Chapter 3

Electronic Communication

From
SCE's Manual

SOUTHERN CALIFORNIA
EDISON

An *EDISON INTERNATIONAL*SM Company

The ESP Handbook

Chapter 4
Setting Up Electronic Communications with SCE

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Chapter 4: Setting Up Electronic Communications with SCE

Coordinating the provision of Direct Access services will require that SCE and ESPs follow a clear and consistent set of communication protocols. This chapter will provide the required information associated with establishing electronic communications and following protocols.

This chapter includes:

- Information on communicating with SCE through EDI and e-mail
- Information on electronic testing for ESPs
- The "Direct Access Interface Specifications, Communications Methods, and Protocol Specifications" document.

4.1. Communicating with SCE

SCE intends to carry out the majority of communications and data exchanges to and from ESPs using standard transaction formats within an Electronic Data Interchange (EDI) environment. Recognizing the aggressive implementation schedule for Direct Access, however, SCE will offer ESPs the option of submitting DASRs through both EDI and e-mail with attached files in ASCII, comma-separated value format. SCE ultimately intends to conduct the other key transactions, such as billing and payments, using EDI as well. In the initial stages of Direct Access, however, SCE will use e-mail with attached files in comma-separated values as the primary platform for conducting non-DASR transactions.

4.2. Establishing EDI with SCE

ESPs interested in establishing EDI capability with SCE for submission of DASRs should begin by contacting the SCE Electronic Communications Coordinator. This Coordinator will function as the liaison between ESPs and SCE's Corporate EDI Group. Specifically, the Electronic Communications Coordinator will assist ESPs in understanding the requirements and protocols associated with establishing EDI with SCE, assist as necessary in completing the Trading Partner Agreement, and compile the necessary electronic transmission control information for EDI communications. The Electronic Communications Coordinator can be contacted through the ESP Support Center at (800) 795-6723, or directly at (562) 491-2228.

SCE intends to use standard EDI transactions developed and maintained by the Accredited Standards Committee X12 (ASC X12). This Committee and its standard transaction formats are sanctioned and approved by the American National Standards Institute (ANSI). ASC X12 transactions have been adopted for EDI by the Utility Industry Group (UIG), an industry action group working in the interest of electric and combination utilities, their customers, and suppliers to improve the methods of exchanging business information through EDI. Specifically, SCE intends to use UIG Implementation Guidelines for the following ASC X12 transaction sets to communicate key data in the Direct Access process:

814—General Request, Response, or Confirmation Transaction Set, version/release 3070. ESPs using EDI will be required to submit the DASR using transaction set 814. The 814 will also be used by SCE to acknowledge receipt of the DASR, and to send DASR confirmation or rejection notices to the ESP. This transaction set could also be used to communicate service termination/disconnection information to ESPs, when available.

In the future, SCE intends to establish EDI capability to conduct other key Direct Access transactions. SCE plans to use the following transactions sets to conduct these:

810—Invoice Transaction Set, version/release 3030. It is expected that both ESPs and SCE will use transaction set 810 in order to submit invoices/billing data. This transaction set will be used under both SCE Consolidated and ESP Consolidated billing.

820—Payment Order and Remittance Advice Transaction Set, version/release 3030. At this time, it is expected that both ESPs and SCE will use transaction set 820 to communicate both remittance data to post accounts and banking instructions to move funds.

824—Application Advice Transaction Set, version/release 3070. EDI Transaction Set 824 - Application Advice Outbound, Version 3070, will be sent by the UDC to the ESP as a response to Consolidated Billing data transmitted by the ESP to the UDC by EDI Transaction Set 810. The 824 transaction indicates an Acceptance or Rejection, and the error code and description of what field(s) of the account data is incorrect.

867—Product Transfer and Resale Report Transaction Set, version/release 3070. SCE is currently evaluating the possibility of using transaction set 867 to send confidential usage data to ESPs as part of the DASR process; however, it is unlikely that this option will be available to ESPs in the initial stages of Direct Access.

To utilize EDI, ESPs will be required to establish a mailbox on a Value-Added Network (VAN) of their choice. This VAN must be fully capable of storing and forwarding ASC X12 transactions. This information can be communicated through the EDI Trading Partner Profile Sheet included in this handbook. SCE currently uses the Harbinger VAN. At this time, SCE will not offer Internet-based EDI.

4.3. Additional Information on Electronic Data Interchange

As stated above, SCE intends to utilize transaction set guidelines for EDI established by the UIG. These guidelines provide a standardized methodology to conduct business in an EDI environment. Consistent with UIG guidelines, SCE uses Dun & Bradstreet (D&B) numbers as mailbox identifiers among the VANs to identify itself and its partners in the EDI exchange process. For more information about UIG guidelines, contact the UIG at *http://*www.*uig.org.*

SCE is developing mapping guides to assist ESPs in conducting Direct Access transactions through EDI. ESPs should note that the guides will define the format for various transactions; SCE will not customize formats for individual trading partners. These mapping guides will be available by request from the Electronic Communications Coordinator and through SCE's Electronic Commerce Internet website, http://*www.edisonx.com/edi*. For further information on the status of these mapping guides, please contact the Electronic Communications Coordinator through the ESP Support Center at (800) 795-6723, or directly at (562) 491-2228.

4.4. Using E-Mail with Attached ASCII Files in Comma-Separated Values

ESPs planning to participate in Direct Access within SCE's service territory may need to send information using e-mail with attached ASCII files in Comma-Separated Values (CSV). When sending these files to SCE, ESPs should note that only one attachment should be included per e-mail. SCE intends to use PGP software for encryption. This software can be obtained from *www.pgp.com*.

In advance of sending e-mails to SCE, an ESP will have to be pre-established in SCE's Internet Reference Table with the necessary Internet control information provided to the Coordinator.

SCE has established the following e-mail address in order to facilitate the transmission of information: *esp_autocomm@sce.com.* ESPs should only send DASRs to this address; questions about the process should be directed to the ESP Support Center at ESPSUPT@sce.com. See Chapter 4 for further information.

At this time, ESPs may only send one attachment per e-mail. Each attachment may not be larger than 200 kb in size; attachments larger than 200 kb will be rejected. Detailed instructions on completing e-mail DASRs are included in Chapter 6.

4.5. Testing Electronic Communications

4.5.A. System Testing

Establishing the information system infrastructure necessary to implement Direct Access on the schedule established by the CPUC represents a significant

challenge to both ESPs and SCE. During the month of October 1997, SCE successfully conducted a broad array of system tests with ESPs in advance of official submissions of DASRs. The scope of these tests included:

- Receiving inbound DASRs in both EDI and e-mail format
- Processing DASRs within SCE
- Sending acknowledgments
- Sending DASR rejections and confirmations

At the time of this writing, the first stage of the system testing stage for DASR-related transactions is complete. Further system testing is required for other Direct Access processes such as Billing and Payments. ESPs interested in participating in this testing may contact the Electronic Communications Coordinator at (800) 795-6723, or directly at (562) 491-2228.

4.5.B. ESP Enrollment Testing

As described above, SCE has conducted system testing in order to ensure the functionality of SCE's electronic infrastructure for Direct Access. In addition to this system testing, SCE provides testing procedures designed to assist ESPs in establishing electronic communications with SCE for the first time.

As a first step, an ESP is required to submit certain background information described in the "Meet SCE Enrollment Requirements" step of the Direct Access process. An SCE Electronic Communications Coordinator may contact ESPs to ensure that all the required information was correctly submitted.

SCE's Interface Protocols

As part of establishing and maintaining Direct Access services, ESPs will need to follow unique protocols as they communicate and provide data through e-mail and, as available, EDI. In order to assist ESPs in following these protocols, SCE has developed the "Direct Access System Interface Specification: Communications Methods and Protocol Specifications," a document that describes the data interfaces necessary to properly transfer information between SCE and ESPs. This guide breaks down key Direct Access transactions into 15 key logical messages, and provides information on the interfacing entities, requirements on the type of interface, required characteristics of data element groupings, and other data.

SCE's Direct Access Interface Specifications:
Communication Methods and Protocol Specifications

4.A. Introduction

4.A.1. Introduction

The Public Utilities Commission in Paragraph 7(c.) of its Second Interim Order in Decision D.97-05-040, required the Utility Distribution Companies (UDC) to hold a Retail Settlement and Information Flow (RSIF) workshop. This workshop, scheduled for July 7, 1997, was responsible for informing the electrical industry stakeholders of the requirements needed for retail settlement and information flow.

As a result of the July 7, 1997 RSIF workshop, the participants identified three critical areas that need additional clarification to effectively implement the systems needed for Direct Access. The areas of concern were 1) auditing function, 2) distribution-loss calculation and 3) billing data interface.

In this report, Edison describes the data transfer protocol and systems interfaces which will encompass all data interfaces, including the billing data interface.

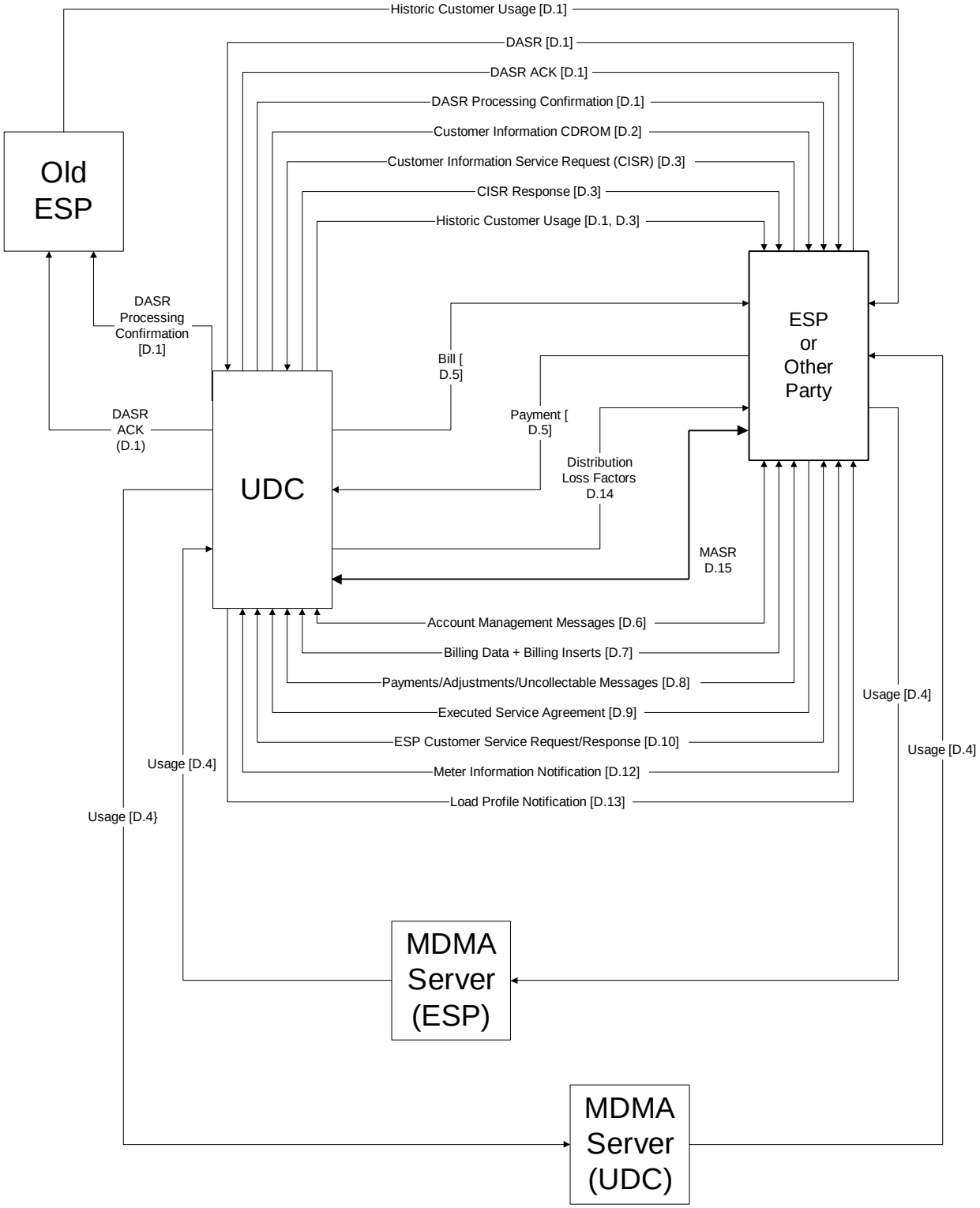
4.A.2 Purpose

This document specifies the data interfaces needed to properly transfer information between Edison and ESPs. To properly establish the correct interface protocol between Edison and ESPs, Edison has identified 15 key logical messages. The key messages will signify information flow from either (1) Edison to the ESP, (2) ESP to Edison or (3) both ways. Later in this document, added clarification will be asserted for each of the 15 areas separately. Each area will be broken down into interfacing entities, requirements on the type of interface, required characteristics of data element groupings, required characteristics of communication methods that the interfacing entities must use for the interface, required characteristics of protocols the interfacing entities must use for the interface and other required characteristics. that further clarify the Edison/ESP interface.

4.B. Referenced Documents

1) Retail Settlement and Information Flow (RSIF) Workshop Report.
2) Metering and Data Communications Standards (MDCS) Workshop Report, dated 7/16/97.
3) Customer Information Database Workshop Report.

4.C. Interface Context Diagrams



4.D. Interface Requirement Descriptions

1. **Direct Access Service Requests (DASRs)** - The DASR is Edison's central processing record. The DASR will contain all the information required by Edison and electronically submitted to effect an energy supplier, service option change, termination or customer elections.

DASR acknowledgments - Edison will respond to the ESP within 2 business days of a successful and unsuccessful DASR submission. Unsuccessful DASRs will be rejected and returned to the originating ESP with information of any errors or submissions. Additionally, Edison will notify the existing ESP of any pending switches submitted by another ESP.

DASR processing confirmation - This will be the process used by Edison to notify ESPs of their DASR effective date and existing ESPs of their impending customer loss.

2. **Third Party Requests for Information** - This process is currently handled today through the Edison billing operations. All third party requests must have prior written authorization from the customer before information is released to a third party. For customer information requests that exceed the allotted 2 times per year per account, Edison may assess a charge for this information.

Historical customer usage - Edison will process requests for customer-specific information. The information will be provided electronically, unless otherwise available from Edison.

ESPs acquiring a Direct Access customer from another ESP should be entitled to twelve months of consumption data provided by the former ESP.

3. **MDMA usage/meter reads** - Usage and meter read data will be shared via the standards identified through the MDCS workshop. This could also be the forum for historical usage information, however, this is not presently within the scope of the workshop.

4. **Billing and Payment Methods** - For ESP consolidated billing, all existing billing and payment methods are available for ESPs to remit UDC charges:
   - Billing Methods
   - EDI
   - Paper
   - Check
   - Cash

5. **Account Maintenance** - Whenever account specific information changes, i.e., meter changes or billing specific information, the ESP must notify the UDC of the account modification. The ESP is required to submit a new DASR to make this account modification valid. The UDC will be responsible for notifying the ESP of the change.

6. **Consolidated billing data interchange** - Because the ESP or UDC can provide meter reading services for specific service accounts, the party reading the meters may

not be the party producing the bills, arrangements are needed to receive usage data from these various entities.

7. **Payment/Adjustments/Uncollectables** - Edison must be able to reconcile bills and make appropriate adjustments on a monthly basis. This will include incorrect energy reads, delinquency and not receiving consumption data in timely for next months bill.

