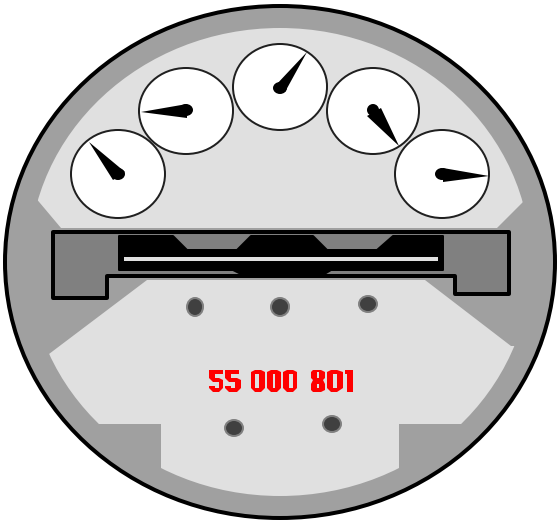
State of Arizona

Direct Access

Metering Handbook



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Arizona State Metering Handbook

Overview

Electric Competition in the State of AZ is referred to as Direct Access (DA). The Process Standardization Working Group (PSWG) was assembled pursuant to the Arizona Corporation Commission (ACC) Decision #61969 to address DA related issues/processes. This decision mandated that a working group would be formed, which shall consist of Arizona Corporation Commission staff, market participants, and the Residential Utility Consumer Office, and shall be coordinated by the Director, Utilities Division or the Director's designee (ACC Decision #61969, p. 6 II. 21-24). The PSWG has structured itself to address many issues, which required the establishment of subgroups or task teams to make recommendations on State standards. This handbook covers standardized processes, transactions, forms etc. that have been developed by a metering subgroup of the PSWG.

The overall objective of the metering subgroup was to produce standardized processes while ensuring the reliability and safety of the electric system as well as the integrity and timeliness of processing the meter data. Additionally, the group's direction was to develop recommendations to the PSWG on content of proposed business transactions and electronic transmission related to metering systems. The group was charged with discussing and seeking consensus on metering related issues raised by market participants related to the implementation of DA.

Since the establishment of the PSWG, the participants have focused on creating a State standard for common processes. Due to tariff and Utility Distribution Company (UDC) process differences, the group was not able to standardize all aspects of the each process. This Handbook will identify those common processes and identify the areas where standardization was achieved and those areas where standardization was not possible. Furthermore, this handbook will also identify those areas that have not yet been addressed by the PSWG. The DA Standards for Metering are applicable to all market participants involved in DA or the provision of DA-related services. The purpose of this Handbook is not to take the place of the each Utility's documentation but to provide information on those processes that have been agreed upon by all AZ Utilities.

Chapter 1 – PREFACE

1.1 Introduction

This chapter will include a high level overview of the market structure, Commission rules and standardized business practices that pertain to metering in the State of Arizona.

1.2 Market Structure and Market Participants

The responsibility for meter services and meter data services will reside with either the customers Electric Service Provider or the UDC. The Electric Service Provider may subcontract these services to a Meter Service Provider (MSP) and/or Meter Reading Service Provider (MRSP). DA electric metering services consist of:

- Physical metering and metering services, including the installation, maintenance, testing and removal of meters and related equipment.
- Meter Data Services including meter reading, meter data translation, validation, editing and estimation (VEE).

Customers that choose to go DA must select an alternative Electric Service Provider other than the UDC. DA customers with an hourly load of 20Kw or greater are required to have interval metering in place. Independent Operating Utilities (IOU) under the jurisdiction of the ACC are allowed to provide MSP and MRSP services for customer loads of 20 kW or less. Unless offering competitive electric services outside of its distribution service territory, Arizona Cooperatives are allowed to provide MSP/MRSP services for all customers within their service territory. Electric Utilities not under the jurisdiction of the Commission may also be allowed to provide MSP/MRSP services for all DA customers in their territory.

The business rules, processes, timing requirements, forms etc. described in this handbook are agreed upon State standards and must be followed by all market participants operating in the State of AZ. ***Revisions to this handbook must go through the PSWG change control process.***

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1.3 Customer Rights and Responsibilities

1.3.1 Eligible Customers

All electric customers within the State of AZ have a choice of ESP. Those DA customers with hourly loads of 20kW or above are required to have interval metering installed. Load profiling is permitted to satisfy the requirements for hourly consumption for customer loads less than 20kW. Load profiles however, may choose other metering options offered by their ESP.

1.3.2 Use of an Eligible MSP/MRSP

DA customers with an eligible ESP have the right to obtain metering and meter data services through an ACC certificated MSP and MRSP. For those customers who return to Bundled service

from DA must obtain metering and meter data services from only the UDC.

1.3.3 Direct Access Customer

A DA Customer, who owns the meter, cannot independently act as its own MSP/MRSP and cannot remove or otherwise control the meter.

1.3.4 Access to Data

All entities must have the customer's written authorization to obtain access to the customer's metered usage data. Except that the utility will have access rights to meter data necessary to render the customer's distribution bill and the ESP providing the customer's energy will have full access rights to the customer's meter data.

1.3.5 Meter Ownership

Bundled customers cannot own the meter. DA customers however, may own the meter as long as the meter is purchased from the UDC, ESP or MSP.

1.4 ESP/MSP/MRSP Rights and Responsibilities

1.4.1 Eligibility

ESP, MSP and MRSPs shall obtain a Certificate of Convenience and Necessity (CC&N) from the ACC. The provider must also contact each UDC whose service territory it wishes to offer competitive services. Refer to the UDC for any additional certification that may be required in each service territory

Competitive Service Providers must agree to comply with:

- ACC Retail Electric Competition Rules
- Electric Power Competition Act House Bill 2663
- State, local and federal regulations
- Code requirements including OSHA and other safety related regulations (see also Chapter 3 section 3.4)
- Electrical codes
- Environmental requirements
- All consumer protections required by the Commission to be provided by the ESP's
- State of Arizona Metering Handbook for the supply of metering and/or meter attributes

1.4.2 ESP Provision of Metering Services

ESPs that choose to provide metering services shall be responsible for the provision of those services, but may elect to contract for such services from a certificated third party MSP/MRSP.

The Provider cannot order a disconnect for nonpayment but can only send a notice of contract cancellation to the customer and the UDC.

1.4.3 Consumer Complaints

Full and prompt investigations shall be made for all service complaints made by the customer, either directly or through the ACC.

1.5 Utility Rights and Responsibilities

This handbook shall not limit the rights and duties of the UDC to enter any building or other location supplied with service by the utility for the inspection and the supply of electricity and of ascertaining the quantity of electricity supplied.

1.5.1 Control of Service Delivery Points

Changes to service delivery points can adversely affect the ability to properly charge each customer for their usage. The following points identify the UDCs rights and responsibilities for control of service delivery points. The UDC:

- may inspect service delivery points and metering installations at all customer locations in its service territory, regardless of meter ownership.

