or >

Document/Version Supported	810 Version 004010

Value Added Network	GXS Network
Communication Method	VAN

810 Invoice

Functional Group ID=IN

Introduction:

This will be the format SDG&E will receive for the inbound UDC-Consolidated Billing.

Level/ SDG&E Requirement	Pos No.	Seg ID	X12 Req Desc	X12 Max Use	X12 Loop Rep	Name	SDG&E Usage	Loop Repeat
Heading:								
Must Use	010	ST	M	1		Transaction Set Header	**M**	
Must Use	020	BIG	M	1		Beginning Segment for Invoice	**M**	
Must Use	030	NTE	O	100		Note/Special Instruction	**M**	
Must Use	050	REF	O	12		Reference Identification	M	
		LOOP ID - N1			200			
Must Use	070	N1	O	1		Name	M	
Not Used	090	N3	O	2		Address Information		
Not Used	100	N4	O	1		Geographic Location		
Not Used	130	ITD		>1		Terms of Sale/Deferred Terms of Sale		
Must Use	140	DTM	O	10		Date/Time Reference		
Detail:								
		LOOP ID - IT1			200000			200000
Must Use	010	IT1	O	1		Baseline Item Data (Invoice)	**M**	
Not Used	040	TXI	O	10		Tax Information		
Not Used	120	REF	O	>1		Reference Identification		
Not Used	150	DTM	O	10		Date/time Reference		
		LOOP ID - SLN			1000			1000
Must Use	200	SLN	O	1		Subline Item Detail	**M**	
Must Use	230	SAC	O	25		Service, Promotion, Allowance, or Charge Information	**M**	
Summary:								
Must Use	010	TDS	M	1		Total Monetary Value Summary	**M**	
Optional	070	CTT	O	1		Transaction Totals	**O**	
Must Use	080	SE	M	1		Transaction Set Trailer	**M**	

Transaction Set Notes

1. Number of line items (CTT01) is the accumulation of the number of IT1 segments.

EDI 810 Version 4010 Data Dictionary

Usage: M – Required, O – Optional, C/X – A relational condition applies

Field Name	SDG&E Usage	LEVEL	X12 EDI Segment POS	EDI X12 Source Segment/Element
Partner ID	M	HDR	020	CAPTURE FROM ISA06
Invoice Issue Date	M	HDR	020	BIG01, YYYYMMDD
Invoice Number	M	HDR	020	BIG02 any sequential or random number
Other Instruction	X	HDR	030	NTE02, NTE01 = OTH
SDG&E Billing Account	M	HDR	050	REF02, REF01 (12) Key Field (SDG&E assigned customer account number)
ESP Account Number	O	HDR	050	REF02, REF01 (11) (Customer Service Account Number)
Utility Name	M	HDR	070	N102, N101 (8S) (Consumer Service Provider)
ESP Name	M	HDR	070	N102, N101 (SJ) (Energy Service Provider)
Invoice Period Start Date	M	HDR	140	DTM02, DTM01 (186) Format - YYYYMMDD When the billing period covered by an invoice begins
Invoice Period End Date	M	HDR	140	DTM02, DTM01 (187) Format - YYYYMMDD When the billing period covered by an invoice begins
Allowance or Charge Indicator	M	DTL	230	SAC_01_248, SAC_ALLOW_OR_CHARGE_INDICATOR
Allowance or Charge Code	X	DTL	230	SAC_04_1301, SAC_ALLOWANCE OR CHARGE CODE
Line Item Charge	M	DTL	230	SAC_05_610, SAC_AMOUNT
Rate Charge	O	DTL	230	SAC_08_118, SAC_RATE
UOM	O	DTL	230	SAC_09_355, SAC_UOM
Quantity	O	DTL	230	SAC_10_380, SAC_QUANTITY
Line Item Description	M	DTL	230	SAC_15_352, SAC_DESCRIPTION
Total Invoice Amount	M	SUM	10	TDS01 Total ESP bill amount (Sum of all charges and allowances)
Number of Line Items	O	SUM	70	CTT01 Total number of line items in the transaction set

