Oracle Utilities Customer Care and Billing Release 2.3.1

Utility Reference Model

5.6.3.1 Manage Meters

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Oracle Utilities Customer Care and Billing Utility Resource Model 5.6.3.1, Release 2.3.1

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Chapter 1

Overview

This chapter provides a brief description of the Manage Meters business process and associated process diagrams. This includes:

- **Brief Description**
  - **Actors/Roles**

Brief Description

Business Process: 5.6.3.1 Manage Meters

Process Type: Sub Process

Parent Process: 5.6.3 Manage Supplies (CCB)

Sibling Processes: 5.6.3.2 Manage Items, 5.1.5.1 Manage Metered Site, 5.1.5.2 Manage Un-Metered Site

When an organization purchases Meters for inventory and installation the Meters are recorded in CC&B. This process describes how Meters are entered in CC&B inventory as well as maintenance of the Meter Record in the system.

Every meter must have at least one configuration in order to measure and store meter reads for the meter. A meter without meter reads cannot be billed (or linked to a service agreement. A meter configuration has one or more registers. The number is dependent on how many things are measured. For example, a meter that measures kilowatt-hours and kilowatt (demand) will have two registers.

Metering devices measure consumption and are classified by service type, such as electric meters, gas meters, and water meters. The Meter record:

- Contains specific information about meters such as meter type, manufacturer, and model.

The Meter Configuration record:

- Contains information about the type of consumption a meter measures. This information can change over time. The system maintains how the meter looks over time so billing reflects historical consumption.
- Every meter configuration contains one or more registers. Each register references the unit measured and how the measured quantity is manipulated before it is billed.

The CSR or Authorized User can add a single Meter record or add multiple Meter records at one time using a replication feature. Once installed, the Meter measures the consumption used at a service point. The Meter's history can be tracked while in service as well as stock location while in inventory.

Actors/Roles

The Manage Meters business process involves the following actors and roles:

- **CSR**: CSR or Authorized User of the Customer Care and Billing application.
- **CC&B**: The Customer Care and Billing application. Steps performed by this actor/role are performed automatically by the application, without the need for user initiation or intervention.
- **Third Party**: Third Party application or User that can request to add and /or maintain meter or item data

Chapter 2

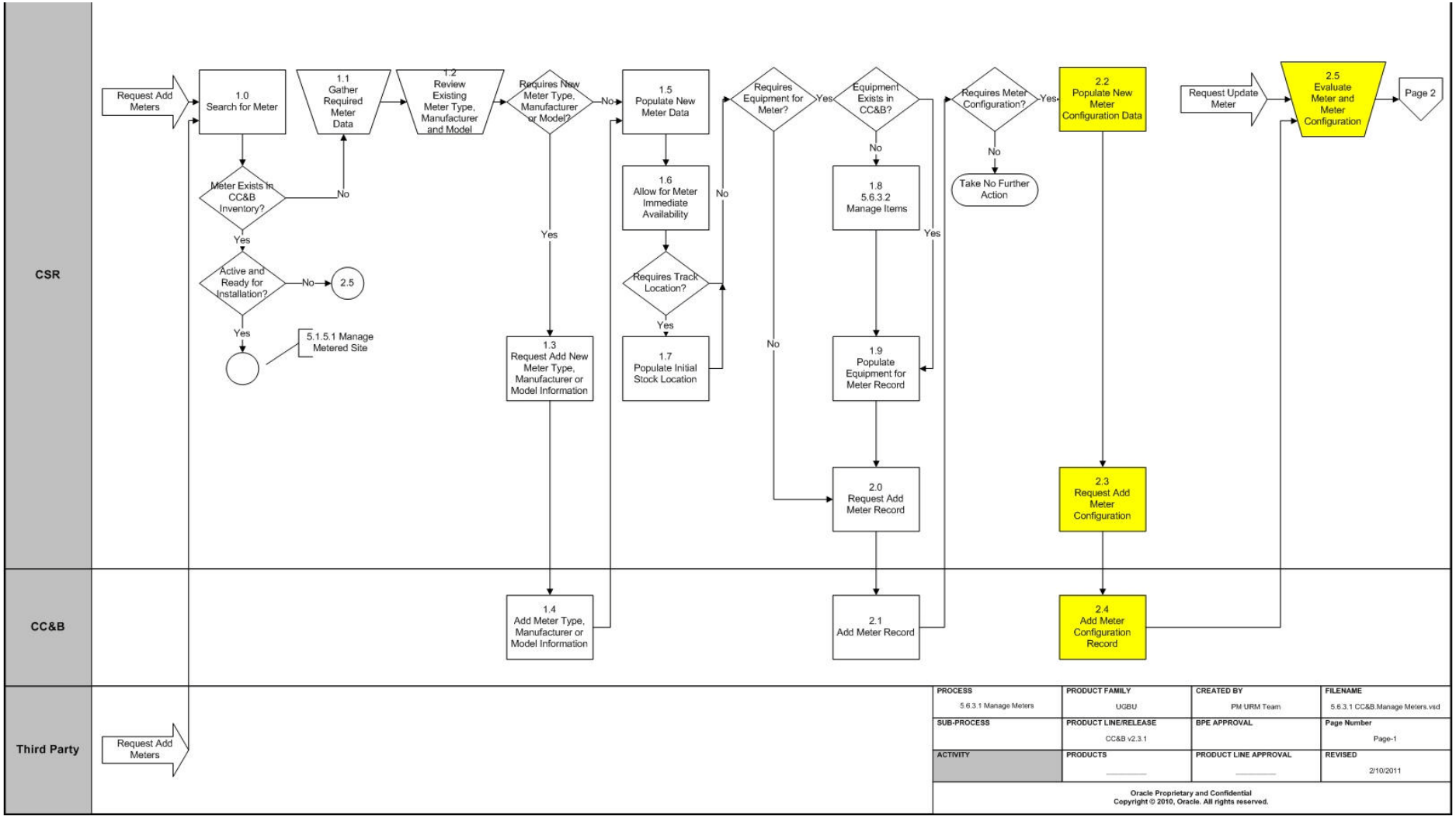
Detailed Business Process Model Description