- will continue to have access to meter equipment at customer's premises for the purpose of maintaining the distribution system, responding to customer calls related to interruptions of electric service, and termination of a customer's service for non-payment.

- shall be responsible for functions related to controlling the service delivery points of the distribution system, including coordination of the identification, sealing and locking of meters by competitive providers.

- will require information for changes to the service delivery point, such as, new installations, meter replacements, and meter removals.

- shall have the right to receive copies of reports of meter tests and all reports of irregular metering conditions that are found within its service territory and responses to those reports.

1.5.2 Maintenance of the Meter Database

The UDC shall be responsible to maintain a meter and site configuration database in order to identify the meters attached to the distribution system in its service territory. The forms and data elements that will be used in the description of a service delivery point are described in handbook.

1.5.3 Meter Removals

Only the UDC has the right to terminate the customer's service or to remove a meter for non-payment.

A UDC may disconnect or remove a meter if equipment or wiring is designed, installed or operated as to present an immediate safety hazard to persons or property, or if it discovers a theft-of-service.

The UDC has the right to remove a non owned UDC meter in order to facilitate the return of a customer to Bundled Services or at the request of the ESP.

1.6 Commission Staff Responsibilities

Note: Does ACC Staff want to keep this section??

1.6.1 Provider Eligibility
1.6.2 Provider Disqualification
1.6.3 Complaint Mediation/Resolution
1.6.4 Reporting Requirements
1.6.5 Oversight of Competitive Providers

Chapter 2 – MSP QUALIFICATIONS

2.1 Introduction

Three classes of meter worker qualifications are set forth as criteria for a meter worker to perform DA meter services within a UDC's service territory. These services may be performed by an EPS, which has been certificated as a MSP.

Any meter worker performing meter services on behalf of an MSP must have sufficient training to exercise due care in performing these functions.

An MSP employee who performs DA metering work is required to have appropriate identification, indicating the worker's employer and the class of meter work the worker is qualified to perform. This identification must be carried by the employee whenever doing meter work.

2.2 Certification of Meter Service Provider

An MSP shall obtain a CC&N from the ACC to do business in the State of AZ. The provider must also contact each UDC whose service territory it wishes to offer competitive services. Refer to the UDC for any additional certification that may be required in each service territory.

2.3 Worker Class Description and Requirements

2.3.1 Class 1

2.3.1.1 Metering Types and Voltages

This class includes single phase, socket-based meters, and 300 volts phase- to-phase maximum but does not include transformer rated meters. Communication wiring must be outside of energized meter panels.

2.3.1.2 Work to be Performed

Class 1 Meter Workers may install, remove and replace single-phase, 120/240 volt or 120/208 volt self-contained meters in standard socket based residential-type metering equipment. Connections of communication conductors must be outside the energized meter panels.

2.3.1.3 Safety Skills

1. Knowledge of electricity hazards and ability to perform work while avoiding the hazards
2. Performance of functions in compliance with MSP's procedures and safety rules
3. Ability to comply with OSHA requirements
4. Use of personal protective equipment while on site

2.3.1.4 Essential Technical Skills

1. Knowledge of single phase electrical metering
2. Knowledge of electric distribution safety procedures
3. Ability to identify energy diversion or tampering related to this class of meter work
4. Ability to install and remove damaged and undamaged meters
5. Knowledge of the meter panel and socket layout for the metering conditions of this class of meter work
6. Ability to read meters used in this class
7. Ability to properly use tools appropriate to this class of work
8. Ability to connect meter communications external to the meter panel

9. Ability to initialize meter communication modules not utilizing Type 2 optical ports and meter configuration software

2.3.1.5 How Essential Technical and Safety Skills are Determined

1. MSPs will develop and implement a program to train their workers to perform Class 1 meter work safely and properly, including a minimum of 40 hours of on the job training with a Class 1 or higher meter worker.
2. Employees will be certified by their employers, based on prior experience or, the use of the training program referenced in (1).
3. To facilitate a UDC/MSP meter work agreements and, if appropriate, an MSP's training program may be shared with UDCs. An MSP's work can be reviewed by the UDC.
4. UDC employees who have worked in classifications performing these functions within the last 3 years are deemed qualified.
5. A Class 1 Meter Worker who does not perform this class of work for 3 years or more must be re-certified before performing Class 1 meter work.

2.3.2 Class 2

2.3.2.1 Metering Types and Voltages

This class includes all Class 1 meter types. It also includes poly-phase, safety socket and standard socket-based meters, and 300V phase-to-phase maximum and up to 600V, poly-phase, safety socket or socket-based, A-base, K-base, and transformer rated meters with internal diagnostics. Communication wiring may be routed inside the panel, and work can be in and around energized circuits.

2.3.2.2 Work to be Performed

In addition to performing the work of a Class 1 Meter Worker, a Class 2 Meter Worker can install, remove and replace single-phase and poly-phase, 120/240 volt or 120/208 volt, self-contained meters in safety socket and standard socket based metering equipment. A Class 2 worker can operate test-bypass facilities in self-contained safety sockets, install communication wiring inside the panel, and work in and around energized circuits. On panels without test-bypass facilities, a worker can not remove or install poly-phase meters without first disconnecting the customer load.

A Class 2 Meter Worker can install, remove and replace all meters consistent with the above, including transformer-rated meters with internal diagnostics. (If detected, metering problems with test switches, panel wiring of transformers and transformer wiring will be corrected by a Class 3 Meter Worker). A Class 2 Meter Worker may operate test switches, but may not install, alter maintain or replace wiring between the meter, test switch, test block and associated equipment.

2.3.2.3 Safety Skills

1. All the skills and safety knowledge required for Class 1
2. Electrical safety knowledge and work skills appropriate for three-phase metering up to 600V phase-to-phase, including the ability to identify and refer to a Class 3 or higher meter installer services above 600V phase-to-phase prior to performing work
3. in the service equipment, or is voltage rating is not labeled, at the time of initial voltage check
4. Ability to perform phase rotation assessments
5. Ability to operate test-bypass facilities or test blocks in a self-contained safety socket
6. Ability to route communication wiring to accommodate meter communications
7. Knowledge needed for up to 600V poly-phase service and the forms and voltages applicable to Class 2 Meter Work
8. Ability to understand, interpret and take appropriate action based on built-in diagnostics of solid state meters
9. Ability to work with transformer rated meters and operate test switches and test blocks

2.3.2.4 Essential Technical Skills

1. All Technical skills required for Class 1
2. Ability to route communication wiring to accommodate meter communications
3. Ability to understand, interpret and take appropriate action based on built-in diagnostics of solid state meters
4. Ability to test meters in locations other than in the meter socket using semi-automatic meter test equipment

2.3.2.5 How Essential Technical and Safety Skills are Determined

1. MSPs will develop and implement a program to train their workers to perform Class 2 meter work safely and properly.
2. Employees will be certified by their employers based on the use of that program.
3. To facilitate a UDC/MSP agreement for performing meter work in this class, the MSP's training program may be shared with the UDC.
4. The MSP's work can be reviewed by the UDCs.
5. UDC employees in classifications performing these functions are deemed qualified.
6. MSP employees who have worked in classifications performing these functions within the last 3 years are deemed qualified.
7. A Class 2 Meter Worker, who does not perform metering work for 3 years or more, must be re-certified prior to performing Class 2 meter work.