EDI 810 version 4010 Example

(presented in an unwrapped format)

```
ISA*00*      *00*      *01*123456789T   *14*006911457  *181106*1109*U*00401*000002988*0*P*~
GS*IN*123456789*006911457UDC41*20181106*1109*2378*X*004010~
ST~810~11838~
BIG~20181003~182760000009359~
NTE~OTH~For more detail on your CCA bill call 1-888-555-1111~
REF~12~1234567890~
N1~8S~SAN DIEGO GAS & ELECTRIC COMPANY~1~006911457~
N1~SJ~CITY OF ABC~1~123456789~
DTM~186~20181005~
DTM~187~20181105~
IT1~1~~~~~~SV~EL~C3~ACCOUNT~
SLN~1~~A~
SAC~C~~~248~~~05233~KH~47~~~~~GENERATION - TOTAL – WINTER~
SLN~2~~A~
SAC~C~~~5162~~~14986~KH~344~~~~~GENERATION~
SLN~3~~A~
SAC~C~~~011~~~~EA~1~~~~~State Surcharge Tax~
TDS~5421~
CTT~1~
SE~18~11838~
GE~5~2378~
IEA*1*000002988~
```

Community Choice Aggregation (CCA) Electric Generation Charges

Your Electric energy is provided by the following CCA:

City of ABC   Phone: 1-888-555-1111

CCA Account Number: 1234567890   Bill Date: Nov 10, 2018   Billing Period: 10/5/18 - 11/5/18

	Amount ($)
GENERATION - TOTAL - WINTER 47 kWh X $0.05233	2.48
GENERATION 344 kWh X $0.14986	51.62
State Surcharge Tax	.11
Total CCA Electric Generation Charges	**$54.21**

For more detail on your CCA bill call 1-888-555-1111

Segment:	**ST** Transaction Set Header (Must Use)			

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

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

Segment:	**BIG** Beginning Segment for Invoice - (Must Use)
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, BIG 10 is not used.
Comments:	**1** BIG07 is used only to further define the type of invoice when needed.

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	**BIG01**	373	**Date**	M	**DT 8/8**
			Date expressed as CCYYMMDD		
			Invoice Issue Date		
Must Use	**BIG02**	76	**Invoice Number**	M	**AN 1/22**
			Identifying number assigned by issuer		
			This will be a random number assigned by the Sender		
Not used	**BIG07**	640	**Transaction Type Code**	O	**ID 2/2**
			Code specifying the type of transaction		
Not used	**BIG08**	353	**Transaction Set Purpose Code**	O	**ID 2/2**
			Code identifying purpose of transaction set		

00	Original	
	This invoice contains new, original, previously unbilled charges.	
01	Cancellation	
	This invoice contains a cancellation.	
CO	Corrected	
	This invoice contains corrected data that was previously billed.	

Segment:	**NTE** Note/special Instruction - (Must Use)		
Position:	030		
Loop:			
Level:	Heading:		
Usage:	Optional		
Max Use:	100		
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:	Used for required messages and notices, when applicable		

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	NTE01	363	**Note Reference Code**	O ID 3/3
			Code identifying the functional area or purpose for which the note applies	
			ADD Additional Information	
			Utility-required messages or notices.	
			OTH Other Instructions	
			Regulatory-required messages or notices.	
Must Use	NTE02	352	**Description**	M AN 1/80
			A free-form description to clarify the related data elements and their content	

Segment:	**REF** Reference Identification - (Must Use)		
Position:	050		
Loop:			
Level:	Heading:		
Usage:	Optional		
Max Use:	12		
Purpose:	To specify identifying information		
Syntax Notes:	1 R0203 - At least one of REF02 or REF03 is required.		
Semantic Notes:	1 REF04 contains data relating to the value cited in REF02		
Comments:			
Notes:	See SDG&E additional note information below.		
	The Billing Account, REF (12) is required by SDG&E.		