8. **ESP Help Desk Interactions** - Edison has established a toll free telephone hotline (888-371-3777) and e-mail address (espsvcs) to field ESP enrollment and contractual questions. Edison has established another toll free telephone hotline (800-795-6723) and e-mail address (espsupt) to field operational questions such as the processing of Direct Access Service Requests (DASRs).

9. **Compliance Testing** - ESPs must pass Edison's compliance testing prior to processing their first set of production data. Edison will provide testing scripts and data for interface testing and ESPs will provide evidence of successful testing.

10. **Meter Information Notification** - Whenever a data concerning a metering device is altered, this record shall be sent from the entity making the change to the other interested entities.

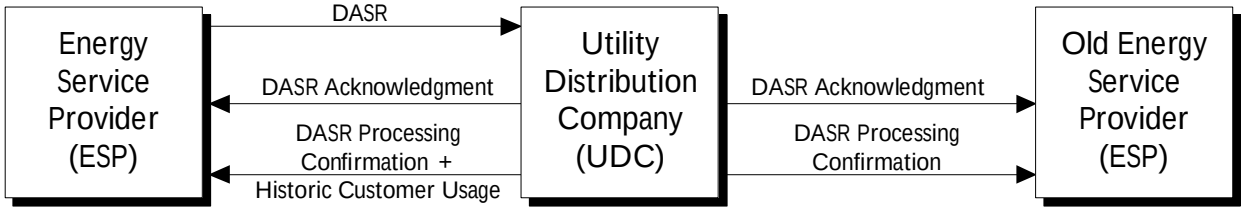
11. **Load Profile Notification** - For the customers who do not qualify for, and do not request, an hourly meter a load profile will be assigned to that service account. Edison will communicate the load profiles through this record.

12. **Distribution Loss Factors Notification** - UDC's are required to communicate to the ESP's their distribution loss factors. This format is the vehicle for that communication.

13. **Metering Service Request (MASR)** - Communication between a metering service provider and another market participant.

4.D.1. Direct Access Service Request (DASR)
DASR Acknowledgment
DASR Processing Confirmation

This interface describes the customer election of an energy provider. It describes the data and messages necessary for the effective communication of customer information to complete the transition from one energy provider to another.



Direct Access Service Request (DASR) RSIF Format

No.	Data Element Name	Type	Size (Maximum Acceptable)	Notes
1	Record Type	CHAR	8	'MEPAD01 " Describes the data record sent.
2	Record Version	CHAR	8	YYYYMMDD Describes the version of the data record sent. Currently 19971101.
3	Sender Identifier	INTEGER	9	Unique Market Participant ID for Sender (DUNS).
4	Sender Customer Identifier	CHAR	20	Customer Account Number Sending entity \$ customer identifier (may be acct # or other). Service Account for SCE.
5	Receiver Identifier	INTEGER	9	Unique Market Participant ID for Receiver (DUNS).
6	Receiver Customer Identifier	CHAR	20	Customer Account Number. Receiving entity \$ customer identifier (may be acct # or other). Service Account for SCE.
7	Time Stamp	CHAR	12	YYYYMMDDHHMM Date and time this record is created. Created by sender.
8	Record ID	CHAR	20	Transaction identifier. Contents returned unchanged in corresponding response record/
9	Operation Type	CHAR	8	See Note 1. The operation which triggered this record to be transmitted.

10	Service Relationship Count	INTEGER	2	This field represents the number of service relationships described in the Type of Service Relationship field.
11	Type of Service Relationship	CHAR	256	This field represents service relationships requested/provided (i.e., BILLER, METER-READER, etc.). Entries are space separated. If field includes METER-INSTALLER the meter installation will be performed by the SP and configuration file is required from the SP.
12	Reason	CHAR	12	Values include: UPDATE, RESEND, ADJUSTMENT, CORRECTION, CONNECT, DISCONNECT, CANCEL.
13	Comment	CHAR	256	Reject/Error Memos & Comments.
14	UDC Account Number for ESP	CHAR	9	ESP Account Number assigned by UDC. SCE Customer Account Number.
15	Effective Start Date	DATETIME	12	YYYYMMDDHHMM Communicates Requested Effective Date when used with AP-REQ/Connect, Pending Effective Date when used with SP-ACK/Connect, and Actual Effective Date when used with SVC/Connect, and Meter Install Schedule when separate Meter-installer, SP-REQ/Connect issued.
16	Effective End Date	DATETIME	12	YYYYMMDDHHMM Service end date.
17	Account Status	CHAR	15	Values are: NEW, SP-PENDING, CUST-PENDING, PENDING, METER-REQUIRED, OK, OFF.
18	Pending Status	CHAR	15	A status as described in the Account Status field that will take effect some time in the future. This is used by the UDC to notify the SP that account status will change soon. The effective change time is described in the Effective Start Date field.
19	Pending ESP DUNS	INTEGER	9	This identifies the SP that will assume the Type of Service Relationship for this customer at the date and time described in the Effective Start Date (DUNS).
20	Reading Estimation Method	CHAR	8	Values are: PG&E, MADAWG, NONE.
21	Commodity	CHAR	1	Commodity type for this account. Values are: E - Electric, G - Gas, W-Water, S - Steam.
22	Customer Name	CHAR	30	Customer complete name. Commercial name.
23	Contact Last Name	CHAR	30	Customer last name

24	Contact First Name	CHAR	30	Customer first name
25	Contact Middle Initial	CHAR	1	Customer middle initial
26	House/Building Number	CHAR	6	
27	House/Building Fraction Number	CHAR	3	
28	Street Prefix Code	CHAR	2	
29	Street Name	CHAR	25	
30	Street Suffix Code	CHAR	4	
31	Unit Number	CHAR	8	
32	City	CHAR	25	
33	State	CHAR	2	
34	Country	CHAR	5	
35	ZIP	CHAR	5	
36	ZIP Extension 4	CHAR	4	
37	ZIP Extension 2	CHAR	2	
38	Standard Time Zone	INTEGER	5	Time zone for local time calculation when daylight savings is not in effect. Value is + or - number of minutes from reported time.
39	Daylight Time Zone	INTEGER	5	Time zone for local time calculation when daylight savings is in effect. Value is + or - number of minutes from reported time.
40	Distribution Loss Designator	CHAR	4	
41	Meter Congestion Zone	CHAR	8	The ISO distribution congestion zone identifier. This may alternately be used to indicate Load Group, Load Point, Grid Takeout Point, substation.
42	Usage Profile	CHAR	8	The description of this account's usage class. SCE Load Profile ID.
43	Billing Options	CHAR	1	Options include: D - Dual Billing U - UDC Consolidated E - ESP Consolidated
44	UDC Rate Name	CHAR	12	UDC rate schedule required (for ESP Consolidated Billing state BILL-READY if providing bill ready data and required for MDMA services.
45	SP Rate Name	CHAR	12	SP Rate schedule required for UDC Consolidated Billing.
46	Phone International Access Number	CHAR	6	Customer Phone International Access Number.
47	Phone Area Code	CHAR	4	Customer Phone Area Code
48	Phone Number	CHAR	7	Customer Phone Number
49	Phone Extension	CHAR	5	Customer Phone Extension
50	FAX Number	CHAR	16	Customer FAX Number
51	Renewable Energy Provider	CHAR	1	Y/N Y - Renewable energy provider for this account, N - Not a renewable energy provide for this account.
52	Meter Count	INTEGER	2	This field allows identifying multiple meters and the associated unit parameters. Describes the number of meters in the Meter ID field (more than

				one meter identifier separated by comma). Maximum number of meters = 12.
53	Meter ID	CHAR	400	Each Meter ID is a set of 3 fields (Meter ID, Usage Reading Interval, Units Parameter). Intervals = 01000000 - monthly 00070000 - weekly 00000100 - hourly 00000030 - 30 minutes where interval = MMDDHHMM Units Parameter = KWH, KW, KVAR, etc.
	SCE FIELDS AFTER THIS POINT; ***RSIF BEFORE THIS POINT***			
54	ESP Registration Number	INTEGER	5	As assigned by CPUC.
55	ESP Renewable Certification ID	CHAR	12	As assigned.
56	Metering Service Option	CHAR	1	P - Load Profiled H - Hourly Meter
57	Customer Acknowledgment of CTC Obtained	CHAR	1	Y/N
58	IVA Required	CHAR	1	Y/N
59	IVA Obtained	CHAR	1	Y/N
60	Life Support Required	CHAR	1	Y/N
61	Meter Owner	CHAR	1	C - Customer E - ESP O - Other U - UDC
62	Meter Owner DUNS	INTEGER	9	DUNS
63	Meter Owner ID	CHAR	4	Unique ID
64	MDMA DUNS	INTEGER	9	DUNS
65	MDMA ID	CHAR	4	Unique ID
66	Meter Service Provider DUNS	INTEGER	9	DUNS
67	Meter Service Provider ID	CHAR	4	Unique ID
68	SSN/EIN	CHAR	9	
69	DL State/Number	CHAR	14	SSNNNNNNNNNNN where SS = State N…N = Number
70	Second Party's Name	CHAR	30	
71	Second Party's SSN	CHAR	9	
72	Second Party's DL State/Number	CHAR	14	SSNNNNNNNNNNN where SS = State N…N = Number
73	Sender ID	CHAR	4	Unique ID
74	Receiver ID	CHAR	4	Unique ID
75	Pending ESP ID	CHAR	4	Unique ID

Required Characteristics of Communication Methods for the Interface

SCE will receive EDI transmissions through Value Added Network (VAN). Internet transmission of EDI data may be supported in the future, but not for 11/1/97.

Required Characteristics of Protocols for the Interface

SCE will support the following protocols:

1) Delivery of files of comma-delimited records using the field (in order) as shown above, or
2) EDI-X.12(3070) "814 –General Request, Response, or Confirmation". The consensus EDI 814 Implementation Guide appears in Appendix A and is incorporated here by reference,

Other Required Characteristics for the Interface

EDI Trading Partner Agreement.

Direct Access Service Request (DASR) RSIF Field Usage

No.	Data Element Name	DASR	Default (If blank)	ACK	SP-NAK	SP-ACK
1	Record Type	R		I/C	I/C	I/C
2	Record Version	O	"19971101 "	I/D/C	I/D/C	I/D/C
3	Sender Identifier	R		C	C	C
4	Sender Customer Identifier	O		C	C	C
5	Receiver Identifier	O	"006908818 "	C	C	C
6	Receiver Customer Identifier	R		C	C	C
7	Time Stamp	O		C	C	C
8	Record ID	O		I	I	I
9	Operation Type	O	"SP-REQ "	C	C	C
10	Service Relationship Count	O		B	B	B
11	Type of Service Relationship	O		B	B	B
12	Reason	R		I	I	I
13	Comment	E		C	C	C
14	UDC Account Number for ESP	E		B	B	B
15	Effective Start Date	E		B	B	B
16	Effective End Date	E		B	B	C/B
17	Account Status	O	"NEW "	C	C	C
18	Pending Status	E		B	B	B
19	Pending ESP DUNS	R		I	I	I
20	Reading Estimation Method	O	"NONE "	I	I/D	I/D
21	Commodity	O	"E "	I/D/C	I/D/C	I/D/C
22	Customer Name	R		I	I	I
23	Contact Last Name	0		I	I	I
24	Contact First Name	O		I	I	I
25	Contact Middle Initial	O		I	I	I
26	House/Building Number	R		I	I	I
27	House/Building Fraction Number	O		I	I	I
28	Street Prefix Code	O		I	I	I
29	Street Name	R		I	I	I
30	Street Suffix Code	O		I	I	I
31	Unit Number	O		I	I	I
32	City	R		I	I	I
33	State	O	"CA "	I	I/D	I/D
34	Country	O	"USA "	I	I/D	I/D
35	ZIP	O		I	I	I
36	ZIP Extension 4	O		I	I	I
37	ZIP Extension 2	O		I	I	I
38	Standard Time Zone	O		B	B	B
39	Daylight Time Zone	O		B	B	B
40	Distribution Loss Designator	O		B	B	B
41	Meter Congestion Zone	O		B	B	B
42	Usage Profile	E		B	B	C
43	Billing Options	R		I	I	I
44	UDC Rate Name	O		B	B	C

No.	Data Element Name	DASR	Default (If blank)	ACK	SP-NAK	SP-ACK
45	SP Rate Name	O		B	B	B
46	Phone International Access Number	O		B	B	B
47	Phone Area Code	O		I	I	I
48	Phone Number	O		I	I	I
49	Phone Extension	O		I	I	I
50	FAX Number	O		I	I	I
51	Renewable Energy Provider	O	"N "	I	I/D	I/D
52	Meter Count	E		B	B	B
53	Meter ID	E		B	B	B
54	ESP Registration Number	O		I	I	I
55	ESP Renewable Certification ID	O		I	I	I
56	Metering Service Option	O		I	I	I
57	Customer Acknowledgment of CTC Obtained	O	"N "	I	I/D	I/D
58	IVA Required	O	"N "	I	I/D	I/D
59	IVA Obtained	O		I	I/D	I/D
60	Life Support Required	O	"N "	I	I/D	I/D
61	Meter Owner	O	"U "	I	I/D/R	I/D/R
62	Meter Owner DUNS	O	006908818	I	I/D/R	I/D/R
63	Meter Owner ID	O	"SCE "	I	I/D/R	I/D/R
64	MDMA DUNS	O	006908818	I	I/D/R	I/D/R
65	MDMA ID	O	"SCE "	I	I/D/R	I/D/R
66	Meter Service Provider DUNS	O	006908818	I	I/D/R	I/D/R
67	Meter Service Provider ID	O	"SCE "	I	I	I
68	SSN/EIN	O		I	I	I
69	DL State/Number	O		I	I	I
70	Second Party's Name	O		I	I	I
71	Second Party's SSN	O		I	I	I
72	Second Party's DL State/Number	O		I	I	I
73	Sender ID	O		C	C	C
74	Receiver ID	O	"SCE "	C	C	C
75	Pending ESP ID	O		I	I/C	I/C

Legend

R	Required
O	Optional
E	Edison Use Only
I	Echoes information sent by ESP
B	Left blank
C	Replaces information sent by ESP with new/correct information
D	Defaults to a pre-selected value

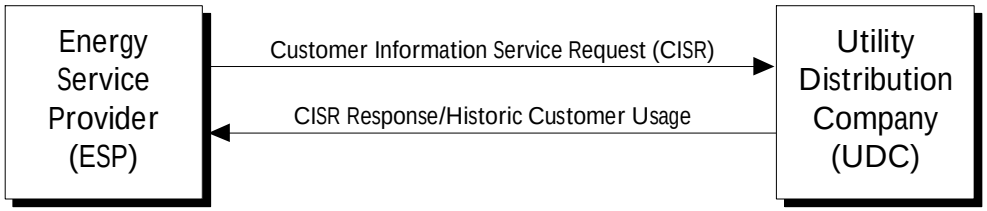
NOTE 1

The above record format is used for a number of communications. The following table describes the two fields that defines the requested usage of the record.

