

PERMANENT STANDARDS WORKING GROUP

APPENDIX C

REQUIREMENTS FOR METER DATA MANAGEMENT AND METER READING IN DIRECT ACCESS

July 29, 1998

VOTING RESULTS:

Because some issues were passed without a unanimous agreement among PSWG participants, each of the issues adopted as requirements in this Appendix C will have a table listing entities along with their voting positions. Since some of the entities were sometimes absent from the PSWG Plenary meetings, the tables showing the voting results will show that these entities voted on some issues but not the others.

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

I. DEFINITION OF MDMA BUSINESS FUNCTIONS

MDMA business functions include Meter Reading (MR) and Meter Data Management (MDM) functions. At a summary level, MDMA business functions include the following:

Functions performed by a Meter Data Management entity:

- A. Accept raw meter reads from meter reading entity
- B. As necessary, translate data into format for internal processing
- C. Associate meter reads with customer identifiers for use in validation or estimation, if needed
- D. Validate, edit, and estimate (VEE) data
- E. If necessary, translate data into CPUC-approved format prior to posting to MDMA Server
- F. Post validated, edited, and estimated data to MDMA Server for retrieval by market participants
 - Perform data adjustments as required
 - Re-frame data as required
 - Resend previously posted data as required
- G. Maintain MDMA Server
- H. Archive raw data and validated data for 36 months

Functions performed by a Meter Reading entity:

- A. Collect data at the meter, including routine meter reads, special reads, and date and time of reads
- B. Transport data to the MDM
- C. Perform any Validation that is required to be performed either on-site or at the time of reading
- D. Check for and report suspected energy theft
- E. Check for and report hazardous conditions (if meter reading is performed locally)

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

Below is Table I showing the ballot result on definition of MDM business functions:

Table I: Ballot Result on MDMA Business Functions (Plenary Meeting on May 28, 1998)

For: 24	Against: 1	Abstain: 3
ABB	California Energy Commission	CPUC-ORA
Applied Metering Technologies		ITRON
California Competitive Network		State of California Measurement Standards
Cellnet		
E-Mon		
ENRON		
EPRI		
eTCommunications		
Firstpoint		
GE		
IGT/IEEE		
LADWP		
NERTEC		
Pacificorp		
PG&E		
Phaser		
QST (by EMS)		
SCE		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Cal. Gas		
Star Data		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

II. SUBCONTRACTING MDM FUNCTIONS

The Commission will revise its Decision D.97-12-048 to allow an entity to be approved for all or any subset of MDM functions, but, if approved for a subset, the entity must operate as a subcontractor to an approved MDMA. Also, the entity need not be re-approved to provide such functions as subcontractor to another MDMA. One example would be approval for meter reading only.

Below is Table II showing the ballot result on subcontracting MDM functions:

Table II: Ballot Result on Subcontracting MDM Functions (Plenary Meeting on May 28, 1998)

For: 24	Against: 1	Abstain: 3
ABB	California Energy Commission	CPUC-ORA
Applied Metering Technologies		ITRON
California Competitive Network		State of California Measurement Standards
Cellnet		
E-Mon		
ENRON		
EPRI		
eTCommunications		
Firstpoint		
GE		
IGT/IEEE		
LADWP		
NERTEC		
Pacificorp		
PG&E		
Phaser		
QST (by EMS)		
SCE		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Cal. Gas		
Star Data		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

III. MSP'S ABILITY TO SUBCONTRACT METER PROGRAMMING TO MDMA
 An MSP shall be allowed to subcontract with an MDMA to reprogram meters remotely.

Below is Table III showing the ballot result on MSP's ability to subcontract meter programming to MDMA:

Table III: Ballot Result on Subcontracting Meter Programming to MDMA
 (Plenary Meeting on July 13, 1998)

For: 17	Against: 1	Abstain: 5
ABB	California Energy Commission	ENRON
Applied Metering Technologies		eTCommunications
CPUC-ORA		ITRON
Cellnet		LADWP
Coalition of California Utility Employees		SCE
E-Mon		
EPRI		
Firstpoint		
GE		
NERTEC		
PG&E		
Phaser		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

IV. MDMA TECHNICAL/BUSINESS SUPPORT TO ESPs AND UDCs

The MDMA will provide access to technical and business assistance during normal business hours (8am to 5pm Pacific). At such times, staff will be available to address question and concerns on data availability, corruption and adjustments, and systems technical support.