Data Element Summary

	Ref. Des.	Data Element	Name	Attributes
Must Use	REF01	128	**Reference Identification Qualifier**	M ID 2/3
			Code qualifying the Reference Identification	
		11	Account Number	
			Number identifies a telecommunications industry account	
			Energy Service Provider-assigned account number for the end use customer. This will contain the ESP's Account Number for this account.	
Must Use		12	**Billing Account**	
			Account number under which billing is rendered. Utility-assigned account number for the end use customer. This will contain the 10-digit SDG&E Account Number. This is **required** by SDG&E.	
Must Use	REF02	127	**Reference Identification**	X AN 1/30
			Reference Identification as defined for a particular Transaction Set or as specified by the Reference Identification Qualifier	

Segment:	**N1** **Name - (Must Use)**
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 **R0203 -** At least one of N102 or N103 is required.
	2 **P0304 -** If either N103 or N104 is present, then the other is required.
Semantic Notes:	
Comments:	1 This segment, used alone, provides the most efficient method of providing organizational identification. To obtain this efficiency the "ID Code" (N104) must provide a key to the table maintained by the transaction processing party.
	2 N105 and N106 further define the type of entity in N101.
Notes:	See SDG&E additional note information below.
	The Consumer Service Provider (8S) and Service Provider (SJ) are required by SDG&E

Data Element Summary

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

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

8S   Consumer Service Provider (CSP)

> Utility Name – SDG&E
>
> Utility. Indicates that N102 will contain the SDG&E.
>
> This is **required** by SDG&E.

SJ   Service Provider

Identified name and address information as pertaining to a service provider for which billing is being rendered

> Energy Service Provider. Indicates that N102 will contain the Energy Provider's name.
>
> This is **required** by SDG&E.

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

Free-form name

> -   Will contain 'SDG&E' if N101 = '8S'
> -   Will contain the Energy Service Provider's name if N101 = 'SJ'

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

Code designating the system/method of code structure used for Identification Code (67)

1   D-U-N-S Number, Dun & Bradstreet

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

Code identifying a party or other code

> -   Will contain "006911457" if N101 = '8S'
> -   Will contain the Energy Service Provider's DUNS if N101 = 'SJ'

Segment:	**DTM** Date/Time Reference - (Must Use)
Position:	140
Loop:	
Level:	Heading:
Usage:	Optional
Max Use:	10
Purpose:	To specify pertinent dates and times
Notes:	1 **R020305 -** At least one of DTM02 DTM03 or DTM05 is required.
	2 C0403 - If DTM04 is present, then DTM03 is required.
	3 P0506 - If either DTM05 or DTM06 is present, then the other is required.
Semantic Notes:	
Comments:	DTM (186) and DTM (187) are mandatory segments

Data Element Summary

	Ref. Des.	Data Element	Name		Attributes
Must Use	DTM01	374	**Date/Time Qualifier**	M	ID 3/3
			Code specifying type of date or time, or both date and time		
			186 Invoice Period Start		
			When the billing period covered by an invoice begins		
			This is **required** by SDG&E.		
			187 Invoice Period End		
			When the billing period covered by an invoice ends		
			This is **required** by SDG&E.		
Must Use	DTM02	373	**Date**	X	DT 8/8
			Date expressed as CCYYMMDD		

Segment:	**IT1** Baseline Item Data (Invoice) - (Must Use)

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** P020304 - If either IT102, IT103 or IT104 are present, then the others are required.
	2 P0607 - If either IT106 or IT107 is present, then the other is required.
	3 P0809 - If either IT108 or IT109 is present, then the other is required.
	4 P1011 - If either IT110 or IT111 is present, then the other is required.
	5 P1213 - If either IT112 or IT113 is present, then the other is required.
	6 P1415 - If either IT114 or IT115 is present, then the other is required.
	7 P1617 - If either IT116 or IT117 is present, then the other is required.
	8 P1819 - If either IT118 or IT119 is present, then the other is required.
	9 P2021 - If either IT120 or IT121 is present, then the other is required.
	10 P2223 - If either IT122 or IT123 is present, then the other is required.
	11 P2425 - If either IT124 or IT125 is present, then the other is required.
Semantic Notes:	**1** IT101 is the purchase order 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. IT1 values shall not display on SDG&E Bill