[Field] OPERATION TYPE	[Field] REASON	Purpose of Record
SP-REQ	CONNECT	Setup/Switch Request
SP-REQ	DISCONNECT	Terminates ESP Relationship (Return to UDC)
SP-ACK	CONNECT	Confirmation Notification
SP-NAK	(none)	Reject DASR
MD-NAK	(none)	Reject Meter Data Request
BD-NAK	(none)	Reject Billing Data Request
SVC	CONNECT	Confirm Actual Switch
ACK	CONNECT, CANCEL, DISCONNECT, UPDATE	Acknowledge Request
ACNT-REQ	RESEND	DASR Customer Request
MD-REQ	RESEND	Meter Data Request
BD-REQ	RESEND	Billing Data Request
ACNT-RESP	RESEND	Reply to Customer Data Request
MD-ACK	RESEND	Acknowledge Meter Data Request
BD-ACK	RESEND	Acknowledge Billing Data Request
SVC	DISCONNECT	Shutoff Notice
SP-REQ	UPDATE	Account Maintenance
BILL-ADDRESS	UPDATE	Notification of new bill address
SP-REQ	CANCEL	Cancels CONNECT, DISCONNECT, UPDATE

4.D.2. Third Party Release of Information Historic Customer Usage

This interface allows the requesting and release of, on customer authorization, confidential customer information. metering information, and 1 year ŝ worth of historic usage.



Customer Information Service Request (CISR) [paper]

Data Element Name	Notes	Required/Optional
Customer Name		Required
Contact Name		Required
Contact Phone		Required
Mailing Address		Required
Authorized Party Name		Required
Authorized Party ŝ Address		Required
Authorized Party ŝ Contact Name		Required
Authorized Party ŝ Phone		Required
Type of Release	O –One time release Y –One year release	Required
Effective Date		Required
Requested Response Medium	P - Paper E - Email D - Diskette X - EDI	Required
EMAIL Address		Optional
Requested Account Information	Repeats 1-n times	Required
Customer Account Number		Required
Service Account Number		Required
Service Address		Required

CISR Response (For each account requested)
Historic Customer Usage

CISR Response
Historic Customer Usage

No.	Data Element Name	Type	Size	Notes	Required/Optional
1	Message Preamble	Group		see Appendix A	Required
2	Customer Name	CHAR	30		Required
3	Service Account Number	CHAR	9		Required
4	Service Address	Group		Standard Address - see Appendix B	Required
5	Billing Address	Group		Standard Address - see Appendix B	Required
6	Meter Read Cycle	CHAR	2		Required
7	Rate Schedule	CHAR	12		Required
8	SIC Code	CHAR	4		Optional
9	Service Voltage	CHAR	3		Required
10	Load Profile ID	CHAR	8	If applicable	Optional
11	Usage Data	Group		1 –12 months (>12 occurrences to handle season changes)	Required
11.1	Read date	DATE			Required
11.2	Billing cycle	CHAR	4	YYMM	Required
11.3	Num. of days in billing cycle	INTEGER	3		Required
11.4	Billing Season	CHAR	1	S –summer W –winter	Required, if rate supports
11.5	Usage Element	Group		1 –n occurrences depending on type of usage information tracked	Required
11.5.1	Commodity	CHAR	1	E –Electricity G –Gas W –Water S –Steam	Required
11.5.2	Unit of measure	CHAR	8	e.g., KW, KWH, THERM, HCF, KVAR	Required
11.5.3	Value	DECIMAL	15	Value in above units 999999999.99999	Required
11.5.4	Peak Period (if applicable)	CHAR	4	ON –on-peak OFF –off-peak MID –mid-peak SOFF –super off-peak	Required, if rate supports
12	Interval Data (not for release on CISR and on DASR Processing Confirmation only if requested on DASR)	Group		1 –n occurrences	Optional
12.1	Interval Date/Time	DATETIME	12	YYYYMMDDHHMM	Required, if interval data requested
12.2	Interval Length	INTEGER	3	Number of seconds in interval	Required, if interval data requested

12.3	Usage Element	Group		1 –n occurrences depending on type of usage information tracked	Required, if interval data requested
12.3.1	Commodity	CHAR	1	E –Electricity G –Gas W –Water S –Steam	Required, if interval data requested
12.3.2	Unit of measure	CHAR	8	e.g., KW, KWH, THERM, HCF, KVAR	Required, if interval data requested
12.3.3	Value	DECIMAL	15	Value in above units 999999999.99999	Required, if interval data requested
12.3.4	Peak Period (if applicable)	CHAR	4	ON –on-peak OFF –off-peak MID –mid-peak SOFF –super off-peak	Required, if interval data requested
13	Meter Information	Group			Required
13.1	Meter Number	CHAR	12		Required
13.2	Meter Serial Number	CHAR	12		Required
13.3	Meter Make	CHAR	6		Required
13.4	Meter Model	CHAR	12		Required
13.5	PT Ratio	DECIMAL	11	+99999.9999	Required
13.6	CT Ratio	DECIMAL	11	+99999.9999	Required
13.7	Voltage Code	CHAR	3		Required
13.8	Billing Constant	DECIMAL	11	+99999.9999	Required

Required Characteristics of Communication Methods for the Interface

Not available at this time as an automated service.

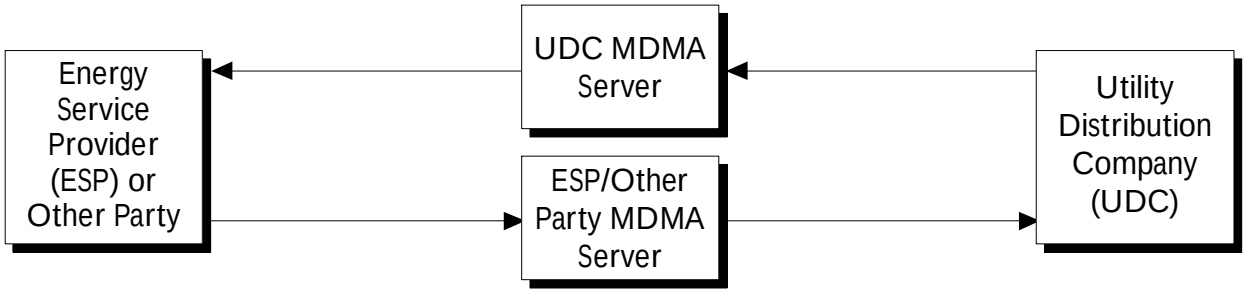
Required Characteristics of Protocols for the Interface

The method for the transmission can be a standard file transmission method, or, preferably, EDI. We feel the X.12(3070) "867 - Product Transfer and Resale Report " transaction is appropriate.

Other Required Characteristics for the Interface

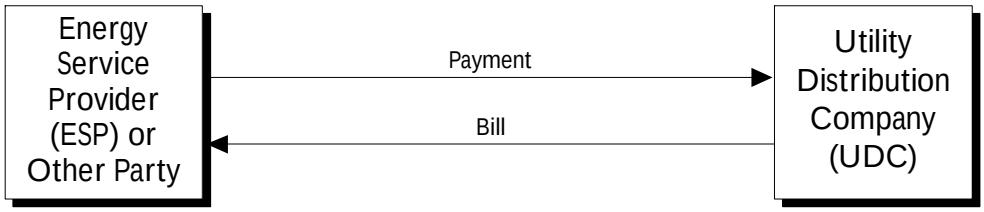
Not available at this time.

4.D.3. MDMA Usage/Meter Reads



This interface is fully described in the MDCS Workshop Report which is incorporated here by reference.

4.D.4. Billing and Payment



All existing methods for bill presentation are available:

1) EDI (810)
2) Paper
3) Diskette.

All existing methods for paying bills are available:

1) EDI (820)
2) EFT
3) Automatic Debit
4) Cash/Check.

Required Characteristics of Communication Methods for the Interface

None. If EDI ,use of VAN.

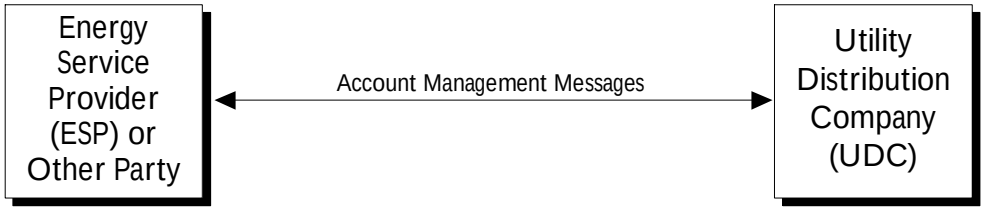
Required Characteristics of Protocols for the Interface

None. If EDI, ANSI X12-810 (3070) Invoices, ANSI X12-820 (3070) Remittance Advice. See SCE Implementation Guide for current requirements.

Other Required Characteristics for the Interface

None. If EDI, trading partner agreement.

4.D.5. Account Maintenance



This interface provides messaging for mutual exchange of data related to a specific customer's service account.

The vehicle for this data interface is described in format D.1 (Direct Access Service Request) DASR. Please refer to that format using OPERATION_TYPE of "SP-REQ" and a REASON of "UPDATE".

Required Characteristics of Communication

An e-mail will be sent to the ESP notifying them of any Customer Account Maintenance changes. This notification of Account Maintenance changes could include any, some, or all of the following: service account number; name; mailing address; phone number; fax number; e-mail address; rate change; meter access change; and any authorized persons added on account.

ESPs should notify SCE's ESP Support Center of any Account Maintenance changes via e-mail or by phone. The e-mail address is esp_support@sce.com and the phone number is 1-800-795-6723. This notification of Account Maintenance changes could include any, some, or all of the following: service account number; name; mailing address; phone number; fax number; e-mail address; rate change; meter access change; and any authorized persons added on account.

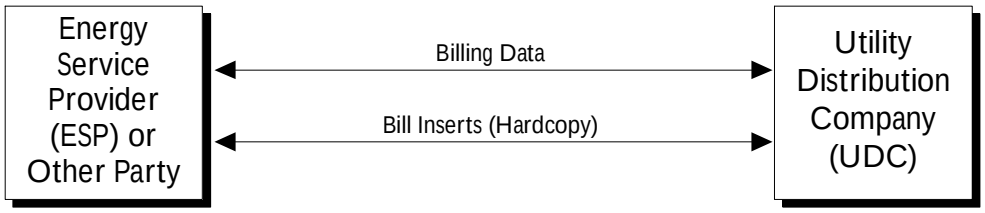
Required Characteristics of Protocols

Not available at this time.

Other Required Characteristics

Not available at this time.

4.D.6. Consolidated Billing Data Interchange



This interface provides the exchange of consolidated billing data with SCE.

Consolidated Billing Data Interchange (SCE Format)

No.	Data Element Name	Type	Size	Use*	Notes
1	Record Type	CHAR	7	R	'MEPBD01 "
2	Record Version	DATE	8	R	YYYYMMDD
3	Sender DUNS	CHAR	9	R	DUNS Number of sender
4	Sender Ticker	CHAR	4	O	Ticker of sender
5	Sender Customer Identifier	CHAR	20	O	Customer Account Number @ sender
6	Receiver DUNS	CHAR	9	R	DUNS Number of receiver
7	Receiver Ticker	CHAR	4	O	Ticker of receiver
8	Receiver Customer Identifier	CHAR	20	R	Customer Account Number @ receiver
9	Timestamp	DATETIME	12	R	YYYYMMDDHHMM
10	Record ID	CHAR	22	R	Unique ID for this record
11	Purpose	CHAR	12	R	Valid entries are: 'OK " Future valid entries will be: 'RESEND ", "CORRECTION ", "ADJUSTMENT ", 'PAYMENT ", 'UNCOLLECTABLE "
12	Comment	CHAR	64	O	
13	Bill Period Start Date	DATE	8	R	YYYYMMDD
14	Bill Period End Date	DATE	8	R	YYYYMMDD
15	Bill Period Meter Start Date	DATE	8	O	YYYYMMDD
16	Bill Period Meter End Date	DATE	8	O	YYYYMMDD
17	Meter ID	CHAR	12	N	
18	Old Meter ID	CHAR	12	N	
19	Bill Total	DECIMAL	13	R	+999999999.99 total for this bill not including previous balance
20	Previous Balance	DECIMAL	13	O	+999999999.99
21	Usage Count	INTEGER	1	N	SCE not used
22	Usage Pair	CHAR	N/A	N	SCE not used

23	Component Count	INTEGER	2	R	Count of the items in the following field.
24	Components	CHAR	N/A	R	Sets of three fields: 1) protocol text (s/a charge type) maximum length = **8 characters**, **Valid values: (all caps)** **SPENERGY** --- Energy Charge **SPCITYTX** --- City Tax **SPOTHER** ---- Other Charge 2) arbitrary text maximum length 22 characters [no imbedded commas], used to describe line item charge 3) amount maximum is +999999999.99 The number of sets needs to match the count contained in the above field.
25	Message Line Count	INTEGER	2	O	Count of messages in the field below
26	Message Line	CHAR	N/A	O	Set of message lines. Number of lines not to exceed 8 and count of lines must match count contained in above field.

Required Characteristics of Communication Methods for the Interface

Not available at this time.

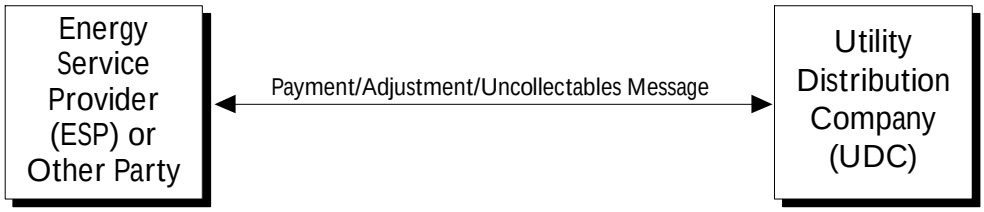
Required Characteristics of Protocols for the Interface

Not available at this time.

Other Required Characteristics for the Interface

Not available at this time.

4.D.7. Payments/Adjustments/Uncollectables



Payments/Adjustments/Uncollectables (RSIF)

No.	Data Element Name	Type	Size	Notes
1	Record Type	CHAR	8	"MEPBD02 " Describes the data record sent.
2	Record Version	CHAR	8	YYYYMMDD Describes the version of the data record sent.
3	Sender Identification	CHAR or INTEGER	4 or 9	Unique market Participant ID for Sender (CHAR = Unique ID or INTEGER = DUNS)
4	Receiver Identification	CHAR or INTEGER	4 or 9	Unique market Participant ID for Receiver (CHAR = Unique ID or INTEGER = DUNS)
5	Record ID	CHAR	20	Transaction identifier. Contents returned unchanged in corresponding response record.
6	Purpose	CHAR	8	
7	Timestamp	CHAR	12	YYYYMMDDHHMM
8	Comment	CHAR	256	
9	Service Account	CHAR	20	
10	ESP ID	CHAR or INTEGER	4 or 9	ID for ESP
11	ESP Customer ID	CHAR	20	ESP's Customer Account Number for this customer
12	Bill Period Start Date	DATE	8	YYYYMMDD
13	Bill Period End Date	DATE	8	YYYYMMDD
14	Transaction Date	DATE	8	YYYYMMDD
15	Transaction Type	CHAR	8	PAYMENT - payment ADJUST - adjustment UNCOLL - uncollectable
16	Transaction Sequence Number	INTEGER	5	
17	Amount	DECIMAL	13	+999999999.99
18	Reason Code	CHAR	1	Reason code for adjustments.

Required Characteristics of Communication Methods for the Interface

Not available at this time.

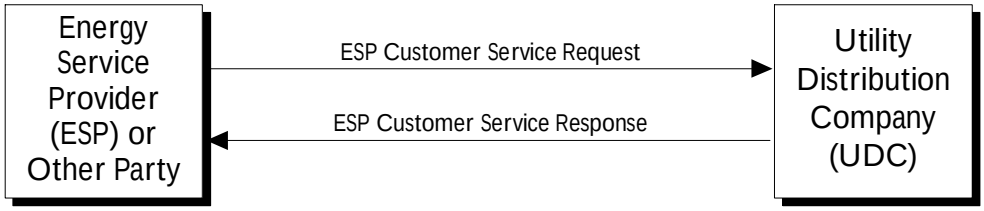
Required Characteristics of Protocols for the Interface

Not available at this time.