2.3.2.6 Experience Requirements

Minimum experience requirements for certification as a Class 2 Meter Worker:

1. 12 months on the job training working alongside a Class 2 or higher Meter Worker and successful completion of the MSP training program; or
2. Two or four year degree in related subject, 4 months on the job training working alongside a Class 2 or higher Meter Worker and successful completion of the MSP training program; or
3. Attainment of journeyman level electrician, journeyman level electric metering worker, or journeyman level line worker and successful completion of the MSP training program.

2.3.3 Class 3

2.3.3.1 Metering Types and Voltages

This class includes all meter types in classes 1 and 2. Class 3 work also includes all metering up to 600V, including transformer rated meters with primary and secondary voltages less than 600V and metering systems with instrument transformer primary side voltages over 600V. Communication wiring may be behind the panel, and work can be in and around energized circuits.

2.3.3.2 Work to be Performed

In addition to performing Class 1 and 2 meter work, a Class 3 Meter Worker can install, remove and replace all meters consistent with the above including transformer-rated meters. A worker can operate test switches and test blocks, perform in-field meter accuracy tests and calibrations and perform all types of meter maintenance and troubleshooting. A Class 3 Meter Worker can program and verify internal programs and software in solid state meters.

2.3.3.3 Safety Skills

1. Includes those required for Classes 1 and 2
2. Ability to conform processes to additional electricity hazards and complexities associated with metering switchboards, testing meters and maintaining meters

2.3.3.4 Essential Technical Skills

1. includes those required for Classes 1 and 2
2. Ability to perform work on metering switchboards
3. Ability to understand the operating characteristics of metering transformers and how to operate test switches and test blocks
4. Ability to perform calibration, repair, retrofit, troubleshooting, data collection of electric meters and to install, maintain and program advanced metering technologies, including TOU, interval data, real time pricing, remote meter communication, and load control devices

2.3.3.5 How Essential Technical and Safety Skills are Determined

1. MSPs may develop and implement a program to train workers to perform Class 3 meter work safely and properly.
2. All workers will be certified by the test process outlined below.
3. MSP's work can be reviewed by the UDCs.
4. UDC employees in classifications performing these functions are deemed qualified.
5. MSP employees employed in classifications performing these functions within the last 3 years are deemed qualified.

2.3.3.6 Experience Requirements

1. Individuals seeking to perform DA meter services, as a Class 3 Meter Worker must successfully pass written and

or practical (demonstrative) tests. The test can be created by the MSP, or maybe a standardized test created by a professional association, State or federal government.

2. Prerequisites for the tests:
    a) Minimum of one year experience as a Class 2 Meter Worker, including 6 months on the job training with a Class 3 Meter Worker; or
    b) Successful completion of Class 3 Meter Worker; or
    c) Employment as a journeyman-metering employee.

2.3.3.7 Testing and Re-Certification Requirements

1. Successful completion of the Class 3 Meter Worker Test permits a Class 3 Meter Worker to perform that class of DA meter work anywhere in Arizona
2. A meter worker who does not perform metering work for 3 years or more must be re-certified prior to performing that class of meter work.

2.3.3.8 Continuing Education

A Class 3 Meter Worker annually must participate in at least 12 hours of the MSP's training program regarding standards of practice and safety related issues.

Chapter 3 – EQUIPMENT REQUIREMENTS AND METER PRODUCTS

3.1 Introduction

This Chapter provides information on the compatibility requirements and specifications/standards for metering in the State of AZ. Additionally, this chapter will cover the following topics:

- Interval metering requirements
- External devices
- Current and Voltage Transformers (CT/VT) - maintenance
- Totalized metering
- Load research meters
- Primary metering
- Meter communications

3.2 Compatibility Criteria

Meters installed by an MSP on the UDC distribution system must maintain compatibility. The following criteria must be considered by the MSP before installation on the UDC system:

- The meter must be capable of measuring the energy/electrical service for which it will be used.

- The meter must be capable of measuring energy to support the UDC rate structure.
- The meter must physically interface with the service delivery point of the utility's distribution system.
- Consideration must be given to any existing UDC control devices connected to the meter.

UDC may have additional compatibility requirements. Refer to specific UDC.

3.3 Displays

Meter products or associated equipment installed on the UDC distribution system must have an interface to the customer and/or utility indicating energy consumption. A visual display of kWh consumption is required.

3.4 Performance Metering Specifications and Standards

In compliance with the ACC Rules and the House bill, section 1 covers the meter standards for meters installed by an MSP. Sections 2-5 list the reference materials by which an MSP must follow when operating in the State of AZ.

1. Meter Standards (where applicable)

ANSI C12.1	Code for Electricity Metering
ANSI C12.6	Marketing & Arrangement of Terminals for Phase Shifting Devices used in Metering
ANSI C12.7	Watt-hour Meter Socket
ANSI C12.10	Electromechanical Watt-hour Meters
ANSI C12.13	Electronic TOU Registers for Electricity Meters
ANSI C12.18	Type 2 Optical Port
ANSI C12.20	0.2% & 0.5% Accuracy Class Meters
ANSI C37.90	Surge Withstand Test
ANSI 57.13	Instrument Transformers
ANSI Z1.4	Sampling Procedures and Tables for Inspection
ANSI Z1.9	Sampling Procedures and Tables for Inspection

2. EEI Electricity Metering Handbook

3. Electric Utilities Service Equipment Requirements Committee (EUSERC) standards that are utilized by UDC's

4. National Electric Safety Code (NESC)

5. National Electric Code (NEC) & Local Requirements

3.5 Interval Metering

The distinction between load-profiled customers and non-load profiled customers is the load limit of 20 kW and is not specific to one particular customer class (i.e. residential, commercial). Thus, all customers who reach a load of greater than 20 kW or 100,000 kWh annually require the installation of a meter with an Interval Data Recorder. Customers with loads 20 kW or less are not required to have a meter with an Interval Data Recorder, but may choose other metering options offered by their ESP.

3.6 External Devices

External devices include any equipment connected to the meter at a customer site. Such devices include but are not limited to cell phones, modems, recorders, etc.

3.6.1 Installation

Installation requirements of external devices vary within each UDC service territory.

Refer to the UDC for requirements.

3.6.2 Removal

When the UDC is removing a meter that has an external device associated with it, the UDC will de-energize any external equipment/devices and remove wiring from secured equipment. The UDC will notify the ESP of its actions on the Meter Installation/Removal Notification (MIRN) form (refer to Chapter 12 for MIRN procedures). UDCs will handle on a case-by-case basis, any external devices within a sealed compartment.