This chapter provides a detailed description of the Manage Meters business process. This includes:

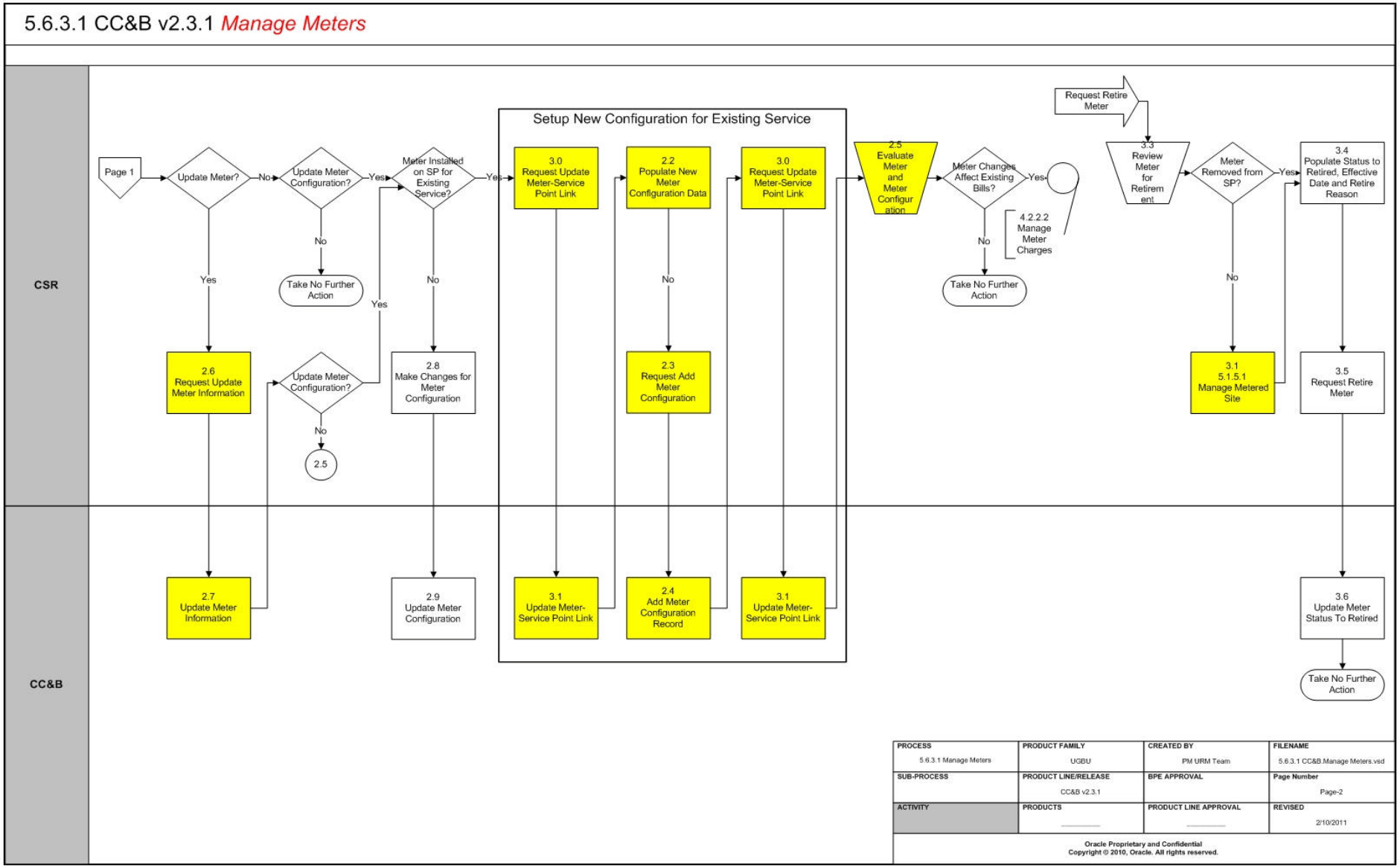
- **Business Process Diagrams**
  - **Manage Meters (Page1)**
  - **Manage Meters (Page2)**
  - **Manage Meters (Page3)**
- **Manage Meters Description**
- **Related Training**