Other Required Characteristics for the Interface

Not available at this time.

4.D.8. ESP Help Desk Interactions



This interface is a Customer Service function with a different set of interactions specific to an ESP—UDC relationship.

Required Characteristics of Communication Methods for the Interface

None.

Required Characteristics of Protocols for the Interface

None.

Other Required Characteristics for the Interface

None.

4.D.9. Compliance Testing

Compliance testing is required before implementation. The UDC will publish a test plan, test procedures, test scripts, sample valid and invalid test data, and defect reporting/tracking procedures after final publication of this interface specification.

Required Characteristics of Communication Methods for the Interface

None.

Required Characteristics of Protocols for the Interface

None.

Other Required Characteristics for the Interface

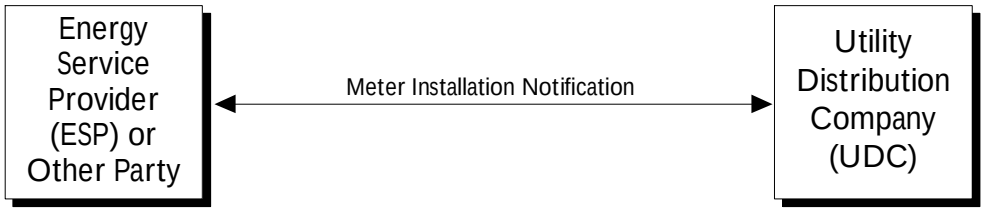
None.

References

See Appendix C of MDCS Report.

4.D.10. Meter Installation Notification

Upon the installation of a metering device, the installing party will notify the other parties in interest of the technical specifications of the metering device installed.



STILL UNDER DEVELOPMENT

No.	Data Element Name	Type	Size	Notes	Required/ Optional
1	Message Preamble	Group			Required
2	Meter Access Information	CHAR	100		Required
3	Service Account Number	CHAR	9		Required
4	Service Address	Group		see Standard Address - Appendix B	Required
5	Panel Size				
6	Main Switch Capacity				
7	Meter Type ID			if applicable	
8	Manufacturer Serial Number				
9	Meter Owner	CHAR	4		
10	Install Service Number				
11	Meter Set Date	DATE	8	YYYYMMDD	
12	Meter Multiplier				
13	Service Voltage				
14	Service Phase				
15	CT Ratio				
16	CT Quantity				
17	VT Ratio				
18	VT Quantity				
19	Meter Type	CHAR	4	KWH - KWH KVAR - KVAR D - Demand IDR - Interval Data Recorder TOU - Time of Use G - GAS W - Water G/W - Gas/Water	
20	Pulse Interval	INTEGER	3	1,5,15,30,50 if applicable	

21	Pulse Multiplier	INTEGER		if applicable	
22	Number of Channels	INTEGER	2	if applicable	
23	Read Method Code	CHAR	1	O - Optical M - Manual R - Radio	
24	Program ID (if optical meter)				
25	Meter KH Value				
26	Number of Dials	INTEGER	1		
27	Number of Decimal Dials	INTEGER	1		
28	Number of Demand Dials	INTEGER	1	if KW meter	
29	Number of Demand Decimal Dials	INTEGER	1	if KW meter	
30	Wire Configuration	CHAR	1	O - Overhead U - Underground	
31	Dog Quantity	Integer	2		

Required Characteristics of Communication Methods for the Interface

N/A.

Required Characteristics of Protocols for the Interface

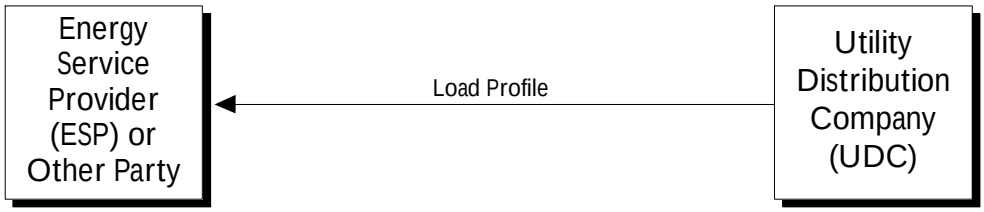
N/A.

Other Required Characteristics for the Interface

N/A.

4.D.11. Load Profile Notification

Each day a load profile for each of the identified rate classes will be available.



Load Profile Notification

No.	Data Element Name	Type	Size	Notes	Required/ Optional
1	Message Preamble			see Appendix A	Required
2	*Load Profile ID*	CHAR	8	Rate class	Required
3	*Profile Date*	DATE		YYYYMMDD	Required
4	Hour 1 Value kWh	DECIMAL	11	999999.999	Required
5	Hour 2 Value kWh	DECIMAL	11	999999.999	Required
6	Hour 3 Value kWh	DECIMAL	11	999999.999	Required
7	Hour 4 Value kWh	DECIMAL	11	999999.999	Required
8	Hour 5 Value kWh	DECIMAL	11	999999.999	Required
9	Hour 6 Value kWh	DECIMAL	11	999999.999	Required
10	Hour 7 Value kWh	DECIMAL	11	999999.999	Required
11	Hour 8 Value kWh	DECIMAL	11	999999.999	Required
12	Hour 9 Value kWh	DECIMAL	11	999999.999	Required
13	Hour 10 Value kWh	DECIMAL	11	999999.999	Required
14	Hour 11 Value kWh	DECIMAL	11	999999.999	Required
15	Hour 12 Value kWh	DECIMAL	11	999999.999	Required
16	Hour 13 Value kWh	DECIMAL	11	999999.999	Required
17	Hour 14 Value kWh	DECIMAL	11	999999.999	Required
18	Hour 15 Value kWh	DECIMAL	11	999999.999	Required
19	Hour 16 Value kWh	DECIMAL	11	999999.999	Required
20	Hour 17 Value kWh	DECIMAL	11	999999.999	Required
21	Hour 18 Value kWh	DECIMAL	11	999999.999	Required
22	Hour 19 Value kWh	DECIMAL	11	999999.999	Required
23	Hour 20 Value kWh	DECIMAL	11	999999.999	Required
24	Hour 21 Value kWh	DECIMAL	11	999999.999	Required
25	Hour 22 Value kWh	DECIMAL	11	999999.999	Required
26	Hour 23 Value kWh	DECIMAL	11	999999.999	Required
27	Hour 24 Value kWh	DECIMAL	11	999999.999	Required

Required Characteristics of Communication Methods for the Interface

N/A.

Required Characteristics of Protocols for the Interface

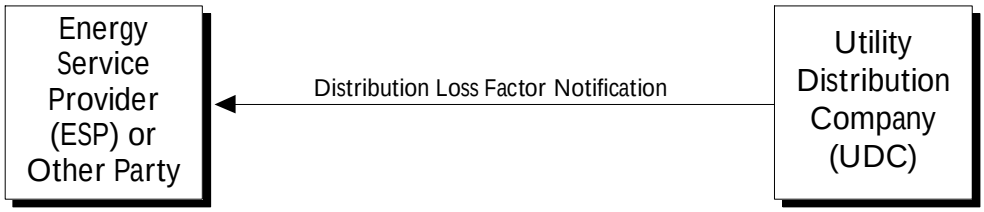
N/A.

Other Required Characteristics for the Interface

N/A.

4.D.12. Distribution Loss Factors Notification

Each day a distribution loss factor notification for each UDC will be available.



Distribution Loss Factor Notification

No.	Data Element Name	Type	Size	Notes	Required/ Optional
1	Message Preamble			see Appendix A	Required
2	UDC ID	CHAR	4		Required
3	UDC DUNS	INTEGER	9		Required
4	Loss Factor Date	DATE	8	YYYYMMDD date of actual or subject date of estimated	Required
5	Record Type	CHAR	1	A = actual F = forecast	Required
6	Hour	INTEGER	2	00-23	Required
7	Subtransmission DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34	Required
8	Primary Voltage DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34	Required
9	Secondary Voltage DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34	Required
10	Distribution Loss Designator	INTEGER	5		Required

Required Characteristics of Communication Methods for the Interface

N/A.

Required Characteristics of Protocols for the Interface

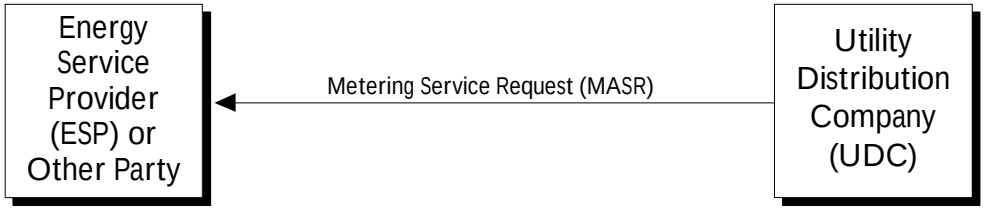
N/A.

Other Required Characteristics for the Interface

N/A.

4.D.13. Metering Service Request (MASR)

Notification of a potential/actual problem with a metering device or related to a metering device.



Metering Service Request (MASR)

No.	Data Element Name	Type	Size	Notes	Required/ Optional
1	Message Preamble			see Appendix A	Required
2	Discovery Date	DATE	8	YYYYMMDD	Required
3	Required Completion Date	DATE	8	YYYYMMDD	Required
4	UDC Account Number	CHAR	9		Required
5	Meter Number	CHAR	1	12	Required
6	Site (Service) Address	Group			Required
7	Party to Complete Repairs	CHAR	4		Required
8	Problem Description Code	CHAR			Required
9	Status of Site/Meter	CHAR			Required

Required Characteristics of Communication Methods for the Interface

N/A.

Required Characteristics of Protocols for the Interface

N/A.

Other Required Characteristics for the Interface

N/A.

Appendices
Appendix A—Message Preamble

This preamble to all messaging appears as a prefix to, and incorporated with, each message. This enables one messaging system with a consistent method of determining the type of message and the expected disposition.

Message Preamble

No.	Data Element Name	Type	Size	Notes
1	Message Type	Group		
1.1	Message Type Prefix	CHAR	5	HIST - Historic Customer Usage METER - Metering PROF- Load Profile see Appendix C
1.2	Message Type Suffix	CHAR	4	see Appendix C
1.3	Message Format Version	INTEGER	2	see Appendix C
2	Message Sent Date	DATE	8	YYYYMMDD
3	Message Sent Time	TIME	6	HHMMSS (UTC)
4	From Entity ID	CHAR	4	see Note 1
5	From Entity DUNS	INTEGER	9	
6	To Entity ID	CHAR	4	see Note 1
7	To Entity DUNS	INTEGER	9	

Appendix B—Standard Address

Standard Address

No.	Data Element Name	Type	Size	Notes	Required/ Optional
1	Address type	CHAR	1	S-standard address N-non-standard address	Required
2	House Number	CHAR	6		Required if "S"
3	House Fraction Number	CHAR	3	e.g., ½	Required if "S"
4	Street Prefix Code	CHAR	2	e.g., N, S, E, W	Required if "S"
5	Street Name	CHAR	25		Required if "S"
6	Street Suffix Code	CHAR	4	e.g., AVE, ST	Required if "S"
7	Unit Number	CHAR	8		Required if "S"
8	Non-standard address	CHAR	40		Required if "N"
9	City Name	CHAR	25		Required
10	State Code	CHAR	2	Use USPS approved codes	Required
11	Zip Code	CHAR	5		Required
12	Zip Code Suffix	CHAR	4		Optional
13	Carrier Route Code	CHAR	4	Use USPS carrier routes	Optional

Appendix C—Message Identification

Message Type Prefix	Message Type Suffix	Message
CISR	RESP	CISR Response
HIST	USE	Historic Use
LOAD	PROF	Load Profile Notification
LOSS	DLF	Distribution Loss Factor Notification
MASR		

Appendix E— Data Element Dictionary

Data Element Name	Type	Size	Notes
Action Code	CHAR	8	Code to describe action to take as a result of this record
Action Required	CHAR	1	Action requested from receiving party by sending party.
Address type	CHAR	1	S-standard address N-non-standard address
Amount	DECIMAL	13	999999999.99
Authorized Party Name			
Authorized Party ŝ Address			
Authorized Party ŝ Contact Name			
Authorized Party ŝ Phone			
Bill Period End Date	DATE	8	YYYYMMDD
Bill Period Meter End Date	DATE	8	YYYYMMDD
Bill Period Meter Start Date	DATE	8	YYYYMMDD
Bill Period Start Date	DATE	8	YYYYMMDD
Bill Total	DECIMAL	13	+999999999.99 total for this bill not including previous balance
Billing Address	Group		use Standard Address - see Appendix B
Billing Constant	DECIMAL	11	99999.9999
Billing cycle	CHAR	4	YYMM
Billing Cycle Date	DATE	8	YYYYMMDD
Billing Cycle Number	INTEGER	2	
Billing Line Item Detail	Group		1 - n occurrences
Billing Season	CHAR	1	S –summerW –winter
Billing Service Option	CHAR	1	E-consolidated ESP U-consolidated UDC D-dual billing
Carrier Route Code	CHAR	4	Use USPS carrier routes
City Name	CHAR	25	
Comment	CHAR	64	
Commodity	CHAR	1	E –Electricity G –Gas W –Water S –Steam
Component Count	INTEGER	3	count of sets in following field
Components	CHAR	max n/a	sets of three fields; fields are: protocol text, arbitrary text, numeric floating point dollar amount) or (charge type, charge text, amount);count based on field above; example:"ELEC-TRANS,,50,ELEC-DIST,,50,ELEC-PPP,,5,ELEC-CTC,,5,OTHER,FIXED TRANSMISSION
Confidential Information Release Obtained	CHAR	1	Y/N
Contact Name	CHAR	30	Person at customer authorizing change
Contact Phone			
CT Quantity			
CT Ratio	DECIMAL	11	99999.9999

Current Read Date	DATE	8	YYYYMMDD
Customer Account	CHAR	9	
Customer Account Balance Owing	DECIMAL	13	999999999.99
Customer Account Number	CHAR	9	
Customer Acknowledgment of CTC Obtained	CHAR	1	Y/N
Customer Name	CHAR	30	
Customer Zip Code	CHAR	5	3 digits for Non-Domestic5 digits for Domestic
DASR Accepted	CHAR	1	Y/N
DASR Receive Date	DATE	8	YYYYMMDDDate DASR received by UDC
DASR Receive Time	DATE	6	HHMMSS (UTC)Time DASR received by UDC
Discovery Date	DATE	8	YYYYMMDD
Distribution Loss Designator	INTEGER	5	
Dog Quantity	Integer	2	
Driver License State/Number	CHAR	14	SSNNNNNNNNNNNN where SS = state code N…N = number
Effective Date	DATE	8	YYYYMMDD
EMAIL Address			
ESP DASR ID	INTEGER	12	Unique ID to this DASR
ESP DUNS	INTEGER	9	DUNS Number for the ESP
ESP ID	CHAR	4	Unique ID for this market participant
ESP Registration Number	INTEGER	5	As assigned by the CPCU
ESP Renewable Certification ID	CHAR	12	As assigned
ESP Renewable Certified	CHAR	1	Y/N
ESP $ UDC Customer Account for this Account	INTEGER	20	
Field Number	INTEGER	2	to be described in data dictionary (Appendix E)
Fields/Reason codes for rejection	GROUP		Repeated 10 times
From Entity DUNS	INTEGER	9	Unique ID for this market participant
From Entity ID	CHAR	4	Unique ID for this market participant
Hour	INTEGER	2	00-23
Hour 1 Value kWh	DECIMAL	12	999999999.99
Hour 10 Value kWh	DECIMAL	12	999999999.99
Hour 11 Value kWh	DECIMAL	12	999999999.99
Hour 12 Value kWh	DECIMAL	12	999999999.99
Hour 13 Value kWh	DECIMAL	12	999999999.99
Hour 14 Value kWh	DECIMAL	12	999999999.99
Hour 15 Value kWh	DECIMAL	12	999999999.99
Hour 16 Value kWh	DECIMAL	12	999999999.99
Hour 17 Value kWh	DECIMAL	12	999999999.99
Hour 18 Value kWh	DECIMAL	12	999999999.99
Hour 19 Value kWh	DECIMAL	12	999999999.99
Hour 2 Value kWh	DECIMAL	12	999999999.99
Hour 20 Value kWh	DECIMAL	12	999999999.99
Hour 21 Value kWh	DECIMAL	12	999999999.99
Hour 22 Value kWh	DECIMAL	12	999999999.99