3.7 Current and Voltage Transformers

Current Transformer (CT) is an electrical device used in conjunction with an electric meter to provide a measurement of energy consumption for metering purposes. A Voltage Transformer (VT) is an electrical device used to step down primary voltage to 120V for metering purposes. See Chapter 4 for CT/VT ownership requirements.

3.7.1 Maintenance

Maintenance and servicing of CT and/ or VT will be limited to the UDC, the ESP or the MSP.

Refer to UDC for requirements

3.8 Totalized Metering

Totalized metering is the measurement for billing purposes at the appropriate rate, through one meter, of the simultaneous demands and energy of a customer who receives this electric service at more than one

delivery point. Rules and requirements allowing totalized sites to remain totalized under DA service and return to UDC Bundled service as a totalized site vary between the UDC.

Refer to UDC for requirements.

3.9 Load Research Meters

UDCs have load research meters installed at various locations within their service territory. In most cases a UDC will select another load research sample when a current load research account switches to DA. There may be some rates however, where the UDC may not select another sample and will be evaluated on a case-by-case basis.

3.10 Primary Metering

Primary Metering is defined as metering installed on service voltages above 600 volts. The following sections describe the work that can be performed by the MSP and the work MSPs are prohibited from performing on primary metered sites.

3.10.1 Work that MSPs can perform up to 25kV

It is appropriate for the MSP to perform work on primary metering stations from 600 volts to 25kV. This work can be done as long as the UDC's operational procedures are followed with respect to connections to primary conductors on the UDC distribution system. The UDC shall perform all switching operations on the primary site.

In Arizona, this work would include:

- Building up primary metering system, on or off-site.
- Installation of new primary metering system overhead and underground.
- UDCs shall do all hookups to high side.
- Maintenance and trouble shooting in service primary metering system.
- In service testing of primary meter for documentation or complaint resolution.
- Perform voltage and current tests on the primary side of instrument transformers, in compliance with UDC's operational procedures.

The MSP must also comply with the Arizona Revised Statutes, Article 6.4 HIGH VOLTAGE POWER LINES AND SAFETY RESTRICTIONS, 40-360.41 through 40-360.45. These sections restrict a non-utility person or entity from performing activities within six feet of a high voltage overhead line. (The MSP may request the UDC to grant a waiver to this restriction.)

3.10.2 Primary Metering Above 25kV

The UDC owns the Current Transformers (CTs) and Voltage Transformers (VTs) for primary metering above 25kV. There fore, the UDCs have the primary responsibility for these instrument transformers. However, the UDC can contract with a third party to perform this work. When MSPs are contracted by UDCs, all of the UDC's operational procedures must be followed with respect to safety and connections to primary conductors on the UDC distribution system. The UDC shall perform all switching operations on the primary side.

3.10.3 Work that the MSP Should Not Perform

MSPs should not perform installation or removal of instrument transformers on primary conductors at primary voltages exceeding 25kV. The UDC, in coordination with the MSP as described above, would perform this work. Work performed by MSPs at primary voltages would be strictly limited to voltage and current testing, while at all times adhering to UDC operational procedures.

3.10.4 Terms and Conditions for MSP Performing Primary Metering Work

The following identify the terms and conditions for MSPs to perform primary metering work:

- Primary metering can only be performed by a Class (3) meterman.
- All primary metering work done by MSPs shall comply with NESC Standards and UDC service requirements.
- For all jobs performed at primary voltages, MSPs will coordinate directly with UDCs.
- The UDC shall develop and administer switching orders related to specific work to be performed.
- Safety "Work Clearances" will only be issued by authorized employees of the UDC.

3.10.5 Safety:

Safety is of the utmost importance when working on primary metering systems. MSPs must ensure that class three (3) meterman are properly trained to work on primary metering. Proof of class three (3) meterman certification may be presented upon request. All safety rules of the American Public Power Association (APPA) or other Arizona Corporation Commission (ACC) approved safety standard shall be followed.

310.6 Fees

When an MSP requests UDC's staff assistance in working with the primary metering system, the work shall be done on a fee basis established by the UDC's tariff. Services and fees vary between UDCs.

Refer to UDC for requirements

3.10.7 Disruption to metering system:

Existing in-service primary metering systems that malfunction or are damaged will be isolated by the UDC from the system (i.e., cutting jumpers between metering equipment and distribution system) and appropriate notification will be given to the affected ESP as soon as possible.

3.10 Meter Communications

3.10.1 Meter Passwords

Pending future development

3.10.2 KYZ Criteria

Pending future development

3.10.3 Telephone Lines

The customer owns most of the phone lines connected to the meter however, for any UDC dedicated phone lines, contact the UDC for process/requirements.

Chapter 4 – OWNERSHIP

4.1 Introduction

This chapter provides information specific to ownership of equipment as well as where the UDC responsibilities begin and end.

4.2 Meters

For customers being served under Bundled service by the UDC, the ACC Rules and the House Bill do not allow a Bundled customer to own their own meter. A customer being served under DA, who has selected a third

party MSP and MRSP other than the UDC, may own their meter. However, the DA customer must purchase the meter from the UDC or an ESP. For DA customer who own the meter and are returning to Bundled, UDCs may accommodate the use of the customer owned meter under Bundled services (Refer to Chapter 10).

4.3 Current/Voltage Transformers

Ownership of Current and Voltage Transformers (CT/VT) fall into two categories, zero up to and including 25 kV (distribution primary) and greater than 25 kV (transmission primary). Entities who are able to own CT/VTs in each category are covered in the following sections.

4.3.1 Zero Up To and Including 25 kV-

The UDC, ESP or MSP may own the CT/VTs at customer sites served under DA.

Refer to the UDC for specific requirements.

4.3.2 Greater Than 25kV-

Only the UDC may own transmission primary voltage CT/VTs.

4.3.3 Exceptions

Ownership of CT/VTs in Customer owned substations would be considered on a case-by-case basis. The UDC will own the equipment in UDC dedicated substations regardless of the voltage.

4.4 Associated Equipment

Pending future development

4.5 Demarcation Point

Pending future development

UDC Responsibility ends and where MSP responsibility begins

Chapter 5 – METER, PROVIDER, AND SERVICE DELIVERY POINT IDENTIFICATION

5.1 Introduction

Proper identification of metering equipment and service delivery points are very important not only for field personnel but also for transmitting data relating to a DA customer/site between multiple parties. The following sections identify the requirements for meter identification as well as service delivery point identification requirements.