Business Process Diagrams

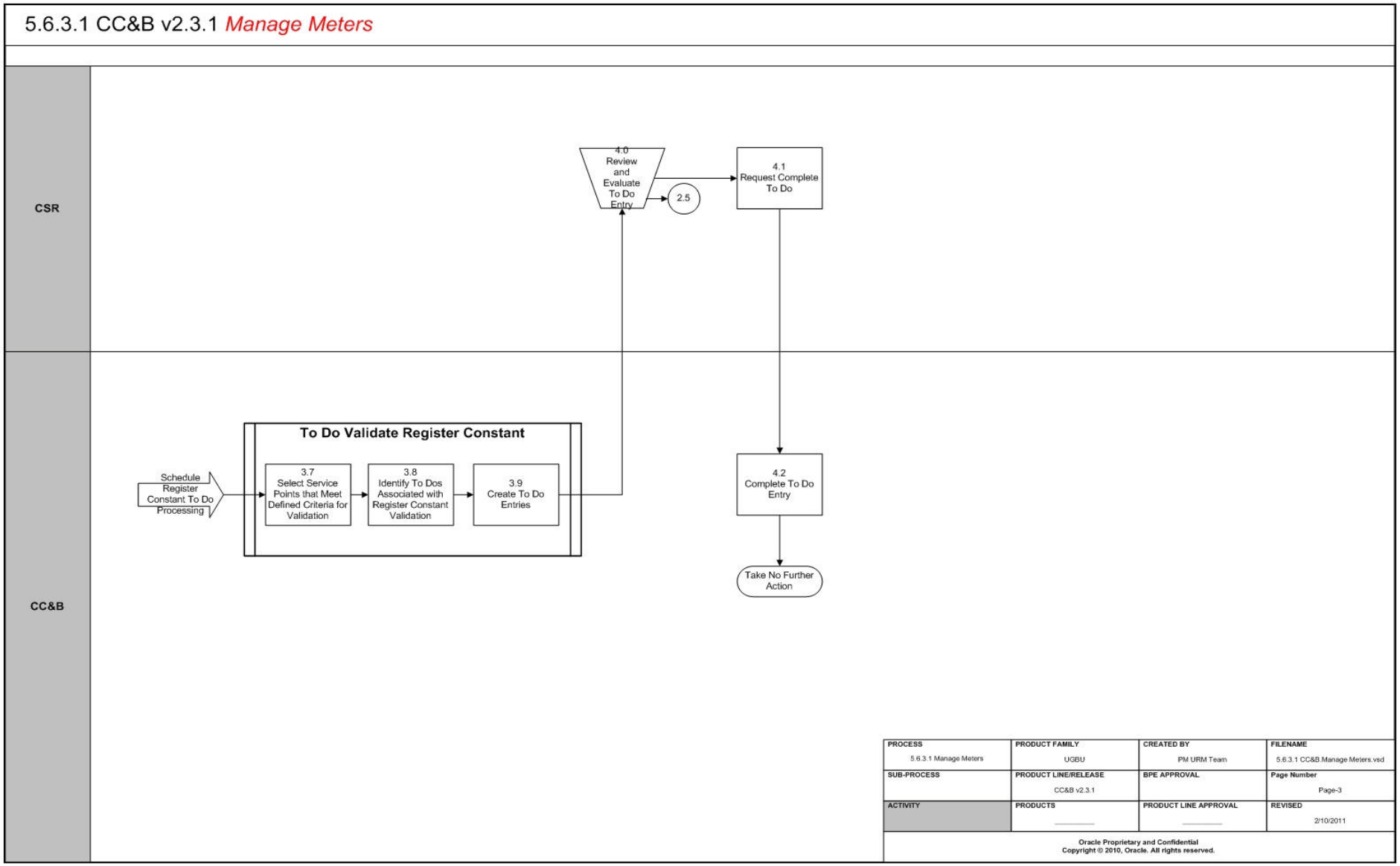
Manage Meters (Page1)