Hour 23 Value kWh	DECIMAL	12	999999999.99
Hour 24 Value kWh	DECIMAL	12	999999999.99
Hour 3 Value kWh	DECIMAL	12	999999999.99
Hour 4 Value kWh	DECIMAL	12	999999999.99
Hour 5 Value kWh	DECIMAL	12	999999999.99
Hour 6 Value kWh	DECIMAL	12	999999999.99
Hour 7 Value kWh	DECIMAL	12	999999999.99
Hour 8 Value kWh	DECIMAL	12	999999999.99
Hour 9 Value kWh	DECIMAL	12	999999999.99
House Fraction Number	CHAR	3	e.g., ½
House Number	CHAR	6	
Install Service Number			
Interval Data (not for release on CISR and on DASR Processing Confirmation only if requested on DASR)	Group		1 –n occurrences
Interval Date/Time	DATETIME	12	YYYYMMDDHHMM
Interval Date/Time	DATETIME	12	YYYYMMDDHHMM
Interval Length	INTEGER	3	Number of seconds in interval
IVA Required	CHAR	1	Y/N
IVA Verification Obtained	CHAR	1	Y/N
Line Item Description	CHAR	20	
Load Profile ID	CHAR	8	Load profile used for billing
Loss Factor Date	DATE	8	YYYYMMDDdate of actual orsubject date of estimated
Mailing Address			
Mailing Address (see Standard Address Format - Appendix B)	Group		Address mailings are sent to
Main Switch Capacity			
Manufacturer Serial Number			
MDMA DUNS	INTEGER	9	
MDMA ID	CHAR	4	
Message Format Version	INTEGER	2	see Appendix C
Message Preamble			see Appendix A
Message Sent Date	DATE	8	YYYYMMDD
Message Sent Time	TIME	6	HHMMSS (UTC)
Message Type	Group		
Message Type Prefix	CHAR	5	see Appendix C
Message Type Suffix	CHAR	4	see Appendix C
Meter Access Information	CHAR	100	
Meter Congestion Zone	INTEGER	2	ISO distribution congestion zone identifier
Meter ID	CHAR	12	
Meter Information	Group		
Meter KH Value			
Meter Make	CHAR	6	
Meter Model	CHAR	12	

Meter Multiplier			
Meter Number	CHAR	12	
Meter Owner	CHAR	4	
Meter Provider DUNS	INTEGER	9	
Meter Provider ID	CHAR	4	
Meter Read Cycle	CHAR	2	
Meter Serial Number	CHAR	12	
Meter Set Date	DATE	8	YYYYMMDD
Meter Type	CHAR	4	KWH - KWHKVAR - KVARD - DemandIDR - Interval Data RecorderTOU - Time of UseG - GASW - WaterG/W - Gas/Water
Meter Type ID			if applicable
Metering Service Option	CHAR	1	P –load profileH –hourly meter
Non-standard address	CHAR	40	
Num. of days in billing cycle	INTEGER	3	
Number of Channels	INTEGER	2	if applicable
Number of Decimal Dials	INTEGER	1	
Number of Demand Decimal Dials	INTEGER	1	if KW meter
Number of Demand Dials	INTEGER	1	if KW meter
Number of Dials	INTEGER	1	
Panel Size			
Party to Complete Repairs	CHAR	4	
Peak Period	CHAR	4	ON –on-peakOFF –off-peakMID –mid-peakSOFF –super off-peak
Phone Number	CHAR	19	AAAABBBCCCDDDDEEEEE whereAAAA=international access codeBBB=area codeCCC=exchangeDDDD=numberEEEEE=extensionLeft justified
Phone Type	CHAR	1	V-VoiceF-Fax
Previous Balance	DECIMAL	13	999999999.99
Previous Read Date	DATE	8	YYYYMMDD
Primary Voltage DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34
Problem Description Code	CHAR		
Profile Date	DATE		YYYYMMDD
Program ID (if optical meter)			
PT Ratio	DECIMAL	11	99999.9999
Pulse Interval	INTEGER	3	1,5,15,30,50if applicable
Pulse Multiplier	INTEGER		if applicable
Purpose	CHAR	12	Valid entries are: "OK", "RESEND", "CORRECTION", "ADJUSTMENT", "PAYMENT", "UNCOLLECTABLE"
Rate Category	CHAR	1	D - DomesticN - Non-Domestic
Rate Schedule	CHAR	12	
Read date	DATE		
Read Method Code	CHAR	1	O - OpticalM - ManualR - Radio

Reason Code	CHAR	1	
Reason for Rejection	CHAR	4	to be described in Appendix C
Receiver Customer Identifier	CHAR	20	Customer Account Number @ receiver
Receiver Identifier	CHAR	4	Unique ID for mkt. participant
Record ID	INTEGER	16	Unique ID for this record
Record Type	CHAR	7	MEPBD01
Record Type	CHAR	1	A = actualF = forecast
Record Version	DATE	8	YYYYMMDD
Requested Account Information			
Requested DASR Effective Date	DATE	8	YYYYMMDD
Requested Response Medium			
Required Completion Date	DATE	8	YYYYMMDD
Scheduled Meter Installation Date	DATE	8	YYYYMMDD
Season	CHAR	1	S –summerW –winter
Second Party's Driver License State/Number	CHAR	14	SSNNNNNNNNNNNNwhere SS = state codeN... N = number
Second Party's Name	CHAR	30	
Second Party's SSN	CHAR	9	
Secondary Voltage DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34
Sender Customer Identifier	CHAR	20	Customer Account Number @ sender
Sender Identifier	CHAR	4	Unique ID for mkt. participant
Service Account	CHAR	9	
Service Account Billing Information	Group		1 - n occurrences
Service Account Number	CHAR	9	
Service Account Status	CHAR	1	M = Meter RequiredP = Pending-New ServiceD = DisconnectedN = New Service
Service Address	Group		Standard Address - see Appendix B
Service Phase			
Service Voltage	CHAR	3	
SIC Code	CHAR	4	
SIC Code	CHAR	2	For Non-Domestics only2 high-order digits of SIC
Site (Service) Address	Group		
SSN/EIN	CHAR	9	Social Security Number or Tax ID
State Code	CHAR	2	Use USPS approved codes
Status of Site/Meter	CHAR		
Street Name	CHAR	25	
Street Prefix Code	CHAR	2	e.g., N, S, E, W
Street Suffix Code	CHAR	4	e.g., AVE, ST
Subtransmission DLF	DECIMAL	6	999.99 percentage with 5.34% shown as 005.34
Supplier Customer Account	CHAR	20	
Timestamp	DATETIME	12	YYYYMMDDHHMM
To Entity DUNS	INTEGER	9	
To Entity ID	CHAR	4	see Note 1
Transaction Amount	DECIMAL	13	1000000000
Transaction Date	DATE	8	YYYYMMDD
Transaction Sequence Number	INTEGER	5	

Transaction Type	CHAR	8	
Type of Release			
UDC Account Number	CHAR	20	9 or 13 digits for SCE
UDC DUNS	INTEGER	9	
UDC ID	CHAR	4	
Unit Number	CHAR	8	
Unit of measure	CHAR	8	e.g., KW, KWH, THERM, HCF, KVAR
Usage Count	INTEGER	1	count of sets in field below; maximum value = 4
Usage Data	Group		1 –12 months (>12 occurrences to handle season changes)
Usage Element	Group		1 –n occurrences depending on type of usage information tracked
Usage Pair	CHAR	max n/a	data pair occurs based on usage count aboveexample:"KWH,50,THERMS,50" with a usage count of 2
Value	DECIMAL	15	Value in above units999999999.99999
Voltage Code	CHAR	3	
VT Quantity			
VT Ratio			
Wire Configuration	CHAR	1	O - OverheadU - Underground
Zip Code	CHAR	5	
Zip Code Suffix	CHAR	4	

Appendix F—Notes

1. We propose a standard Entity ID. This would be a standard four (4) character ID much like the standard ticker symbols, airline codes, airport codes, etc. We propose that it be created, maintained, and published by a third party.

From
SDG&E's Manual

ELECTRONIC DATA INTERCHANGE DATA TRANSFER

This section provides a detailed model to establish the electronic exchange of information for DASRs and billing information between SDG&E and the ESP. EDI is the preferred method to exchange DASR information and the required method for billing information.

SDG&E will provide ESPs with all required information and forms needed to implement EDI transactions with SDG&E. (See Appendices section for SDG&E EDI Package or the SDG&E Web site **http://www.sdge.com/EIC/html/especially_for_esp_s.htm**) Questions should be directed to SDG&E's ESP EDI Coordinator at (619) 654-8368.

After an ESP has completed and returned the *Letter of Intent* and *ESP Trading Partner Information* forms from the EDI package to ESP Administration, an SDG&E EDI coordinator will contact the ESP to begin the process of establishing EDI transactions.

Contents of the SDG&E EDI Package for ESPs

A. **Letter of Intent to Exchange Data Utilizing EDI**
This letter formalizes that both parties intend to establish EDI based data transactions.

B. **SDG&E - ESP Trading Partner Information**
This form provides the basic technical information needed to ensure that the ESP's EDI information is sent and received correctly. This form should be completed and returned to SDG&E via fax at the number listed at the top of the form.

C. **SDG&E Trading Partner Information**
This sheet provides the basic technical information about SDG&E's EDI system and should be forwarded to the ESP's technical staff.

D. **EDI Bank Information Form**
This form provides routing information SDG&E needs in order to process the ESP's financial EDI transactions. The ESP should complete this form and return it to SDG&E at the address on the form. It also contains information about SDG&E's bank. A copy of this form should also be forwarded to the ESP's technical staff.

E. **EDI Trading Partner Agreement with SDG&E (ESP Consolidated Billing)**
This is the formal agreement for EDI transactions between the ESP and SDG&E. The ESP should review and complete this form, keep a copy for its records and send the original to:

EDI Service
SDG&E
8316 Century Park Court
San Diego, CA 92123

F. **Transaction Set Implementation 814 Guide**
This guide has all the technical information for mapping DASRs to the standard EDI format. This document should be forwarded to the ESP's technical staff.

G. **Transaction Set Implementation 810 & 820 Guides**
These guides have all the technical information on mapping invoices and payments to the standard EDI format. These documents should be forwarded to the ESP's technical staff.

EDI DATA Protocol

Information transmitted using EDI format must conform to the rules established under the American Standards Institute (ANSI), commonly referred to as ANSI X12.

EDI Implementation

Key EDI Contacts
EDI Product Manager:
Name: Andrew Sickels Phone: (619) 654-1253 Fax: (619) 654-1117
E-mail: asickels@sdge.com

DASR Contact:
Name: Michael Gunzelman Phone: (619) 654-1177 Fax: (619) 654-1794
E-mail: mgunzelm@sdge.com

Billing/Payment Contact:
Name: Anji Landymore Phone: (619) 654-8368 Fax: (619) 654-8393

E-mail: alandymo@sdge.com

System Support Contact:
Name: Hector Montes Phone: (619) 654-1138 Fax: (619) 654-1175
E-mail: hmontes@sdge.com

SDG&E Telecommunication Information
Envelope Qualifier: Production: 01
Envelope ID (ISA): Production: 006911457
Group ID (GS): Production: 006911457
VAN Name: HARBINGER

SDG&E Bank Information
Bank Name: MELLON BANK
Bank Account Number: Available on contract signing
Bank ABA Routing Transit Number: Available on contract signing
NACHA Standard Entry Class Code: CTX
VAN Name: HARBINGER

ANSI X.12 Transaction Set Capability

Outbound	814 (DASR)	Version 3070
Inbound 814 (DASR)		Version 3070
Outbound	810 (Invoice)	Version 3030
Inbound 810 (Invoice)		Version 3030
Outbound	820 (Pay Order)	Version 3030
Inbound 820 (Remittance Advice)		Version 3030

ESP Testing of EDI Transmission and Data

Test accounts for the ESP must be established and tested to ensure that the EDI communication is correctly configured. ESPs offering consolidated billing must complete compliance testing 3 days prior to the scheduled switch date.

Set Up Procedures

Transaction Set 814 - Dual Billing Option

The default billing option for DA customers will be Dual Billing. ESPs who offer this option will have the option of sending and receiving customer enrollment information electronically using the EDI 814 Transaction Set.

This procedure establishes Transaction Set 814 to exchange DASR enrollment information.

Step	Initiated By	Action
1.	ESP	Designates Dual Billing Option
2.	SDG&E ESP Admin	Provides ESP: • SDG&E 814 In-bound and Out-bound Implementation Guides • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI
3.	ESP	Completes and returns to SDG&E: • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI
4.	SDG&E ESP/EDI Coordinator	• Sends ESP the Ambassador Kit • Sends ESP the SDG&E Contact List
5.	ESP	• Completes the Ambassador Kit • Contacts SDG&E to begin testing
6.	SDG&E System Support	Coordinates testing with ESP
7.	SDG&E ESP/EDI Coordinator	Notifies ESP to start In-bound 814
8.	ESP	Initiates In-bound 814 transactions
9.	SDG&E	Initiates Out-bound 814 transactions
10.	SDG&E ESP/EDI Coordinator	Verifies receipt of 997

Transaction Set 810 and 820 - SDG&E Consolidated Billing Option

ESPs can offer customers SDG&E Consolidated Billing. In addition to enrollment information, ESPs who offer this option will send their ESP charges to SDG&E for billing using EDI Transaction Set 810 Invoice. SDG&E will send payments collected, from customers, to the ESP using EDI Transaction Set 820 Payment Order and Remittance Advice. ESPs offering consolidated billing must complete compliance testing at least 3 business days prior to the scheduled switch date.

This procedure establishes Transaction Set 810 and 820 to exchange customer billing and payment information.