5.2 Meter Identifiers

5.2.1 Universal Meter Identifier (UMI)

The Universal Meter Identifier (UMI) is a standard format used to identify meters regardless of owner or originator. The UMI standard has been reviewed by many states and implemented in few states. At this time, Arizona is not requiring the UMI as the State Standard for identifying meters. At such time when the UMI is adopted as a National Standard or widely used in other states, the Process Standardization Working Group (PSWG) will review the UMI as a possible State standard. A waiver was filed by the PSWG and approved by the Arizona Corporation Commission (ACC) excluding Market Participants from requiring the UMI as the State standard for meter identification.

Refer to UDC for meter identification requirements.

5.2.2Permanent Meter Faceplate Requirements

Pending future development

5.2.3 New Meter unique number requirements

Pending future development

5.2.4 Provider Identifiers

Pending future development

5.3 Service Delivery Point Identifiers

The service delivery point identifier used in Arizona is the Universal Node Identifier (UNI). The UNI is a unique permanent identification number assigned by the UDC to each service delivery point on the UDC distribution system. A UNI will be assigned to both metered and un-metered service delivery points. The UNI will be used as a requirement in transactions between the UDC, the ESP and their agents.

Chapter 6 – STICKERS, SEALING AND LOCKING HARDWARE

6.1 Introduction

Pending future development

6.2 Meter Securing and Sealing

Pending future development

6.3 Meter Panel and Associated Equipment Securing and Sealing

Pending future development

6.4 Meter Socket Covering, Securing and Sealing

Pending future development

6.5 Life Support Seal
Pending future development

6.6 Stickers
6.6.1 480 volt Sticker
Pending future development
6.6.2 Meter Panel Stickers
Pending future development

Chapter 7 – FIELD SITE INSPECTIONS, SAFETY AND ENVIRONMENTAL
Pending future development

Chapter 8 – PROCESS FLOWS
The following sections illustrate the high-level process flows for switching a customer from Bundled UDC service to DA (referred to as Process 1) and switching a customer back to Bundled UDC service from DA (referred to as Process 2). The purpose is to illustrate the necessary steps and timing requirements related to these two processes in the State of AZ.

8.1 Customer switch from Bundled Service to DA – Process 1
Refer to Appendices A

8.2 Customer switch from DA to Bundled – Process 2
Refer to Appendices B

Chapter 9 – PROVIDING METER INFORMATION
9.1 Introduction
Obtaining meter information for a customer site is an important step in switching customers as well as maintaining their services. This section covers the process for obtaining existing meter information for a customer who has chosen to switch to DA.

9.2 Existing Meter Information (EMI) Form Overview
The EMI was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

This form will be used by the UDC to communicate existing meter attributes to the designated ESP and MSP. The EMI contains information about the existing meter at the site. For sites that have more than one meter, a separate EMI will be provided for each meter.

General Information

1. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event.

2. The EMI will be sent within 5 business days of receiving the DASR acceptance notification pending meter exchange. **Example**: "5 business days of receiving the DASR acceptance notification pending meter exchange" = DASR notification took place on December 4, 2000, the EMI must be sent no later than the end of business on December 11, 2000.

3. Site Meet Required? (field 12) – A "Yes" value indicates that the UDC must meet the MSP at the site for the installation. The MSP and UDC must mutually agree upon site meet schedule dates and times.

4. Equip Purchase Auth (EPA)(field 15) – A "Yes" value indicates an Equipment Purchase Authorization form will be sent as an attachment to the EMI. The EPA will list equipment related to the site for sale. The ESP sends the UN-signed EPA form back to the UDC within 5 business days prior to the exchange. This will be considered intent to purchase the equipment or not to purchase.

5. The EMI form will be e-mailed as an Excel worksheet. The maximum number of EMI's to a worksheet is twenty (20).

6. There are 2 versions of the EMI available for use, they are:
    1. EMI V1 – enter information on each individual form, which will link to a spread sheet **view only** version. Do **not** change any information on the spreadsheet in this version, as the information will not bridge to the individual form.
    2. EMI V1SS – enter information on the spreadsheet, which will link to individual **view only** version of the forms. Do **not** change any information on the individual forms in this version, as the information will not bridge to the spreadsheet.

File Naming Convention

EMIYYYYMMDDSENDERRECEIVER--S.xls

EMI	Type of form being sent
YYYY	Year
MM	Month
DD	Day
SENDER	Acronym for market participant sending EMI
RECEIVER--	Acronym for market participant receiving EMI

S	Sequence (1, 2, 3, etc.) to support multiple files sent on a single day from the same "Sender" to the same "Receiver"

File Name Examples:
EMI20000622NWECUC1.XLS
EMI20000622NWECUC2.XLS
EMI20000622TEPAPSES1.XLS
EMI20000622TEPAPSES2.XLS

9.3 EMI Sample Form
Refer to Appendices C

9.4 Field Definitions and Requirements
Refer to Appendices D

Chapter 10 – PURCHASING / TRANSFERRING EQUIPMENT

10.1 Introduction
When a customer switches to DA or back to Bundled UDC service from DA there may be equipment that can be purchased or transferred between the UDC and the ESP/Customer or vice versa. For circumstances where this occurs, the Equipment Purchase Authorization (EPA) process is utilized. The following sections illustrate or refer to the associated documentation (State of AZ DA metering Forms), the process for purchasing equipment. Also see Chapter 16, section 16.3.

10.2 Equipment Purchase Authorization (EPA) Form Overview – Switch from Bundled Service to DA – Process 1
The EPA was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

This form will be used by the UDC, ESP, MSP and the Customer to communicate options for purchasing existing equipment located at the site or to purchase new equipment/supplies. Contact individual UDC for their policy on selling new and existing equipment.

General Information

1. Content of the form has been standardized with the exception of the disclaimer.

2. The EPA form will be in Excel format.

3. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example**: "5 business days before the exchange" = Meter exchange

will take place on December 11, 2000, the UN-signed EPA must be sent no later than the end of business on December 4, 2000.

Purchase of Existing Equipment

1. The EPA will be sent with the Existing Meter Information (EMI) form from the UDC, if applicable.

2. The ESP fills in Intent to Purchase area on the EPA and sends the UN-signed EPA form back to the UDC within 5-business days prior the exchange. The UN-signed EPA is considered intent to purchase and must be sent to the UDC regardless if the equipment is being purchased or not. **NOTE:** The EPA is sent UN-signed so that the ESP is not taking ownership of the equipment until the date of the exchange and the MSP has had the opportunity to inspect the equipment.

3. If the unsigned intent to purchase EPA is not received 5 business days before the exchange, the UDC will handle this as an exception and not allow the meter exchange to take place.

4. If the unsigned intent to purchase EPA indicated existing equipment will be purchased, then the signed EPA form must be returned to the UDC within 5 business days of the meter exchange.