Manage Meters (Page2)



Manage Meters (Page3)



Manage Meters Description

This section includes detailed descriptions of the steps involved in the Manage Meters business process, including:

- **1.0 Search for Meter**
- **1.1 Gather Required Meter Data**
- **1.2 Review Existing Meter Type, Manufacturer and Model**
- **1.3 Request Add New Meter Type, Manufacturer or Model Information**
- **1.4 Add Meter Type, Manufacturer or Model Information**
- **1.5 Populate New Meter Data**
- **1.6 Allow for Immediate Meter Availability**
- **1.7 Populate Initial Stock Location**
- **1.8 5.6.3.2 Manage Items**
- **1.9 Populate Equipment for Meter Record**
- **2.0 Request Add Meter Record**
- **2.1 Add Meter Record**
- **2.2 Populate New Meter Configuration Data**
- **2.3 Request Add Meter Configuration**
- **2.4 Add Meter Configuration Record**
- **2.5 Evaluate Meter and Meter Configuration**
- **2.6 Request Update Meter Information**
- **2.7 Update Meter Information**
- **2.8 Make Changes for Meter Configuration**
- **2.9 Update Meter Configuration**
- **3.0 Request Removal of Meter for New Meter Configuration**
- **3.1 5.1.5.1 Manage Meter Site**
- **3.2 Request Reinstall of Meter with New Meter Configuration**
- **3.3 Review Meter for Retirement**
- **3.4 Populate Status to Retired, Effective Date and Retire Reason**
- **3.5 Request Retire Meter**
- **3.6 Update Meter Status to Retired**
- **3.7 Select Service Points that Meet Defined Criteria for Validation**
- **3.8 Identify To Dos Associated with Register Constant Validation**
- **3.9 Create To Do Entries**
- **4.0 Review and Evaluate To Do Entry**
- **4.1 Request Complete To Do**
- **4.2 Complete To Do Entry**

1.0 Search for Meter

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User searches for the given Meter in CC&B to determine if it is in existing inventory. Searching for the Meter can be accomplished through Meter/Item Search using various search criteria.

If configuration objects are listed, put them all in tables:

Entities to Configure
Geo Type
Installation Options
Stock Location

Available Algorithm
CI_MTRI-DFLT -This Installation Options algorithm formats the Meter Information for display throughout CC&B. This algorithm formats the "Meter Info" that appears throughout the system: Meter Type, Badge Number, Serial Number, Meter Status, Location Information

1.1 Gather Required Meter Data

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: Using a purchase order, packing slip or other meter receipt information, the CSR or Authorized User reviews and collects the needed information for entering meters in CC&B. Information includes Meter type, badge numbers, serial numbers, Manufacturer, Model, and measuring component information.