In addition, the MDMA will provide access to a support pager available 24 hours a day/365 days a year to address issues of server availability. The MDMA shall respond and provide a status to all pages within 2 hours.

MDMA server availability or access issues will be dealt with as soon as reasonably possible. At the MDMA's discretion, concerns over data availability, data corruption and adjustments or non-urgent problems will be addressed during the next business day.

Below is Table IV showing the ballot result on MDMA technical/business support to ESPs and UDCs:

Table IV: Ballot Result on MDMA Technical/Business Support to ESPs and UDCs (Plenary Meeting July 13, 1998) (Note - these were voted in as part of VEE Rules on July 13, 1998)

For: 21	Against: 0	Abstain: 0
ABB		
Applied Metering Technologies		
California Energy Commission		
CPUC-ORA		
Cellnet		
ENRON		
EPRI		
eT Communications		
Firstpoint		
GE		
ITRON		
LADWP		
NERTEC		
PG&E		
Phaser		
SCE		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

V. MDMA PERFORMANCE STANDARDS

The following MDMA performance standards shall be applied:

- The first billing cycle shall be disregarded in performance standards
- Five day standard shall be 99.0% of usage
- Separate estimation of ISO data to server shall be done according to VEE rules in Appendix C-VEE (Section A for interval data and Section B for monthly data).

Below is Table V-1 showing the ballot result on MDMA performance standards:

Table V-1: Ballot Result on MDMA Performance Standards (Plenary Meeting on July 13, 1998)

For: 17	Against: 0	Abstain: 3
ABB		EPRI
California Energy Commission		GE
CPUC-ORA		LADWP
Cellnet		
ENRON		
eTCommunications		
Firstpoint		
ITRON		
NERTEC		
PG&E		
Phaser		
SCE		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

VI. MDMA PERFORMANCE EXEMPTIONS:

In the event of a large catastrophe (i.e., hurricanes, earthquakes, etc.) that prevents the MDMA from reading meters, the MDMA shall estimate and post the data. This estimated data shall be reported separately by the MDMA in their performance report, and not be included in any performance penalties assessed against the MDMA. Additionally, estimated data due to meter failure where the meter is not accurately recording usage shall be reported separately by the MDMA in their performance report, and not be included in any performance penalties assessed against the MDMA.

Below is Table V-2 showing the ballot result on MDMA performance exemptions:

Table V-2: Ballot Result on MDMA Performance Exemptions (Plenary Meeting July 13, 1998) (Note - these were voted in as part of VEE Rules on July 13, 1998)

For: 19	Against: 1	Abstain: 1
ABB	SCE	FirstPoint
Applied Metering Technologies		
California Energy Commission		
CPUC-ORA		
Cellnet		
ENRON		
EPRI		
eT Communications		
GE		
ITRON		
LADWP		
NERTEC		
PG&E		
Phaser		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

VII. EDI IMPLEMENTATION

VII.1. Meter Usage Data Transactions:

For meter usage data transactions currently using CMEP, a migration to EDI following adoption of an implementation plan shall be developed by market participants as follows:

- a) All interested parties will work together to create a consistent statewide implementation guide, including file format and business rules, by 1/1/99. [See Table VI-1 for the ballot result for this Item a)].
- b) The rollout of EDI format based upon the implementation guide will be tentatively 12 months after completion of the guide but no later than 12/31/99. [See Table VI-1 for the ballot result for this Item b)]
- c) EDI shall be implemented with the continued use of the existing Internet communication mechanism, i.e., retrieval of data from servers using HTTP with Secure Sockets Layer. However, this does not preclude future changes to this communication mechanism in response to other standard-setting processes. [See Table VI-2 for the ballot result for this Item c)]