5. The equipment will be considered sold as of the effective date of the customer switch.

Purchase of New Equipment/Supplies -

Contact individual UDC for their policy on selling new equipment and supplies

10.3 Equipment Purchase Authorization (EPA) Form Overview – Switch from DA to Bundled Service– Process 2

The EPA was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

This form will be used by the UDC, ESP, MSP and the Customer to communicate options for purchasing existing equipment located at the site or to purchase new equipment/supplies. Contact individual UDC for their policy on selling new and existing equipment

General Information

4. Content of the form has been standardized with the exception of the disclaimer.

5. The EPA form will be in Excel format.

6. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example**: "5 business days of DASR submittal" = DASR submittal took place on December 4, 2000, the EPA must be sent no later than the end of business on December 11, 2000.

Purchase of Existing Equipment

1. The EPA will be sent from the ESP to the UDC, if applicable, within 5 business days of DASR submittal.

2. The UDC fills in Intent to Purchase area on EPA and sends the UN-signed EPA form back to the ESP within 5 business days prior to the exchange. The unsigned EPA is considered intent to purchase and must be sent to the ESP regardless if the equipment is being purchased or not. **NOTE**: The EPA is sent UN-signed so that the UDC is not taking ownership of the equipment until the date of the exchange and the UDC has had the opportunity to inspect the equipment.

3. If the unsigned intent to purchase EPA indicated existing equipment will be purchased, then the signed EPA form must be returned to the ESP within 5 business days of the meter exchange.

4. The equipment will be considered sold as of the effective date of the Customer switch.

10.4 Sample EPA Form

Refer to Appendices E

10.5 EPA Field Definitions and Requirements for Process 1

Refer to Appendices F

Chapter 11 – ACCESS, SCHEDULING AND TIMING

11.1 Introduction

This chapter will cover the following requirements and process:

- Gaining access to a customer site
- Installing and or removing locks present at a customer site
- Scheduling meter activity
- Timing Requirements
- Site Meets

11.2 Site Access

MSPs will need to make arrangements with the customer to gain access to the customer's metering equipment. UDCs will supply meter location, site surroundings and access issues on the EMI form. The UDCs however, will not provide copies of customer or UDC keys to existing locks.

11.2.1 Emergency Site Access

In order to ensure necessary site access in the event of an emergency, the MSP must notify the UDC on the MIRN within 3 business days of any changes to meter access at a customer site.

11.2.2 Site Locks

There are many different scenarios a third party provider may see at the customer site relative to site lock(s). This section covers the requirements for gaining access to a locked meter site, removing an existing lock and installing a third party provider lock.

11.2.2.1 UDC Lock

If an MSP arrives at a site where there is just a UDC lock installed, the MSP may cut the lock to gain access to the site or schedule a site meet with the UDC. If the UDC lock is cut, the MSP must install a mutually approved dual-locking device in order to accommodate the MSP and UDC lock. The MSP must also advise the UDC on the MIRN form that the lock was cut and a dual- locking device was secured.

The UDC may provide open CAP (Customer Access Padlocks) locks to the MSP/ESP to use in securing the site with the dual locking device. The ESP or MSP may be charged for the lock in accordance with the UDCs applicable service fees.

11.2.2.2 Customer Lock

In order for a third party to gain access to a site that is secured by a customer lock, the MSP must make arrangements with the customer to gain access to customer site. UDCs will not provide customer keys to MSP/ESPs.

11.3 Scheduling

Scheduling of meter activity (i.e. meter exchanges) is completed through the Meter Data Communication Request (MDCR) process. This section will cover an overview of the MDCR process, an illustration of the MDCR form and information of the field definitions and requirements.

11.3.1 MDCR OVERVIEW

The MDCR was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

The MDCR worksheet can be used by the MSP, ESP and UDC to communicate the following transactions:

Notification Type	Timing Requirement
Scheduling	5 business days prior to scheduled work date
Rescheduling	Changes to schedule by 2 p.m. (AZ time), 1 business day prior to scheduled exchange date.
UN-scheduling	Changes to schedule by 2 p.m. (AZ time), 1 business day prior to scheduled exchange date.
Exceptions	Any exceptions will be communicated to the appropriate party within 2-business days of receipt.

General Information

1. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example**: "5 business days prior to scheduled work date" = Exchange will take place on December 11, 2000, the MDCR must be received no later than the end of business on December 4, 2000.

2. The MDCR will be e-mailed as an Excel, 8½ X 14-landscape worksheet. The maximum number of notifications per MDCR worksheet is twenty (20).

3. MDCR submittal must **only** contain new or revised transactions. Unchanged previously sent transaction(s) must be excluded.

4. Any exceptions will be communicated on a single MDCR worksheet and will contain **only** the exception transaction(s). Any previously sent transaction(s) will be excluded.

5. Corrections to the MDCR may be submitted via e-mail and must include the file name for correlation.

File Naming Convention

MDCRYYYMMDDSENDRRECEIVER—S.xls

MDCR	Type of form being sent
YYYY	Year
MM	Month
DD	Day
SENDER	Acronym for market participant sending MDCR
RECEIVER--	Acronym for market participant receiving MDCR
S	Sequence (1, 2, 3, etc.) to support multiple files sent on a single day from the same "Sender" to the same "Receiver"

File Name Examples:

20000501NWECUC1.xls 20000501NWECUC2.xls
20000501TEPAPSES1.xls 20000501TEPAPSES2.xls

11.3.2 Sample MDCR

Refer to Appendices G.

11.3.3 MDCR Field Definitions and Requirements

Refer to Appendices H

11.4 Timing Requirements

Throughout the Handbook business days is used to describe the timing requirements of a particular process. The definition of business days is as follows: Any day except Saturday/Sunday or NERC holiday. If the holiday falls on a Saturday, it is recognized on a Friday. If the holiday falls on a Sunday, it is recognized on a Monday.

11.4.1 Timing Requirement Sample

A following scenario gives an example of timing requirements: The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example:** "3 business days after the exchange" = Exchange took place on December 4, 2000, the MIRN must be returned no later than the end of business on Thursday December 7, 2000.

11.4.2 Blackout Window

A black out window is used to describe a period of time a MSP/UDC cannot exchange the meter. Typically, the blackout window occurs around the time of the UDC read date.

Refer to UDC for black out requirements.

11.5 Site Meets

A site meet is where the presence of both the UDC and ESP/MSP are required or requested at the site where the meter activity is being completed.

11.5.1 Required Site Meets

Site meets are required for all UDC owned dedicated substations and may be required for customer loads 1 mW or greater or when other special metering equipment is in place, at the discretion of the UDC.

Refer to UDC for additional requirements.

11.5.2 Requested Site Meets

The ESP/MSP may request a site meet at their discretion. Site meet charges may apply.

11.5.3 Scheduling Site Meets

In order to schedule a site meet the requesting or requiring party must submit an MDCR form. Additional phone coordination is required between the UDC and ESP/MSP to confirm the site meet date and time indicated on the form.

11.5.4 Changes

After a site meet is scheduled and there are changes to the anticipated site meet time/date, the other party must be notified by 2:00 p.m. (Arizona Time), one (1) business day prior to the site meet.