Data Element Summary

Ref. Des.	Data Element	Name	Attributes	
IT101	**350**	**Assigned Identification**	**O**	**AN 1/20**
		Alphanumeric characters assigned for differentiation within a transaction set		
		Line item counter.		
IT106	**235**	**Product/Service ID Qualifier**	**X**	**ID 2/2**
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		SV Service Rendered		
IT107	**234**	**Product/Service ID**	**X**	**AN 1/48**
		Identifying number for a product or service		
		This will contain 'EL'		
IT108	**235**	**Product/Service ID Qualifier**	**X**	**ID 2/2**
		Code identifying the type/source of the descriptive number used in Product/Service ID (234)		
		C3 Classification		
IT109	**234**	**Product/Service ID**	**X**	**AN 1/48**
		Identifying number for a product or service		
		This will contain ACCOUNT (Account Model)		

Segment:	**SLN** Subline Item Detail – (Must Use)	
Position:	200	
Loop:	SLN	Optional
Level:	Detail:	
Usage:	Optional	
Max Use:	1	
Purpose:	To specify product subline detail item data	

Notes:
1 P0405 - If either SLN04 or SLN05 is present, then the other is required.
2 C0706 - If SLN07 is present, then SLN06 is required.
3 C0806 - If SLN08 is present, then SLN06 is required.
4 P0910 - If either SLN09 or SLN10 is present, then the other is required.
5 P1112 - If either SLN11 or SLN12 is present, then the other is required.
6 P1314 -If either SLN13 or SLN14 is present, then the other is required.
7 P1516 - If either SLN15 or SLN16 is present, then the other is required.
8 P1718 - If either SLN17 or SLN18 is present, then the other is required.
9 P1920 - If either SLN19 or SLN20 is present, then the other is required.
10 P2122 - If either SLN21 or SLN22 is present, then the other is required.
11 P2324 - If either SLN23 or SLN24 is present, then the other is required.
12 P2526 - If either SLN25 or SLN26 is present, then the other is required.
13 P2728 - 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.

Data Element Summary

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

Segment:	**SAC** Service, Promotion, Allowance, or Charge Information – (Must use)		

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. R0203 - At least one of SAC02 or SAC03 is required.
2. P0304 - If either SAC03 or SAC04 is present, then the other is required.
3. P0607 - If either SAC06 or SAC07 is present, then the other is required.
4. P0910 - If either SAC09 or SAC10 is present, then the other is required.
5. C1110 - If SAC11 is present, then SAC10 is required.
6. L130204 - If SAC13 is present, then at least one of SAC02 or SAC04 is required.
7. C1413 - If SAC14 is present, then SAC13 is required.
8. C1615 - 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.
3. If SAC05 is present with SAC07 or SAC08, then SAC05 takes precedence.
4. SAC08 is the allowance or charge rate per unit.
5. SAC10 and SAC11 is the quantity basis when the allowance or charge quantity is different from the purchase order of invoice quantity.
6. SAC10 and SAC11 used together indicate a quantity range, which could be a dollar amount, that is applicable to service, promotion, allowance, or charge.
7. SAC13 is used in conjunction with SAC02 or SAC04 to provide a specific reference number as identified by the code used.
8. SAC14 is used in conjunction with SAC13 to identify an option when there is more than one option of the promotion.
9. 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 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.