Table VI-1: Ballot Result for Items a) and b) above (Plenary Meeting on 6/25/98)

For: 22	Against: 2	Abstain: 3
ABB	SCE	GE
California Competitive Network	Stardata	ITRON
California Energy Commission		LADWP
CPUC-ORA		
Cellnet		
Coalition of California Utility Employees		
E-Mon		
ENRON		
EPRI		
eTCommunications		
Firstpoint		
IEEE		
NERTEC		
Pacificorp		
PG&E		
Phaser		
Schlumberger		
SDG&E		
Sierra Pacific Power		
So. Cal. Gas		
Southern Company		
State of Cal. Measurement Stds.		

VII.2. New MDMA Transactions:

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

For any new transactions between MDMAs and market participants (other than in the previous item), the preferred method is EDI.

Below is Table V-2 showing the ballot result on Item VI.1.c) and on new MDMA transactions:

Table VI-2: Ballot Result on EDI for Item VI.1.c) and New MDMA Transactions (Plenary Meeting on July 13, 1998)

For: 17	Against: 1	Abstain: 5
ABB	California Energy Commission	ENRON
Applied Metering Technologies		eTCommunications
CPUC-ORA		ITRON
Cellnet		LADWP
Coalition of California Utility Employees		SCE
E-Mon		
EPRI		
Firstpoint		
GE		
NERTEC		
PG&E		
Phaser		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

VII.3. Meter Specific Information Flows:

For electronic communications concerning Meter-Specific Information Flows, such as those described in the October 15, 1997, report to the CPUC, the preferred method is EDI.

Below is Table V-3 showing the ballot result meter specific information flows:

Table VI-3: Ballot Result on EDI for Meter Specific Information Flows (Plenary Meeting on July 13, 1998)

For: 17	Against: 1	Abstain: 5
ABB	California Energy Commission	ENRON
Applied Metering Technologies		eTCommunications
CPUC-ORA		ITRON
Cellnet		LADWP
Coalition of California Utility Employees		SCE
E-Mon		
EPRI		
Firstpoint		
GE		
NERTEC		
PG&E		
Phaser		
Schlumberger		
SDG&E		
Sierra Pacific Power		
Southern Company		
TeCom		

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

VIII. VEE

The proposed implementation plan for changes to the interim interval rules is described in Table VIII-1 below. The Optional/Required column indicates if market participants will be required to make this change. The Earliest date acceptable column indicates the earliest a market participant is allowed to implement this change (note to UDCs - this means the VEE test would need to allow these options), and the Required by column indicates the date by which market participants must implement the option (only applies to required options). MDMAs that were accepted prior to the required date must comply, but do not need to go through the acceptance process again.

During the discussion, it was noted that some of the optional changes have a bigger impact on some technologies than others.

Table VIII-1: Implementation Plan for the Major Changes in Interval Data Rules

Modification	Optional/Required?	Earliest date acceptable	Required by
Spike check threshold	Optional	Now	n/a
kVARh check threshold	Optional	Now	n/a
Use of partial days for estimation	Optional (may make a bigger difference with some technologies than others)	Now	n/a
Don't use days containing power fail as source for estimation	Required	Now	90 days after Commission decision
Allow use of accurate meter readings scale estimated data	Optional (may apply more to some technologies than others)	Now	n/a
Simplified proration algorithm when meter clock is off	Optional	Now	n/a
Automated handling of irregular usage	Optional	Now	n/a
Handling of test mode intervals	Required	Now	90 days after Commission decision

PSWG APPENDIX C: Requirements for Meter Data Management in Direct Access

Clarification of selection of reference days	Required	Now	90 days after Commission decision
High/low usage check	Required	Now	90 days after Commission decision
kVARh check	Optional	Now	na

Appendix C-VEE provides detailed requirements for energy usage data VEE rules for both monthly and interval customers as well as the ballot result on these VEE rules.