11.5.5 Missed Site Meets Appointments

11.5.5.1 MSP

If the MSP fails to arrive within 30 minutes of the site meet time, or if the MSP fails to cancel one business day prior to the site meet, the UDC may charge the ESP. Refer to UDC for charges.

11.5.5.2 UDC

If the UDC fails to arrive within 30 minutes of the site meet time, or if the UDC fails to cancel one business day prior to the site meet, the UDC may credit the ESP or the ESP may charge the UDC.

Chapter 12 – METER INSTALLATION / REMOVAL

12.1 Introduction

The following section covers the minimum required procedures that an MSP must follow when installing and/or removing meters. These procedures do not necessarily include all facets of a meter installation, however, they do provide the major processes and requirements to install and or remove a meter.

12.2 Meter Installation/Removal Notification (MIRN) Form

Communication of Information relative to the Installation/Removal of a meter is handled through the Meter Installation Removal Notification process. This section will cover an overview of the MIRN process, an illustration of the MIRN form and information of the field definitions and requirements for the following scenarios:

- **Customer Switch from Bundled Service to DA – Process #1**
- **Customer Switch from DA to Bundled Service – Process #2**

12.2.1 MIRN Overview

12.2.1.1 Customer Switch from Bundled Service to DA Overview – Process #1

The MIRN was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

The MIRN form is used to communicate meter installation/removal information.

The UDC and ESP must receive a completed MIRN anytime meter activity is performed. The completed MIRN must be received within 3 business days of the meter install/removal.

General Instructions

1. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example**: “3 business days after the exchange” = Exchange took

place on December 4, 2000, the MIRN must be returned no later than the end of business on December 7, 2000.

2. Complete the MIRN with the information collected at the meter install/removal time for each meter located at the site.

3. UDC will contact the MSP and ESP via e-mail immediately for missing or incomplete data.

4. MSP must respond and/or acknowledge to UDC and ESP via e-mail any discrepancies within 1 business day of the notification

5. The UDC will notify the ESP and MSP of MIRNS not received 3 business days after the scheduled install/removal date.

6. MSP must return the completed MIRN to the UDC or provide a Meter Data Communication Request (MDCR) with a reschedule date within 1 business day of the above notification.

7. Unless mutually agreed upon, MSP must return removed UDC meters to the UDC within 15 business days of removal.

8. The MIRN will be sent as an Excel worksheet. The maximum number of MIRN's to the worksheet is twenty (20).

9. There are 2 versions of the MIRN available for use, they are:
    1. MIRN V1 – enter information on each individual form, which will link to a spread sheet **view only** version. Do **not** change any information on the spreadsheet in this version, as the information will not bridge to the individual form.
    2. MIRN V1SS – enter information on the spreadsheet, which will link to individual **view only** version of the forms. Do **not** change any information on the individual forms in this version, as the information will not bridge to the spreadsheet.

File Naming Convention

MIRNYYYYMMDDSENDERRECEIVER--S.xls

MIRN	Type of form being sent
YYYY	Year
MM	Month
DD	Day
SENDER	Acronym for market participant sending MIRN
RECEIVER --	Acronym for market participant receiving MIRN
S	Sequence (1, 2, 3, etc.) to support multiple files sent on a single day from the same "Sender" to the same "Receiver"

File Name Examples:
MIRN20000626APSNWE1.XLS
MIRN20000626APSESSRP1.XLS
MIRN20000626APSNWE2.XLS
MIRN20000626APSESSRP2.XLS

12.2.1.2 Customer Switch from Bundled Service to DA Overview – Process #2

The MIRN was developed by the ACC Process Standardization Working Group (PSWG) and is subject to change based on future work by the PSWG.

The MIRN form is used to communicate meter installation/removal information.

The ESP and MRSP must receive a completed MIRN anytime meter activity is performed. The completed MIRN must be received within 3 business days of the meter install/removal.

General Instructions

1. The timing requirements covered in this Handbook are based on business days. The day of the event is considered day zero and days from that event are to be counted + or – from the day of the event. **Example**: "3 business days after the exchange" = Exchange took place on December 4, 2000, the MIRN must be returned no later than the end of business on December 7, 2000.

2. UDC will complete the MIRN with the information collected at the meter install/removal time for each meter located at the site.

3. UDC must return the completed MIRN to the ESP or provide a Meter Data Communication Request (MDCR) with reschedule/unschedule date within 1 business day of the scheduled meter exchange date.

4. Unless mutually agreed upon, UDC will return the meter within 15 business days of the removal. UDC will contact the ESP to determine if the meters will be shipped or picked up.

5. The MIRN form will be e-mailed as an Excel worksheet. The maximum number of MIRN's per worksheet is twenty (20)

6. There are 2 versions of the MIRN form available for use, they are:

    1. MIRN V1 – enter information on each individual form, which will link to a spread sheet **view only** version. Do **not** change any information on the spreadsheet in this version, as the information will not bridge to the individual form.
    2. MIRN V1SS – enter information on the spreadsheet, which will link to individual **view only** version of the forms. Do **not** change any information on the individual forms in this version, as the information will not bridge to the spreadsheet.

File Naming Convention
MIRNYYYYMMDDSENDERRECEIVER--S.xls

MIRN	Type of form being sent
YYYY	Year
MM	Month
DD	Day
SENDER	Acronym for market participant sending MIRN
RECEIVER--	Acronym for market participant receiving MIRN
S	Sequence (1, 2, 3, etc.) to support multiple files sent on a single day from the same "Sender" to the same "Receiver"

File Name Examples:
MIRN20000626APSNWE1.XLS
MIRN20000626APSNWE2.XLS
MIRN20000626APSESSRP1.XLS

12.2.3 MIRN Samples

12.2.3.1 Bundled Service to DA – Process #1

Refer to Appendices I

12.2.3.1 Bundled Service to DA – Process #2

Refer to Appendices J

12.3 MIRN Field Definitions and Requirements

Refer to Appendices K

12.4 UDC/ESP Responsibility Begins and Ends

There may be differences in the requirements to post data based on the types of meters that are being exchanged. If a non-IDR meter is involved in the exchange, it may be difficult for the biller for the non-IDR meter to ensure that the customer is not being billed for a particular interval(s) more than once. The following scenarios provide requirements for posting of meter data and the identification of when the ESP/UDC responsibilities begin and end.

- Non-IDR to IDR exchange (i.e. Process #1 Initial switch Bundled to DA)-Non-IDR UDC meter is being removed. DA IDR meter is installed and programmed at 2:10. The MRSP is responsible for posting beginning data starting at the first full fifteen-minute interval after the DA meter is installed and programmed. The first interval posted to the UDC by the MRSP is the 2:15 to 2:30 interval. The responsibility would begin/end at 2:15 for the Providers (applies for all UDCs except for those UDCs where the switch occurs on the read date. **NOTE:** UDC practice is to estimate and bill the customer for unaccounted for usage if the meter id out of the socket greater than 15 minutes (Refer to Lost Registration section 12.5).