Steps	Initiated By	Action
1.	ESP	Designates UDC Consolidated Billing Option
2.	SDG&E ESP Admin	Provides ESP: • SDG&E 814 In-bound & Out-bound, 810 In-bound, 820 Out-bound Implementation Guides • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI

3.	ESP	Completes and returns to SDG&E: • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI
4.	SDG&E ESP/EDI Coordinator	• Sends ESP the Ambassador Kit • Sends ESP the SDG&E Contact List
5.	ESP	• Completes Ambassador Kit • Contacts SDG&E to begin testing • Sends ESP Trading Partner Agreement & Bank Routing Information
6.	SDG&E System Support	Coordinates testing with ESP
7.	SDG&E ESP/EDI Coordinator	Signs & returns ESP Trading Partner Agreement
8.	SDG&E ESP/EDI Coordinator	Notifies ESP to start In-bound 814
9.	ESP	Initiates In-bound 814 transactions
10.	SDG&E ESP/EDI Coordinator	Initiates Out-bound 814 transactions
11.	SDG&E ESP/EDI Coordinator	Verifies receipt of 997 for out-bound 814
12.	ESP	Initiates In-bound 810 transaction
13.	SDG&E	Initiates Out-bound 820 transaction
14.	SDG&E ESP/EDI Coordinator	Verifies receipt of 997 for Out-bound 820

Transaction Set 810 and 820 - ESP Consolidated Billing Option

The ESP can also offer customers ESP Consolidated Billing. ESPs that offer this billing option will ask that SDG&E send its charges to the ESP for consolidation on the ESP bill. SDG&E charges will be transmitted using Transaction Set 810 *Invoice*. ESP payments will be send using EDI Transaction Set 820 *Payment Order and Remittance Advice*. ESPs offering consolidated billing must complete compliance testing at least 3 business days prior to the scheduled switch date.

This procedure establishes Transaction Set 810 & 820 to exchange customer billing and payment information.

Steps	Initiated By	Action
1.	ESP	Designates ESP Consolidated Billing Option
2.	SDG&E ESP Admin	Provides ESP: • SDG&E 814 In-bound & Out-bound, 810 Out-bound, 820 In-bound Implementation Guides • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI • SDG&E/ESP Trading Partner Agreement
3.	ESP	Completes and returns to SDG&E: • ESP Trading Partner Information form • Letter of Intent to Exchange Data Utilizing EDI
4.	SDG&E ESP/EDI Coordinator	• Sends ESP the Ambassador Kit • Sends ESP the SDG&E Contact List
5.	ESP	• Completes the Ambassador Kit • Contacts SDG&E to begin testing
6.	SDG&E System Support	Coordinates testing with ESP
7.	ESP	Sends signed SDG&E Trading Partner Agreement
8.	SDG&E	Signs SDG&E Trading Partner Agreement
9.	SDG&E ESP/EDI Coordinator	Notifies ESP to start In-bound 814
10.	ESP	Initiates In-bound 814 transactions
11.	SDG&E	Initiates Out-bound 814 transactions
12.	SDG&E ESP/EDI Coordinator	Verifies receipt of 997 for Out-bound 814
13.	SDG&E	Initiates Out-bound 810 transaction
14.	ESP	Initiates In-bound 820 transaction
15.	SDG&E ESP/EDI Coordinator	Verifies receipt of 997 for Out-bound 820

From
PG&E's Manual

Chapter 2

Direct Access Setup

This chapter was last updated on: 2/11/98.

Overview

Prior to offering DA to end-use customers through submission of a Direct Access Service Request (DASR), the ESP must satisfy certain requirements with respect to electronic data exchange and metering. For instance, the ESP must both establish a systems infrastructure which is capable of handling the transmission of information in a format acceptable to PG&E and also have the capability to exchange information with PG&E over the Internet.

Prerequisites

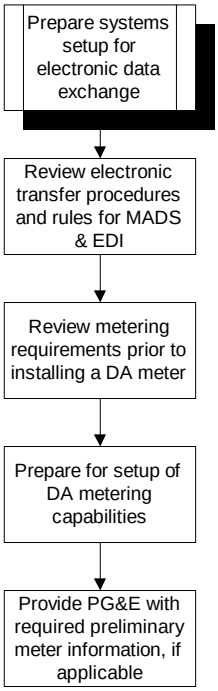
Prior to obtaining proceeding with DA setup, the ESP must fulfill the following:

- Register with the CPUC if it intends to serve Small Customers.
- Complete, execute, and submit the *ESP Service Agreement* and *ESP Credit Application*. (See Chapter 1)
- Complete, execute, and submit the Consolidated Billing Options Worksheet if planning to offer consolidated billing options. Complete, execute, and submit the *EDI Trading Partner Agreement* and *EDI Setup Form* if planning to offer Consolidated ESP billing. If applicable documents are not submitted, PG&E will default billing option selection to Separate billing. (See Chapter 1)
- Obtain credit approval from PG&E if planning to offer Consolidated ESP billing. If credit is not approved, PG&E will default billing option to Separate billing. (See Chapter 1)

Checklist of key steps

#	Step
1.	Prepare systems setup for electronic data exchange
2.	Review electronic transfer procedures and rules as designated by PG&E for DES and EDI (if applicable)
3.	Test the viability and accuracy of data transferred to and from ESP/PG&E
4.	Review metering requirement rules prior to the installation of a DA interval meter
5.	Prepare for setup of DA metering capabilities
6.	Provide PG&E with required preliminary meter information, if applicable

Direct Access Setup Illustrated



Procedures

This section provides a detailed discussion of the process steps outlined within the "***Checklist of Key Steps***."

Electronic data exchange synopsis

Participation in DA will require that ESPs are capable of exchanging service account information electronically with PG&E. Effective 30 days from the CPUC decision date, October 30, 1997, all DA information will be transmitted using the California Metering Exchange Protocol (CMEP). CMEP is a cost effective and easy to use protocol which will allow ESPs to submit administrative DA transactions (i.e. DA setup, DA service termination, meter usage, billing service options, customer service account changes, etc.) to PG&E through the Internet. Similarly, PG&E will also send responses to ESPs (i.e. request confirmations, rejections, etc.) using CMEP protocol standards. Data entry and Internet connectivity will be facilitated by the Data Exchange Service (DES), which ESPs can easily install locally on their systems.
Additionally, the transmission of financial information (i.e. ESP/PG&E charges and payments) will be required via Electronic Data Interchange (EDI) protocol will also be required for ESPs who plan to offer the Consolidated ESP billing option to end-use customers.

1. Prepare systems setup for electronic data exchange

The first step involved with electronic data transfer is to establish a systems environment which can support the processing requirements related to DASRs and Consolidated ESP billing transactions. The following requirements summarized below are further elaborated upon in Sections C and D of Rule 22:

1. An ESP will be required to meet electronic data exchange requirements as specified by PG&E. To commence the process for establishing this requirement, the ESP must contact PG&E.

2. PG&E may allow alternative arrangements to electronic data exchange at its discretion for certain transactions.

3. An ESP must have the capability to exchange data with PG&E via the Internet.

4. The ESP must have the capability to communicate to and from Metering and Data Management Agent (MDMA) servers for the sharing of meter reading and usage data.

5. The ESP must have the capability to perform Electronic Data Interchange (EDI) if it will be offering ESP or UDC Consolidated billing options.

6. To commence the process for establishing EDI, ESP must contact PG&E and shall be required to enter into a trading partner agreement in the form by completing and submitting the *EDI Trading Partner Agreement* to PG&E.

2. Review electronic transfer procedures and rules as designated by PG&E for CMEP and EDI (if applicable).

ESPs who participate in DA with PG&E will need to conform to specific electronic transfer procedures and rules as discussed below.

CMEP DATA TRANSFER SPECIFICS

HOW CMEP IS USED TO EXCHANGE DA INFORMATION

CMEP was developed specifically to transmit gas and electricity utility metering, billing, and administrative information contained within DASRs between ESPs, UDCs, Metering Agents (MA), and Billing Agents (BA). Information which is in CMEP format is transmitted between the ESP and PG&E through DES over the Internet (World Wide Web). All DASRs which the ESP submits through DES are transmitted to a mail server external to PG&E's firewall called the "QUE" and are automatically time stamped upon arrival. The time stamp determines the priority of the DASR. These DASRs are then forwarded in order of priority to a server inside PG&E's firewall called the "QUME", where they are further processed by priority within PG&E's Customer Information System (CIS).
DASRs which PG&E transmits to the ESP are initially placed in the QUME and then forwarded to the QUE, from which the ESP can download or view the DASRs.
The diagram below depicts the information channels used when DASRs are submitted.

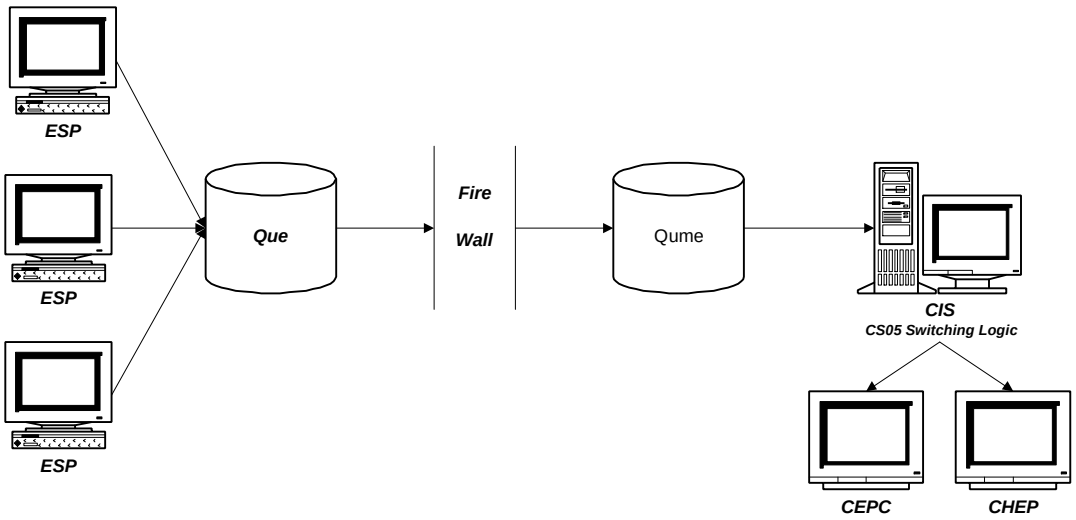


EXHIBIT: DASR SUBMITTAL INFORMATION FLOW CHANNELS

CMEP/DES IMPLEMENTATION

KEY DES CONTACTS

Questions regarding DES protocol or systems implementation requirements related to DES should be directed to:

LYNN MCELHATTON, USER ACCESS CONTROL AND DES ADMINISTRATOR	GARY WESCOM, TECHNICAL SUPPORT
PHONE: (415) 973-8080	PHONE : (805) 595-6348
EMAIL: LDMJ@PGE.COM	EMAIL: GRW1@PGE.COM

DES WEB SITE

ESPs can also consult the DES Internet site at **http://mads.pge.com** for information about using DES to transmit CMEP data. The exhibit below provides an example of the DES index page.

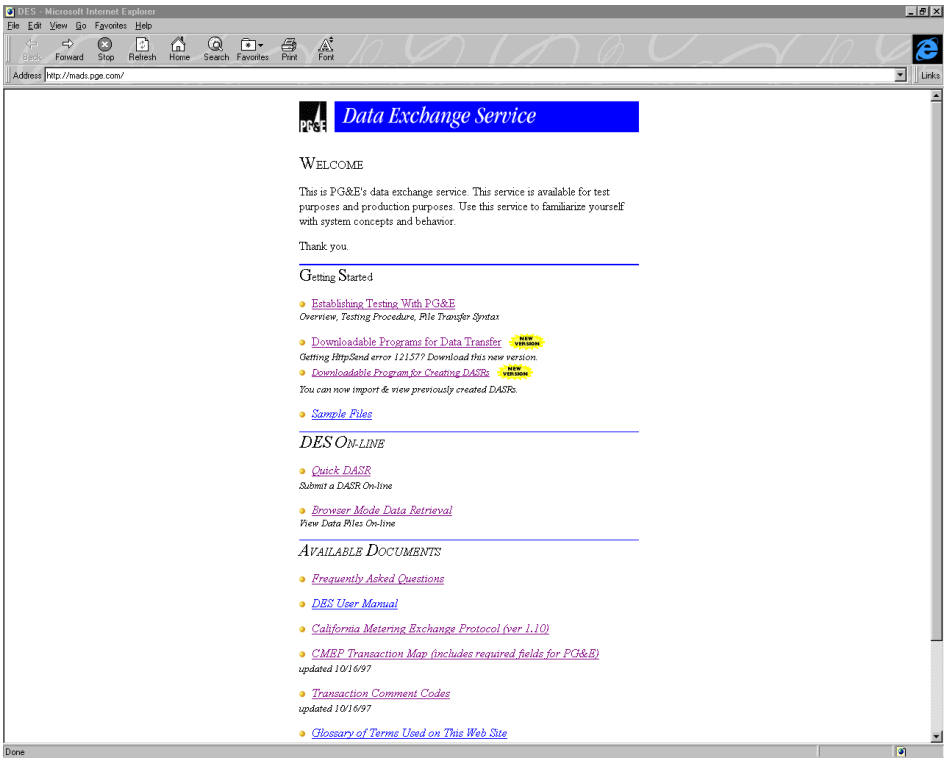


EXHIBIT: DES WEBSITE

The demos provided serve as tutorials for using DES. As indicated, documentation is also available through the site and includes the information topics listed below.

Information Topic	Description
Establishing Testing with PG&E	Provides background and detailed instructions for testing data transfer using DES.
Downloadable Programs for Data Transfer	Contains programs required to conduct data transfer with PG&E.
Downloadable Program for Creating DASRs	Contains an optional program which can be used to facilitate data entry and the creation of DASRs.
Sample Files	Contains a set of files which can be used to test data transfer.
Quick DASR	Allows ESP to create and submit individual DASRs to PG&E without downloading the DASR creation program.
Browser Mode Data Retrieval	Allows the ESP to view downloaded DASR files via an Internet browser.
DES User Manual	Provides instructions on how to use the DES application.
California Metering Exchange Protocol	Provides a CMEP implementation overview and describes on a technical level: • Specific protocol features • Record Types • Header Fields • Protocol Text • Administrative Data Records • Metering Service Records • Billing Service Data Records • Distribution Loss Factors Data Records • Equipment Configuration Records • Change History
CMEP Transaction Map (includes required fields for PG&E)	Includes current DASR field descriptions and formats. Also provides required fields matrices for availabe DASR transactions.
Setting up NT Server & IIS for Internet Operation	Provides NT Web server installation procedures to accommodate DES configuration requirements.
Setting up Secure Socket Layer (SSL) in IIS	Provides information on how to establish client access to DES Internet Server.

CMEP protocol

Specific CMEP data protocol rules are described in the table below.