Entities to Configure
Meter Type
Manufacturer
Model

1.2 Review Existing Meter Type, Manufacturer and Model

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The new Meters may be from a new vendor or be a new type of Meter. The CSR or Authorized User determines if the new Meters require any new set up information configured in CC&B. Meter Type defines the type of service associated with this meter. It also defines characteristics common to all meters of a given type and the type of equipment that can be linked to the meter.

Entities to Configure
Meter Type
Manufacturer
Model

1.3 Request Add New Meter Type, Manufacturer or Model Information

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: If new setup information is required, the CSR or Authorized User enters this information in CC&B.

Entities to Configure
Meter Type
Manufacturer
Model

1.4 Add Meter Type, Manufacturer or Model Information

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: Meter Type, Manufacturer, or Model Information is added in CC&B.

Entities to Configure
Meter Type
Manufacturer
Model

1.5 Populate New Meter Data

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User enters the new Meter Information for the Meter to be placed in inventory. A Badge Number is assigned. Typically this is the stamped number from the

manufacturer. Serial Number, Date Received as well as Meter Type, Manufacturer, and Model are identified.

Entities to Configure
Meter Type
Manufacturer
Model
Meter ID Type
Characteristic Type

1.6 Allow for Immediate Meter Availability

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The Meter must be considered Active to be installed at a Service Point. Sometimes organizations track meters in inventory prior to receipt of the Meters. In this case the Meters are assigned an Ordered status and changed to Active when received.

1.7 Populate Initial Stock Location

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: If this Meter's location is being tracked, a physical stock location is identified.

Entities to Configure
Stock Location

1.8 5.6.3.2 Manage Items

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: At times additional equipment may be added to the Meter record. The Equipment record must be in CC&B inventory. Refer to 5.6.3.2 Manage Items.

Entities to Configure
Item Type

1.9 Populate Equipment for Meter Record

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User adds Equipment information to be included with the Meter record.

Entities to Configure
Item Type

2.0 Request Add Meter Record

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: When all information is added for the Meter, the CSR or Authorized User saves the record.

2.1 Add Meter Record

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Meter record is added in CC&B.

Entities to Configure
Meter Type
Manufacturer
Model
Meter ID Type
Characteristic Type
Meter Configuration Type

Business Object
DR_Meter - Data Replicator - Meter
C1-MeterLocation - Meter Location Description

2.2 Populate New Meter Configuration Data

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: In order to measure consumption and record Meter Reads, the Meter requires a Configuration record. The Meter's configuration defines how the system calculates consumption and how the billing process uses consumption. A Configuration record may change over time.

Meter Configurations are effective dated and can impact previous existing Bills. It is recommended to add a new Meter Configuration when the Meter is reconfigured and has an impact on existing bills. The CSR or Authorized User enters the new Meter Configuration including: Effective Date, Configuration Type, Unit of Measure, Time of Use codes, Register Constants, Dial Format, and other information.

Entities to Configure
Unit of Measure
Time Of Use
Time of Use Group
Read Out Type
Characteristic Type
Characteristic Value
Meter ID Type
Protocol Codes

2.3 Request Add Meter Configuration

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: When all information is added for the new Meter Configuration, the CSR or Authorized User saves the record.

2.4 Add Meter Configuration Record

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The new Meter Configuration record is added in CC&B.

Entities to Configure
Meter Configuration Type
Unit of Measure
Time Of Use
Time of Use Group
Read Out Type
Characteristic Type
Characteristic Value
Meter ID Type
Protocol Codes

Business Object
CI_MeterConfiguration - Meter Configuration DR_MeterConfiguration - Data Replicator - Meter Configuration

2.5 Evaluate Meter and Meter Configuration

See for the **Manage Meters (Page1)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User reviews and verifies the accuracy of the newly entered Meter and Meter Configuration information. The CSR or Authorized User may use the Replication feature to enter a full shipment or group of meters at the same time. The CSR or Authorized User also reviews Meter and Meter Configuration information prior to making any changes for an existing Meter and Meter Configuration. Changes may or may not impact existing Bills. A new configuration is created when the Meter is reconfigured. All existing information was accurate at the time it was entered, but now something about the meter's configuration has changed. The historical information is retained, and the new configuration has its own unique identity in the system.