- IDR to Non-IDR meter exchange (i.e. Process #2 Switch from DA to Bundled) –Non-IDR UDC meter is being installed. Non-IDR UDC meter is installed at 2:10. The MRSP is responsible for posting ending data up through the last full fifteen-minute interval prior to the installation of the UDC meter. The ending interval posted by the MRSP to the UDC will be the 1:45 to 2:00

interval. The ESPs responsibility would end at 2:00 (applies for all UDCs except for those UDCs where the switch occurs on the read date).

- IDR to IDR meter exchange (i.e. ESP to ESP switch involving the removal of an IDR meter and an installation of a new IDR meter) – New IDR meter is installed at 2:10. The ending interval posted by the MRSP to the UDC for the removed IDR meter must include the 2:00 to 2:15 interval. The beginning interval posted by the MRSP to the UDC for the new meter must start with the 2:15 to 2:30 interval. The responsibility would begin/end at 2:15 for the Providers (applies for all UDCs except for those UDCs where the switch occurs on the read date).

12.5 Lost Registration

Lost registration occurs when the customer has power to the site but there is no meter in the socket registering the usage. Typically, the calculation of lost registration is calculated from the time when the meter is removed until the time the meter is installed. The AZ UDCs have agreed to a consistent method for requiring and calculating lost registration when a customer is moving from Bundled to DA Service. In the AZ, lost registration is calculated when the meter is out of the socket more than 15 minutes. Th MSP must clock the disk and calculate the current kW or equivalent (displayed instantaneous kW on meter) of the newly installed meter and indicate it on the MIRN form. This information will be used to calculate and bill the customer on their Final Bundled bill. If this information is not received, the UDC to resolve the situation will contact the MSP.

12.6 Re-installation of UDC meter

If while performing a meter exchange, the MSP identifies problems that require the MSP to re-install the UDC meter the MSP must:

- Re-schedule using the MDCR form.
- Identify the lost registration information in the remark section of the MDCR, which must include, time of meter removal, time of re-installation, read upon removal, and clocked kW.

12.7 Meter Communication Connection)

Pending future development (Issue 41/103)

12.8 New Meter Start Reads

Although many UDCs require new meters to be set with a starting read of zero, there are some differences between the UDCs.

*Refer to UDC for requirements**.***

Chapter 13 – REPLACEMENT OF EXISTING / DEFECTIVE EQUIPMENT

13.1 Introduction

This section will cover the responsibilities of the MSP and UDC when discovering damaged or altered meters or metering equipment. These responsibilities apply when the MSP or UDC is exchanging the meter to switch a customer to DA or return a customer to Bundled from DA.

13.2 MSP Responsibilities

If an MSP discovers damaged or altered meters or metering equipment, the MSP should pull off the job, leaving the site as found and call the UDCs Metering Point of Contact for coordination of work. The UDC will assess the problem within 2 business days and advise the MSP of the approximate length of time to make repairs. The UDC will contact the MSP when the work is complete. If the MSP discovers an unsafe condition, they must contact the UDC immediately.

13.3 UDC Responsibilities

If the UDC discovers damaged or altered meters or metering equipment, at their discretion, the meter exchange will either take place or they will back off the job and contact the ESP for coordination of work and notification. If the UDC backs off the job, the normal re-scheduling requirement via the MDCR will apply.

13.4 Returning Meters

This section covers the responsibilities of the MSP and the UDC for returning meters to the appropriate party after removal.

13.4.1 MSP Responsibilities

When an MSP removes a UDC meter, the meter must be returned to the UDC within 15 business days of the removal. Designated locations to physically deliver meters, shipping options, charges for damaged/lost meters, etc. may vary between UDCs.

Refer to UDC for requirements.

13.4.2 UDC Responsibilities

When a UDC removes a non-UDC owned meter, the UDC will return the meter within 15 business days of the removal and

contact the ESP, via e-mail to determine if the meters will be shipped or picked up. Some UDCs may have arranged to ship the meters to a predetermined shipping location for the ESP. If the MSP owns the meter, the UDC will contact the MSP via e-mail and carbon copy the ESP.

Chapter 14 – CHANGE OF PROVIDERS AND DISCONTINUANCE

Pending future development

Chapter 15 – TROUBLE CALLS / MADEN

Pending future development

Chapter 16 – BILLING FOR SERVICES / EQUIPMENT

16.1 Introduction

This section covers charges from the UDC for various services performed by the ESP/MSP. Additionally, this section addresses information needed for purchasing or selling meters and/or associated equipment.

16.2 Billing ESP/MSP for Worked Performed

UDCs will bill ESP (MSP, MRSP and/or customer if applicable) at least monthly for equipment, work performed, non-returned meters, site meet charges, from the previous month.

16.2.1 Site Meets

Charges for site meets may apply in the UDC service territories. The charges may vary depending upon UDC's services & fees. UDC requirements are published and are subject to change.

Refer to UDC for specific requirements.

16.2.1.1 MSP Missed Appointments

If the MSP fails to arrive within 30 minutes of the site meet time, or if the MSP fails to cancel one business day prior to the site meet, the UDC may charge the ESP.

Refer to UDC for specific requirements.

16.3 Buying and Selling Equipment

16.3.1 Meters, CT/VT & Associated Equipment

Options for purchasing equipment in the field, existing from stock or new stock may vary between UDCs.

Refer to UDC for specific requirements.

16.3.2 Locks

In situations where the MSP has cut a UDC lock to gain access to a customer site, the EPS or MSP may be charged for the lock in accordance with the UDCs applicable service fees.

Refer to UDC for specific requirements.

16.4 Meter Returns

The UDCs will charge for shipping non owned UDC meters back to the ESP or MSP. For meters that are not returned within 15 business days of the removal, the UDC may charge. Charges may vary between UDCs.

Refer to UDC for specific charges.

Chapter 17 – METER TESTING

Pending future development

Chapter 18 – INQUIRY AND COMPLAINTS

Pending future development

Chapter 19 – RECORD KEEPING

Pending future development

Chapter 20 – AUDITING AND REPORTING

Pending future development

Chapter 21 – PERFORMANCE MONITORING

Pending future development

APPENDICES

A – Process Flow - Customer switch from Bundled Service to DA

Insert Flow

B – Process Flow - Customer switch from DA to Bundled Service

Insert Flow

C – EMI Sample Form

D – EMI Field Definitions and Requirements

E – EPA Sample Form

F – EPA Field Definitions and Requirements

G – MDCR Sample Form

H – MDCR Field Definitions and Requirements

I – MIRN Sample Form- Switch from Bundled Service to DA (Process 1)

J – MIRN Sample Form -Switch from DA to Bundled Service (Process 1)

K – MIRN Field Definitions and Requirements

Metering Glossary
EMI Form Sample
MDCR Form Sample
MIRN Form Sample
EMI Data Elements
MDCR Data Elements
MIRN Data Elements
MADEN Form Sample
MADEN Data Elements