#	PROTOCOL RULE
1.	DATA CONTENT IS A SEQUENCE OF ASCII TEXT LINES TERMINATED WITH ASCII CARRIAGE RETURN AND LINE FEED CHARACTERS.
2.	EACH LINE IS A COMPLETE RECORD.
3.	NO LINE SHALL EXCEEED A TOTAL LENGTH OF 2048 CHARACTERS INCLUDING END OF LINE CARRIAGE RETURN AND LINE FEED. THIS LIMIT IS IMPOSED TO SIMPLIFY AND CLARIFY IMPLEMENTATION ISSUES.
4.	EACH RECORD STANDS ALONE AS AN ATOMIC ENTITY. THIS IS A CONTEXT FREE PROTOCOL.
5.	EACH RECORD CONSISTS OF A SERIES OF VARIABLE LENGTH FIELDS, EACH DELIMITED WITH THE ASCII COMMA CHARACTER.
6.	NO SINGLE FIELD SHALL EXCEED A TOTAL LENGTH OF 256 CHARACTERS INCLUDING ANY DELIMITED CHARACTERS. THIS LIMIT IS IMPOSED TO SIMPLIFY AND CLARIFY IMPLEMENTATION ISSUES.
7.	EACH RECORD BEGINS WITH A CONSISTENT SET OF FIELDS, CALLED A HEADER, TO FACILITATE IDENTIFICATION AND INTERPRETATION.
8.	FIELD CONTENTS ARE PACKED. LEADING AND TRAILING WHITE SPACE IS REMOVED, UNLESS THAT WHITE SPACE IN ITSELF IS SIGNIFICANT.
9.	EMPTY OF UNUSED FIELDS ARE INDICATED WITH A SINGLE ASCII COMMA CHARACTER.
10.	EACH RECORD ENDS WITH AN OPTIONAL CARRAIGE RETURN CHARACTER (CRC) FIELD WHICH LIES BETWEEN THE LAST SUPPLIED COMMA IN THE RECORD AND THE TERMINATING CARRIAGE RETURN AND LINE FEED CHARACTERS. THE CRC TYPE IS CRC-16. WHEN SUPPLIED, THIS FIELD IS ENCODED AS A HEXADECIMAL INTEGER TOTALLING 5 CHARACTERS IN LENGTH, INCLUDING THE LEADING ASCII 'H' CHARACTER. WHEN NOT SUPPLIED, THE CRC FIELD IS LEFT EMPTY.
11.	RECORDS MAY BE TRUNCATED AT ANY FIELD AFTER THE HEADER. THOSE FIELDS NOT SUPPLIED ARE ASSUMED TO BE EMPTY. WHEN RECORDS ARE TRUNCATED, THE CRC FIELD IS STILL ASSUMED TO LIE BETWEEN THE LAST ACTUALLY SUPPLIED COMMA AND THE TERMINATING CARRIAGE RETURN, LINE FEED CHARACTERS.
12.	FIELD TEXT THAT CONTAINS THE ASCII COMMA CHARACTER IS ENCLOSED BETWEEN ASCII QUOTATION MARKS AT THE FIELD BOUNDARIES.
13.	FIELD TEXT MAY CONTAIN ONE OF THE FOLLOWING DATA TYPES: NUMERIC INTEGER, NUMERIC FLOATING POINT, A CALENDAR DATE, TIME, A DATE/TIME, A TIME INTERVAL, ARBITRARY TEXT, OR A PREDEFINED PROTOCOL TEXT ENTRY.
14.	NUMERIC VALUES ARE ENCODED AS ASCII TEXT. TWO KINDS OF NUMERIC VALUES ARE PROVIDED: INTEGER AND FLOATING POINT. INTEGER VALUES ARE ENCODED IN DECIMAL WITH OPTIMAL LEADING PLUS (+) OR MINUS (-) SIGNS OR IN HEXADECIMAL. HEXADECIMAL VALUES ARE INDICATED BY A LEADING ASCII CHARACTER 'H'. FLOATING POINT VALUES MAY BE ENCODED AS SIMPLE INTEGERS, WITH TRAILING DECIMAL POINT AND ONE OR MORE DECIMAL DIGITS , OR SCIENTIFIC NOTATION OF THE FORM: [+][-]9.9E[+][-]9, WHERE "[+][-]" MEANS AND OPTIONAL PLUS OR MINUS SIGN, "9" MEANS ONE OR MORE DECIMAL DIGITS, AND "E" MEANS ONE OF THE FOLLOWING CHARACTERS 'E', 'e', 'D', OR 'd'. FLOATING POINT VALUES, HOWEVER, MUST BE LIMITED TO A SPECIFIC RANGE. ALTHOUGH THEY MAY BE ENCODED IN SCIENTIFIC NOTATION, FLOATING POINT NUMBERS WILL BE CONVERTED TO "+/-99999999999.99999" FORM BY PG&E FOR INTERNAL

#	PROTOCOL RULE
	USE. NUMERIC FIELDS MAY NOT EXCEED 16 CHARACTERS IN LENGTH. EMPTY NUMERIC FIELDS ARE INTERPRETED AS THE VALUE ZERO.
15.	TIME AND DATE VALUES ARE ENCODED AS ASCII TEXT. DATE ONLY FIELDS ARE ENCODED AS "CCYYMMDD". TIME FIELDS ARE ENCODED AS "HHMM". DATE/TIME FIELDS ARE ENCODED AS "CCYYMMDDHHMM". EMPTY DATE AND DATE/TIME FIELDSARE UNDEFINED EXCEPT WHERE EXPLICITLY HANDLED.
16.	TIME INTERVAL VALUES ARE ENCODED AS ASCII TEXT. THEY ARE ENCODED "MMDDHHMM". EMPTY TIME INTERVAL FIELDS ARE INTERPRETED AS ZERO INTERVAL. INTERVAL VALUES OF LESS THAN AN HOUR MUST REPEAT ON THE HOUR. INTERVAL VALUES OF LESS THAN A DAY MUST REPEAT AT MIDNIGHT.
17.	ARBITRARY TEXT FIELDS CONTAIN FREE FORM TEXT SUCH AS CUSTOMER NAME AND ADDRESS INFORMATION. EMPTY TEXT FIELDS ARE INTERPRETED AS BLANK.
18.	PROTOCOL TEXT FIELDS CONTAIN VALUES THAT HAVE A PREDEFINED AND LIMITED SET OF POSSIBLE VALUES. THEY ARE USED AS DATA TYPE INDICATORS AND AS QUALIFIERS OR FEATURE FLAGS. PREDEFINED TEXT VALUES ARE CHOSEN TO MAKE THEIR MEANINGS EASILY INFERRED BY SOMEONE FAMILIAR WITH THE TECHNOLOGY THEY DESCRIBE. EMPTY TEXT FIELDS ARE INTERPRETED AS BLANK. PROTOCOL TEXT FIELDS MAY NOT EXCEED 12 CHARACTERS IN LENGTH, NOT COUNTING THE DELIMITING COMMA. THIS LIMIT IS IMPOSED TO SIMPLIFY AND CLARIFY IMPLEMENTATION ISSUES.

EDI DATA TRANSFER SPECIFICS

HOW EDI IS USED TO EXCHANGE ESP FINANCIAL INFORMATION

As previously mentioned, ESPs will only need to use EDI to receive charges and payment data related to Consolidated ESP billing transactions from PG&E. Like CMEP, EDI provides a way for parties with disparate systems to exchange electronic information.
The diagram below illustrates at a conceptual level how the transmission of information works using EDI.

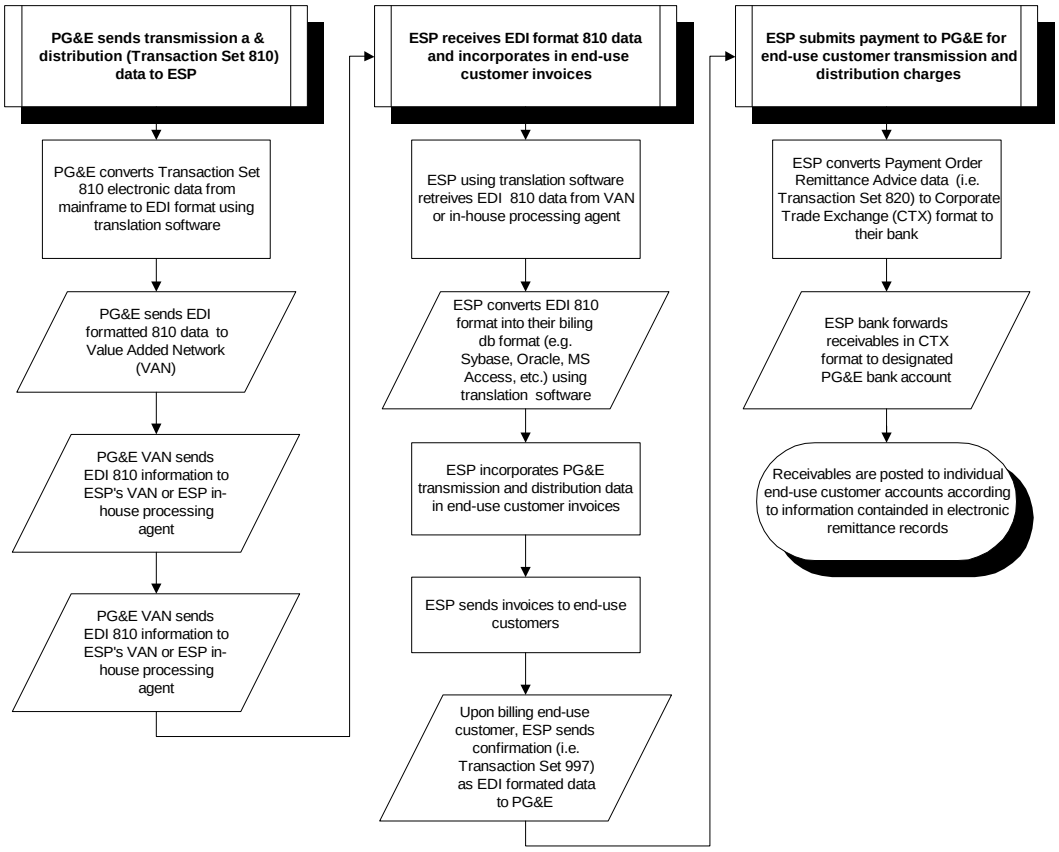


EXHIBIT: INFORMATION FLOW VIA EDI

EDI IMPLEMENTATION

Below is a checklist which outlines PG&E's EDI implementation process for ESPs.

1. Follow the procedures outlined within Chapter 1 of this guide regarding the completion and execution of applicable DA startup documentation, including the *EDI Trading Partner Agreement* and *EDI Setup Form*.

2. Purchase and install EDI transaction software. The software must be capable of reciving the American National Standards Institute (ANSI) X-12 Utility Industry Group (UIG) 810 Invoice version 3030. The software vendor will be able to create an interface file compatible with an ESP's accounts payable system.

3. Establish an electronic mailbox with a Value Added Network Service Provider (VAN).

4. Contact your banking institution and verify that it provides VAN services. The bank must be capable of providing electronic payments with remittance data using ANSI X-12 UIG 820 Payment and Remittance Order, version 3010.

5. Verify that the VAN's communicate successfully.

6. Submit DASRs for established PG&E accounts.

7. Provide a list of approximately 20 PG&E account numbers under Consolidated ESP billing for testing purposes and establish a date for the accounts to be sent via EDI.

8. Download invoices for the 20 test accounts from PG&E into your accounts payable system.

9. Test the upload of electronic payment and remittance information to PG&E.

10. Upon completion of successful testing, provide a list of all Consolidated ESP billing accounts which will be migrated to EDI.

11. Migrate all ESP Consolidated billing accounts to EDI.

12. Paper billing for ESP Consolidated billing accounts will be discontinued 30 days after complete migration to EDI.

KEY EDI CONTACTS

Questions regarding EDI protocol or systems implementation requirements related to DES should be directed to:

TOM ELDER, EDI TRADING PARTNER IMPLEMENTATION	RON CASE, TECHNICAL SUPPORT
PHONE: (415) 973-5119	PHONE : (415) 973-9069
EMAIL: TXE6@PGE.COM	EMAIL: RCCF@PGE.COM

EDI APPLICATION GUIDE

ESPs can also refer to the *EDI Application Guide for Pacific Gas and Electric* in order to obtain detailed information about EDI implementation. The handbook can be downloaded from the "DA Documents" link on the *ESP Resource Center* website at **http://www.pge.com/esp**.The table below describes topics covered within the guide.

INFORMATION TOPIC	DESCRIPTION
ABOUT PACIFIC GAS AND ELECTRIC'S EDI PROGRAM	PROVIDES AN OVERVIEW OF THE EDI PROGRAM.
PACIFIC GAS AND ELECTRIC SETUP & CONTACT INFORMATION	PROVIDES DETAIL ON EDI SETUP AND WHO TO CONTACT FOR SPECIFIC QUESTIONS.
TESTING WITH PACIFIC GAS ND ELECTRIC	DISCUSSES THE TESTING PROCESS DEVELOPED BY PG&E TO ENSURE THE SUCCESSFUL TRANSMISSION OF DATA TO THE ESP.
TRANSACTION SET SPECIFICATIONS	PROVIDES FIELD LEVEL REQUIREMENTS AND DATA PROTOCOL FOR ALL VAILABLE TRANSACTION SETS

ESP TESTING OF EDI TRANSMITTED DATA

Test accounts for the ESP must be established to determine if the EDI links are correctly configured.

PG&E TESTING OF EDI TRANSMITTED DATA

PG&E will perform testing on a test group comprised of selected customer account records upon request by the ESP.

1. The ESP will provide PG&E with account numbers and other information relevant to the test group they have selected, in accordance with specifications contained in the *EDI Application Guide for Pacific Gas and Electric.*

2. PG&E will then for a period not to exceed six (6) months, submit information for the EDI test group in both electronic and hard copy format.

3. The ESP will then have the opportunity to compare the hard copy information to the electronic information for the test group.

4. If the ESP identifies discrepancies between the two formats they should:

   a) Inform their VAN or in-house EDI processing unit.

   b) If the ESP's VAN or in-house EDI processing unit determines that the data transmission problem resides outside of the ESP's realm, then the ESP should contact their EDI contact at PG&E.

EDI DATA PROTOCOL

Information transmitted using EDI format must conform to the rules established under the American National Standards Institute (ANSI) Business Data Interchange Standards, commonly referred to currently as ANSI X12. Data protocol rules are addressed in the "**Transaction Set Specifications**" chapter within the *EDI Application Guide for Pacific Gas and Electric.*
The actual exchange of EDI information takes place initially through three different transaction sets as discussed below. Each transaction set represents an individual end-use customer record.

TRANSACTION SET 810, VER. 3030

This transaction set contains PG&E distribution and transmission charge and payment information using the Utility Industry Group (UIG) format. The 810 transaction set provides the following data field information:

1. Service address

2. Service start and end dates

3. Measured energy usage

The exhibit below provides an example of the 810, Ver., 3030 transaction set.

```
ISA|00|          |00|          |09|00691287702    |12|8045236064     |980201|0613|U|00200|000000087|0|P|~
GS|IN|00691287702|8045236064|980201|0613|87|X|003030
ST|810|000000206
BIG|980201|NLF1157363980201||UTILITY|||PR
N1|MQ|TEST INVOICE |91|NLF1157363
N2|(1244-12201)
N3|FOOT OF COMMERCIAL ST
N4|EUREKA|CA|95501
N1|RE|PACIFIC GAS & ELECTRIC|92|NLF1157363
ITD|10|5
IT1|BTC001|4160|KH|0||SV|ELECTRIC
MEA|AA|MU|80|KH|2604|2656
MEA|AA|MU|80.000|K1|0|1.820
REF|MG|6T4861
REF|RB|A 10
DTM|150|980101
DTM|151|980131
ITA|C|||06|||142000||||KH||ELECTRIC ENERGY|ENC
ITA|C|||06|||300||||KH||DISTRIBUTION|DIS
ITA|C|||06|||100||||KH||COMPETITIVE TRANSITION CHARGE |615
ITA|C|||06|||6||||KH||RATE REDUCTION BOND|BND
N1|BT|BOAT MOORING
TDS|142406
CTT|1
SE|20|000000207
GE|2|87
IEA|1|000000087
```

EXHIBIT: TRANSACTION SET 810

TRANSACTION SET 997

This transaction set is a confirmation which the ESP's EDI processing system sends back to PG&E's processing system, indicating whether an invoice was sent successfully received or rejected. The 997 transaction set provides the following data field information:

1. Receiver Address
2. Confirmation or receipt of rejection
3. Reason for rejection

Below is an illustration of the 997 transaction set.

```
ISA*00*          *00*          *01*001345165
*09*00691287702*970904*1250*U*00200*000000259*0*P*!¦
GS*FA*001345165*006912877*970904*1250*258*X*002040¦
ST*997*0001¦
AK1*IN*269¦
AK2*810*000002155¦
AK5*A¦
AK2*810*000002156¦
AK5*A¦
AK2*810*000002157¦
AK5*A¦
AK2*810*000002158¦
AK5*A¦
AK2*810*000002159¦
AK5*A¦
AK2*810*000002160¦
AK5*A¦
AK2*810*000002161¦
AK5*A¦
AK9*A*7*7*7¦
SE*18*0001¦
GE*1*258¦
IEA*1*000000259¦
```

EXHIBIT: TRANSACTION SET 997

TRANSACTION SET 820

This transaction set contains information about Automated Clearing House payments using most of the information contained from either the Corporate Trade Exchange (CTX) or Cash Concentration and Disbursement with one Agenda record (CCD+) ACH formats. The ESP is responsible for transmitting this transaction set to its banking institution in order to initiate payment to PG&E. The 820 transaction set provides the following data field information:

1. Remittance amount
2. Reference UDC account number
3. Originating invoice mount due

Below is an illustration of the 820 transaction set.

```
ST*820*000000001
BPS*ADC*1788.18*C*01*101036151**3101036151**01*122000218*621221530*960812*960812
 REF*TN*101036150418386*TRACE NUMBER FROM THE ACH PAYMENT
 REF*AN*W35895   690251
 REF*ZZ*02*ACH COMPANY DISCRETIONARY DATA
 DTM*007*960812
 N1*PE*PG AND E
 N1*PR*USCG TREAS  310
 LS*N1
 N1*PR*USCG TREAS  310
 RMT*IV*WNN2056151*1788.18*1788.18******4496NN2056151010
 LE*N1
SE*13*000000001
```

EXHIBIT: TRANSACTION SET 820

3. Test the viability and accuracy of data transferred to PG&E using CMEP

PG&E requires each ESP to conduct electronic data transfer testing. Therefore, the ESP will need to develop a viable test plan with respect to testing the transfer of DA information to PG&E via DES. Testing requirements, testing implementation framework, and required downloadable programs are available to ESPs on the DES Web site at **http://mads.pge.com**.