2.6 Request Update Meter Information

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: At times it may be necessary to update meter information. The CSR or Authorized User enters the required information for the change.

2.7 Update Meter Information

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The meter information is updated in CC&B.

2.8 Make Changes for Meter Configuration

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User determines to make changes for the existing Meter Configuration. These changes are required when some information was entered incorrectly prior to the billing process, can be changed without an impact to existing bills, or billing corrections will be made following the meter configuration changes.

2.9 Update Meter Configuration

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Meter Configuration is updated in CC&B.

3.0 Request Removal of Meter for New Meter Configuration

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The effective date of the Meter Configuration cannot overlap with the effective date period for any service point historical installation. This means a new Meter Configuration cannot be added while the Meter is installed and currently measuring consumption. The Meter is removed from the Service Point to add the new effective dated Meter Configuration.

3.1 5.1.5.1 Manage Meter Site

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: Refer to 5.1.5.1 Manage Meter Site for steps to remove a Meter and/or install a Meter.

3.2 Request Reinstall of Meter with New Meter Configuration

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The new effective dated Meter Configuration is now available for the Meter. The Meter can be reinstalled in CC&B.

3.3 Review Meter for Retirement

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: At times it is determined a Meter cannot be repaired or requires removal due to age of the meter. Some organizations' business rules require removal of Meters when they reach a certain age. Once the Meter is removed from the Service Point it is changed to Retired in CC&B.

3.4 Populate Status to Retired, Effective Date and Retire Reason

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User updates the Meter Status to Retired. A retire date and retire reason is entered.

Entities to Configure
Retire Reason

3.5 Request Retire Meter

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User saves the Meter Record with the updated retirement information.

Entities to Configure
Retire Reason

3.6 Update Meter Status to Retired

See for the **Manage Meters (Page2)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Meter is updated to Retired Status in CC&B.

3.7 Select Service Points that Meet Defined Criteria for Validation

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Group: To Do Validate Register Constant

Actor/Role: CC&B

Description: This background process selects all electric Metered Service Points for a given Service Cycle evaluating all Service Points defined with Current Transformers and Potential Transformers. Ratios are calculated for each. Anomalies are highlighted and To Do Entries created. It then finds the meter currently installed at the service point and extracts its dial constant from an identified meter characteristic. It then calculates a register constant by taking the product of all CT ratios and PT ratios and multiplying this value by the meter's dial constant. It then compares the calculated register constant with the actual register constant of every register linked to the meter. Anomalies are highlighted and To Do entries created

Entities to Configure
To Do Type
To Do Role
Characteristic Type
Characteristic Value
Meter Type
Item Type

Customizable Process
REGCNST- Register Constant Validation - This background process is used to validate Register Constants for specifically defined Meters

3.8 Identify To Dos Associated with Register Constant Validation

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: To Do's related to Register Constant anomalies are identified.

Entities to Configure
To Do Type To Do Role Characteristic Type Characteristic Value Meter Type Item Type

Customizable Process
REGCNST- Register Constant Validation - This background process is used to validate Register Constants for specifically defined Meters.

3.9 Create To Do Entries

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: To Do Entries are created in CC&B for review by a CSR or Authorized User.

Entities to Configure
To Do Type To Do Role Characteristic Type Characteristic Value Meter Type Item Type

Customizable Process
REGCNST- Register Constant Validation - This background process is used to validate Register Constants for specifically defined Meters.

4.0 Review and Evaluate To Do Entry

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User reviews the To Do Entry information as well as the Meter and Service Point records. There is investigation and the CSR or Authorized User determines the next steps for resolution for the Register Constant discrepancy.

4.1 Request Complete To Do

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User marks the To Do Entry as complete and requests completion of the To Do Entry. The CSR or Authorized User may add comments or a log entry for future reference.

4.2 Complete To Do Entry

See for the **Manage Meters (Page3)** business process diagram associated with this activity.

Actor/Role: CC&B

Description: The To Do Entry is updated to Complete status in CC&B.

Related Training

The following User Productivity Kit (UPK) modules provide training related to this business process:

- Oracle Utilities UPK for Customer Care and Billing, User Tasks