Notes:

1. Only the SAC charges will be shown on the SDG&E Bill Line Items.
2. Tax Information should be sent as a SAC Charge.
3. If Unit of Measure in SAC09 is 'EA', then Description in SAC15 can have a maximum length of '70' characters. Description shall be truncated in excess of '70' characters.
4. If Unit of Measure in SAC09 is 'K1'or 'KH, then Description in SAC15 must have a maximum length of 42 characters only. Description shall be truncated in excess of '42' characters.
5. Rate in SAC08 cannot be negative.
6. Total number of NTE and SAC segments cannot be greater than 48 occurrences
7. Maximum length of SAC Key Elements

Element	Element Description	Maximum Length/Format
SAC05	Amount	9 (N2)
SAC08	Rate	8 99999999
SAC10	Quantity	12
SAC15	Description	
	If SAC09 = EA	78
	If SAC09 = K1 or KH	46

	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

C	Charge

The amount in SAC05 should be included when summing the invoice total.

N	No Allowance or Charge

The amount in SAC05 should be ignored when summing the invoice total. Detail is given for INFORMATION ONLY.

	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

	SAC05	610	**Amount**	O N2 1/15

Monetary amount

The amount may either be positive or negative.
If negative, the minus sign must be transmitted.
Maximum length for SDG&E is '9'
This is a Numeric value with implied two decimal places
Example: 7500 will be interpreted as 75.00
        75 will be interpreted as 0.75

	SAC08	118	**Rate**	O R 1/9

Rate expressed in the standard monetary denomination for the currency specified

The value must be sent as N5 type.
The maximum value shall be sent as eight (9s) i.e. 99999999 and shall be shown on the bill as $999.99999
Trailing zeroes must be added to make 5 digits after the decimal.
Example:
      To show 0.00424 on the bill, send 00424
      To show .72000 on the bill, send 72000
      To show 1.10000 on the bill, send 110000
      To show 2.00000 on the bill, send 200000
      To show 23.62000 on the bill, send 2362000
      To show 923.62000 on the bill, send 92362000

Max length is 8 digits. 3 digits prior to decimal and 5 after decimal.
The rate must not be negative.

	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
K1	Kilowatt Demand

<table>
<tr><td></td><td>KH</td><td>Represents potential power load measured at predetermined intervals
Kilowatt Hour
KH will be shown as kWh on the bill, K1 as kW, EA shall not be shown on the bill</td></tr>
</table>

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

Numeric value of quantity.

Maximum length to be allowed is 9.

For Demand (K1): 1 decimal digit is assumed.
Implying maximum value 9,999,999.9 (on the bill) which will be sent as 99999999 (eight 9's)
Populate zero after the decimal if a decimal digit does not exist
Examples:
      To show 6750.0 on the bill, send 67500
      To show 22.8 on the bill, send 228
      To show 123.1 on the bill, send 1231
      To show 0.2 on the bill, send 2
      To show 50.0 on the bill, send 500

For Consumption (Kh): Needs to be whole number. Maximum is 999999999 (nine 9's). This will be shown as 999,999,999 on the bill.
For negative consumption, maximum is -99999999 (eight 9's)

Examples:
      KH (No Decimals)
      To show 6750 on the bill, send 6750
      To show 1 on the bill, send 1
      To show 22 on the bill send 22
      To show -3456789 on the bill, send -3456789

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

A Free-form description to clarify the related data elements and their content.
See specifics below regarding SDG&E's description length limitations:

If SAC09 is 'EA', Description in SAC15 can have a maximum length of '70' characters
If SAC09 is not 'EA', the Description in SAC15 must have maximum length of '42' characters only.
If a description is received beyond the allowed length, the values will be stripped on the right (left adjusted)

Segment:	**TDS** Total Monetary Value Summary – (Must Use)		
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 SAC05 (where SAC01 = C) segments. If this amount is negative, send the minus sign.		
	SDG&E will not validate the total invoice amount (SAC line items) but display the TDS value as-is.		

Data Element Summary

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

Segment: **CTT** **Transaction Totals (Optional)**

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

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

Segment:	**SE** Transaction Set Trailer – (Must Use)		
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

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