4. Review metering requirement rules prior to DA meter installation

Beginning on the DA implementation date interval meters will be required for DA customers whose maximum electrical demand is equal to or exceeds 50kW. Interval meters, however, can be installed at end-use customer locations prior to the DA implementation date. For customers whose demand is less than 50kW existing meters will be adequate for load profiles. However, if a customer using less than 50kW wants to participate in the hourly PX rate option, that customer will have to have an interval meter installed.

Interval meters can be provided by PG&E or by a qualified Meter Service Provider (MSP) selected by the ESP. The ESP can also act as its own MSP. ESP-selected MSPs must be certified by the CPUC prior to the installation of interval meters and must follow all UDC safety and other installation-related requirements.

Currently, PG&E owns all service account customer interval meters. PG&E will continue to provide meter installation and reading services for new end-use customers at the request of the ESP.

Statistical Load Profile (SLP) customers are not required to have an interval meter, but may have one installed at their own expense. However, a service account with an installed interval meter is not eligible for a SLP service account.

All DA interval meters, DA interval meter installations, and DA interval meter reading services, whether performed by the ESP, third party MSP, or PG&E must conform to CPUC-approved standards, protocols, and any other legal or regulatory requirements. These requirements are also covered in the subsequent sections below, "***PG&E provided meters***" and "***ESP provided meters***".

The ESP is responsible for selecting an approved Meter Data Management Agent (MDMA) that will be responsible for reading meters and for validating, editing , and estimating the usage data. The MDMA can either be PG&E or any third party that has been approved by PG&E to perform the functions described above.

QUALIFICATIONS FOR MSPS AND MDMAS

An ESP who plans to provide metering services (i.e. MSP and MDMA functions) is responsible for ensuring that these services are performed in accordance with applicable DA tariffs (Rule 22 and CPUC Decision No. 97-12-048), whether the ESP provides these services itself or through subcontractors. PG&E suggests that MSP and MDMA qualification issues are resolved prior to the submission of DASRs which indicate that the ESP will be providing either of these metering services on its own. Requirements and qualification guidelines regarding MSPs and MDMAs are addressed in Chapter 5, "**Metering**" of this guide.

PG&E PROVIDED METERS

At the request of the ESP, PG&E will install meters at end-use customer locations. ESPs who elect to have PG&E own and install meters should be aware of the provisions and limitations associated with PG&E owned meters.

REVIEW PG&E PROVISIONS FOR METER INSTALLATION

The following provisions are provided within Section I under Rule 22.

#	PG&E OPTIONS AND OBLIGATIONS FOR METER INSTALLATION SERVICES
1.	IF ESP DOES NOT ELECT TO PROVIDE METERING SERVICES, THE DA CUSTOMER MAY ELECT TO CHOOSE FROM THE FOLLOWING UDC METERING SERVICE OPTIONS: • METER OWNERSHIP BY PG&E • METER SERVICES (INSTALLATION, MAINTENANCE, AND TESTING) PROVIDED BY PG&E • METER DATA MANAGEMENT AGENT (MDMA) SERVICES PROVIDED BY PG&E. AS AN ALTERNATIVE, ESPS MAY CHOOSE TO SUBCONTRACT ONE OR MORE OF THE ABOVE OPTIONS TO PG&E.
2.	METERS INSTALLED BY PG&E WILL BE INSTALLED ACCORDING TO THE IMPLEMENTATION SCHEDULE FOR VALID DASRS AS DISCUSSED IN THE SECTION "***DETERMINING THE EFFECTIVE DA CUSTOMER SWITCH DATE***", WITHIN THIS CHAPTER.
3.	PG&E RESERVES THE RIGHT TO EXTEND ITS NORMAL INSTALLATION PERIOD DUE TO METER AND INSTALLATION PERSONNEL ACTIVITY. PG&E WILL INFORM THE CUSTOMER OF SPECIFIC REASONS FOR DELAY AND THE ANTICIPATED SCHEDULE FOR INSTALLATION. PG&E WILL WORK WITH THE CUSTOMER IF NECESSARY TO FIND MUTUALLY AGREEABLE ALTERNATIVES TO PROVIDE METERING AND TO EXPEDITE INSTALLATIONS.
4.	IF PG&E PROVIDES METER MAINTENANCE SERVICES ONLY, IT WILL BE RESPONSIBLE FOR THE ACCURACY, CALIBRATION, AND OTHER MAINTENANCE NEEDS FOR THE METER. PG&E'S STANDARDS FOR METER MAINTENANCE WILL CONFORM TO THE EXISTING RULES FOR ALL OF ITS CUSTOMERS. UNDER THIS SPECIFIC ITEMIZED SERVICE, PG&E WILL NOT BE RESPONSIBLE FOR REPLACING A NON-PG&E METER. HOWEVER, UPON REQUEST AND FOR A FEE, PG&E MAY REPLACE A FAULTY METER.
5.	THE MDMA WILL READ INTERVAL METERS ON PG&E'S SCHEDULED METER READING DATE, OR ON A DATE MUTUALLY DETERMINED BY THE MDMA AND PG&E. AT THE CUSTOMER'S REQUEST, THE CUSTOMER OR THE CUSTOMER'S ESP MAY ELECT A DIFFERENT METER READING DATE. PG&E MAY PROVIDE THIS SERVICE AT ITS OPTION ON A FIRST COME, FIRST SERVED BASIS (BY GEOGRAPHIC AREA). THE SERVICE IS SUBJECT TO EXISTING RESOURCE, CAPACITY, AND OTHER SYSTEM CONSTRAINTS WHICH MAY EXIST IN THE GEOGRAPHIC AREA WHERE THE CUSTOMER IS LOCATED. PG&E MAY ASSESS A CHARGE FOR THIS ELECTION ONLY TO THE EXTENT APPROVED BY THE CPUC.
6.	UPON THE CUSTOMER'S REQUEST, PG&E WILL MAKE AVAILABLE TO THE CUSTOMER OR THE CUSTOMER'S ESP, THE DATA OBTAINED FROM THE METER IN A TIMELY MANNER, AS AGREED TO BY THE CUSTOMER AND PG&E.
7.	ESPS MUST NOTIFY PG&E OF CHANGES TO THEIR METERING SERVICE ELECTION THROUGH THE SUBMISSION OF A DASR.
8.	UTILITY WILL PERFORM ALL METERING SERVICES FOR BUNDLED SERVICE CUSTOMERS EXCEPT METER OWNERSHIP, WHICH MAY REMAIN WITH AN END-USE

#	PG&E OPTIONS AND OBLIGATIONS FOR METER INSTALLATION SERVICES
	CUSTOMER WHO HAS RETURNED FROM DA TO BUNDLED SERVICE. IF THE CUSTOMER RETAINS OWNERSHIP OF THE METER, IT MUST BE CONFIGURED SO THAT PG&E CAN READ THE METER.
9.	IF PG&E REMOVES A NON-PG&E OWNED DA INTERVAL METER, PG&E WILL RETURN THE DA INTERVAL METER WITHIN TEN (10) WORKING DAYS TO THE END-USE CUSTOMER. THE DA INTERVAL METER WILL BE PROPERLY IDENTIFIED AND RETURNED TO THE END-USE CUSTOMER IN THE SAME CONDITION THAT THE METER WAS IN PRIOR TO THE METER BEING REMOVED FROM SERVICE. THE COORDINATION OF THE METER REMOVAL BY PG&E AND THE INSTALLATION OF THE NEW DA INTERVAL METER REPLACEMENT IS THE RESPONSIBILITY OF THE END-USE CUSTOMER'S ESP. THE SERVICE CHARGE FOR THE REMOVAL OF A METER AS SET FORTH IN PG&E'S RATE SCHEDULE MUST BE PAID IN FULL TO PG&E PRIOR TO ANY WORK BEING PERFORMED.
10.	IF PG&E INSTALLS A DA INTERVAL METER AT THE ESP'S REQUEST, THE ESP WILL BE REQUIRED TO PAY A METER INSTALLATION SERVICE CHARGE WHICH CAN INCLUDE THE COST FOR THE METER UPGRADE. AN ADDITIONAL CHARGE WILL APPLY FOR REMOVAL OF THE EXISTING METER. THESE CHARGES ARE SET FORTH IN PG&E'S RATE SCHEDULES AND MUST BE PAID IN FULL BY THE ESP OR END-USE CUSTOMER TO PG&E PRIOR TO ANY WORK BEING PERFORMED BY PG&E. THESE CHARGES WILL BE IN ADDITION TO THE CHARGES FOR DELIVERY SERVICES PROVIDED UNDER PG&E TARIFFS.

ESP PROVIDED METERS

METER TYPE REQUIREMENTS

See Appendix D to this guide, "**DA Approved Meters**" for the most current list of approved interval meters.

REVIEW METER REQUIREMENT RULES FOR THE INSTALLATION OF A DA INTERVAL METER

If an ESP plans to install an ESP owned or third party installed DA interval meter, the meter must conform to the requirements governing meter installation under Rule 22.

#	ESP OPTIONS AND OBLIGATIONS FOR METER INSTALLATION
1.	ESP SHALL NOTIFY PG&E IN WRITING OR ELECTRONICALLY PRIOR TO INSTALLATION OF ANY METERING EQUIPMENT FOR A CUSTOMER.
2.	NO METER INSTALLATION OR MAINTENANCE MAY BE PROVIDED OR COMMENCED BY ESP FOR ANY CUSTOMER UNLESS ESP HAS SUBMITTED A DASR FOR THAT CUSTOMER AND PG&E HAS APPROVED COMMENCEMENT OF METER INSTALLATION BY ESP.
3.	WHEN AN ESP INSTALLS A DA INTERVAL METER FOR A DA CUSTOMER, THE ESP WILL PROVIDE PG&E, WITHIN TWO (2) WORKING DAYS OF THE DA INTERVAL METER INSTALLATION, THE RESULTS OF THE INITIAL DA INTERVAL METER TEST, THE STOP-READ FOR THE FULL SERVICE OR DA INTERVAL METER THAT WAS REMOVED (IF APPLICABLE), THE START-READ FOR THE REPLACEMENT DA INTERVAL METER, THE VOLTAGE, DATA COLLECTION CAPABILITIES, DATA ACQUISITION METHODS, DA INTERVAL METER CONSTANTS AND OTHER PERTINENT INFORMATION ABOUT THE REPLACEMENT DA INTERVAL METER FACILITIES THAT ARE NECESSARY FOR IDENTIFICATION OR BILLING PURPOSES. IF ESP PERFORMS METER INSTALLATION, ESP SHALL PROVIDE PG&E WITH PG&E-SPECIFIED METER

#	**ESP OPTIONS AND OBLIGATIONS FOR METER INSTALLATION**
	INFORMATION AND SHALL KEEP THAT INFORMATION CURRENT.
4.	THE CUSTOMER OR ITS ESP MAY ELECT TO HAVE PG&E REMOVE THE EXISTING PG&E METER AT THE CUSTOMER'S PREMISES. THE COORDINATION OF THE METER REMOVAL BY PG&E AND THE INSTALLATION OF THE NEW DA INTERVAL METER REPLACEMENT IS THE RESPONSIBILITY OF THE CUSTOMER'S ESP. A SERVICE CHARGE FOR THE REMOVAL OF A PG&E METER MUST BE PAID IN FULL TO PG&E PRIOR TO ANY WORK BEING PERFORMED.
5.	IF AN ESP REMOVES A PG&E METER, THE ESP MUST RETURN THE PG&E METER WITHIN TEN (10) WORKING DAYS TO A LOCATION APPROVED IN ADVANCE BY PG&E. THE PG&E METER MUST BE PROPERLY IDENTIFIED AND RETURNED TO PG&E IN THE SAME CONDITION THAT THE METER WAS IN PRIOR TO THE METER BEING REMOVED FROM SERVICE.
6.	COMMUNICATION FACILITIES ASSOCIATED WITH TRANSFERRING METERING DATA SHOULD BE COORDINATED BY THE DA CUSTOMER'S ESP WITH PG&E. IF PG&E IS PROVIDING THE METER READING SERVICE FOR THE DA ACCOUNT, THE DA INTERVAL METER AND ASSOCIATED COMMUNICATION FACILITIES FOR THE ACCOUNT MUST BE CAPABLE OF CORRECTLY INTERFACING WITH PG&E'S ELECTRONIC DATA TRANSFER SYSTEM BEFORE PG&E WILL APPROVE THE DASR REQUESTING THAT THE ACCOUNT BE PLACED ON DA SERVICE.
7.	PG&E WILL INSPECT ANY WORK ON THE DA INTERVAL METER OR ASSOCIATED FACILITIES WHICH REQUIRE THE DE-ENERGIZATION OF A CUSTOMER'S SERVICE. PG&E RETAINS THE RIGHT TO INSPECT THIRD-PARTY DA INTERVAL METER INSTALLATIONS PRIOR TO THE ACCOUNT RECEIVING DA SERVICE, EVEN IF THE CUSTOMER'S SERVICE DID NOT NEED TO BE DE-ENERGIZED FOR SUCH INSTALLATION.
8.	PG&E MUST APPROVE THE SATISFACTORY OPERATION OF ALL ESP-INSTALLED METERING EQUIPMENT AND DATA COMMUNICATION SYSTEMS, AS THEY INTERFACE WITH PG&E'S SYSTEM.
9.	PG&E SHALL HAVE NO LIABILITY FOR ANY DAMAGE OR INJURY CAUSED BY ESP-INSTALLED METERING EQUIPMENT.
10.	PG&E HAS NO OBLIGATION FOR COSTS INCURRED BY THE ESP IN CONNECTION WITH PROVIDING METERING SERVICES.