Oracle Utilities Customer Care and Billing Release 2.3.1

Utility Reference Model

4.2.2.2 Manage Meter Charges

July 2012

ORACLE®

Oracle Utilities Customer Care and Billing Utility Reference Model 4.2.2.2, Release 2.3.1

Contents

Chapter 1

Overview

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

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

Brief Description

Business Process: 4.2.2.2 Manage Meter Charges

Process Type: Sub Process

Parent Process: 4.2.2 Manage Bill

Sibling Processes: 4.2.2.3 Manage Item Charges, 4.2.2.4 Manage External and Miscellaneous Charges, 4.2.2.5 Manage Loan Charges, 4.2.2.6 Manage Deposit Charges, 4.2.1.3 Validate Meter Reads, 4.3.3.1 Manage Payments

This process describes Billing for Metered services. A Bill is used to communicate financial obligations to the customer. The customer may have many services with an organization. The customer receives a Bill at regularly scheduled intervals for each established Account. The total amount owed, as well as financial and consumption details for each service, is placed on a Bill for payment within a set time period.

Most bills are produced automatically in a Batch Billing process. If errors are detected, the Bill is saved with an error status for review. The CSR or Authorized User can create Bills manually if required. If a Bill is generated as valid but has missing or incomplete information, the CSR or Authorized User has the ability to modify the bill.

When a Bill for metered service is created, consumption is calculated first. The system then applies the service agreement's rate to the consumption to calculate how much the customer owes. This information is placed on a Bill Segment and a financial record is also created.

The Bill contains information about financial activity since the last time the customer was billed. The Bill will include information for Payments, Adjustments, and Bill corrections in addition to the current Bill information. The organization can communicate pertinent information to the customer through the use of Bill messages. Bills will be sent to every person linked to the account who requires a copy of the Bill.

It is possible to rebill at a later date if missing or inaccurate information is discovered.

The customer is responsible for payment by a given due date. If the Customer does not pay, CC&B can detect the overdue amounts and provide notification.

Actors/Roles

The Manage Meter Charges business process involves the following actors and roles.

- **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.

- **CSR CC&B:** CSR or Authorized User of the Customer Care and Billing application.

Chapter 2

Detailed Business Process Model Description

This chapter provides a detailed description of the Manage Meter Charges business process. It includes:

- **Business Process Diagrams**

    - **Manage Meter Charges Page 1**

    - **Manage Meter Charges Page 2**

    - **Manage Meter Charges Page 3**

    - **Manage Meter Charges Page 4**

    - **Manage Meter Charges Page 5**

- **Manage Meter Charges Description**

- **Installation Options - Control Central Alert Algorithms**

- **Rate Schedule Algorithms and Major Configuration Information**

- **Related Training**

ss Process Diagrams

Meter Charges Page 1

C&B v2.3.1 *Manage Meter Charges*

Request for Bill

Process Exceptions

Request to Bill Metered Services Manually

1.0 Search for Customer

1.1 Evaluate Customer Account Eligibility for Bill

Is SA for Metered Service Point? — Yes / No

4.2.2.3 Manage Item Charges, 4.2.2.4 Manage External and Miscellaneous Charges, 4.2.2.5 Manage Loan Charges, 4.2.2.6 Manage Deposit Charges

1.2 Enter Specific Data for Bill Segment(s) Calculation

1.3 Request Generate New Bill Segment(s)

2.2 Review Bill Segment (s)

Generated Successfully? — Yes / No

2.9 Request Freeze Bill Segment(s)

2.Review Bill Segment(s)

Delete Bill Segment? — Yes / No

One Bill Segment (Metered Service) Exists? — Yes / No

2.7 Request Delete Specific Bill Segment(s)

2.3 Request Changes for Recalculation of Metered Service's Bill

2.5 Request Delete Bill

2.4 Update Information

2.6 Delete Bill

2.8 Delete Bill Segment(s)

3.0 Freeze Bill Segment(s)

1.2

Still Requires Bill Metered Service? — Yes → 1.1 / No

Take No Further Action

Generate Bill Segment

Get Consumption

Allow Proration? — No / Yes

1.4 Determine Bill and Consumption Period, Service Point, Meter, and Meter Read

Meter Read Available? — Yes / No

Use This Read to replace Previous Estimation? — Yes / No

1.8 Determine and Cancel Applicable Estimated Segments

1.9 Calculate Bill Segment Lines and Create Bill Segment(s) Using Rates

2.0 Create Financial Transaction(s)

1.5 Determine Bill and Consumption Period, Service Point, Meter, and Meter Read

1.6 Verify Eligibility for Estimation

Estimate Meter Read

NetMeter? — Yes / No

1.7 Estimate Meter Read

Is Final Bill Segment? — No / Yes

2.1 Add Final Bill Switch for Bill Segment(s)

2.0.1 Format Online Presentation

PROCESS	PRODUCT FAMILY	CREATED BY	FILE
4.2.2.2 Manage Metered Charges	TUGBU	PM URM Team	
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page
	CC&B v2.3.1		
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVIS

Oracle Proprietary and Confidential
Copyright © 2010, Oracle. All rights reserved.

C&B v2.3.1 *Manage Meter Charges*

Flowchart elements:

- 6.5 → 6.6 Receives Bill → Take No Further Action
- age 1 → Requires Rebill? — No → Requires Cancel Bill Segment(s)? — No → Add Bill Message(s)? → 4.3 Request Complete Bill
- 5.7 Review Bill → Completed Successfully? — Yes → Reopen Bill? — N

Requires Rebill? — Yes → 3.1 Request Rebill Bill Segment(s)
- Undo Bill Segment(s)Rebill? — No → 2.9
- 3.3 Request Undo Rebill Bill Segment(s)
- 3.2 Update Bill Segment(s) to Pending Cancel and Create New Bill Segment(s)
- 3.4 Delete New Segment(s) and Return Original Bill Segment(s) to Frozen

Requires Cancel Bill Segment(s)? — Yes → 3.5 Request Cancel Frozen Segment(s)
- Undo Bill Segment(s) Cancel? — No → 3.9 Request Finalize Cancel Bill Segment(s)
- 3.7 Request Undo Cancel Bill Segment(s)
- 3.6 Update Bill Segment(s) to Pending Cancel
- 3.8 Return Original Bill Segment(s) to Frozen
- 4.0 Update Bill Segment(s) to Canceled

Add Bill Message(s)? — Yes → 4.1 Request Add Bill Message(s)
- 4.2 Add Bill Message(s)

Completed Successfully? — No → 5.8 Make Necessary Changes for Bill
- 2.4 Update Information

Reopen Bill? — Yes → 5.9 Request Reopen Bill
- 6.0 Update Current Bill to Reopen

Pre-Bill Completion
- 4.4 Create Bill Message
- Require Custom Message? — No → Excess Credit SA Exist? — No → Additional Financial Transactions for this Bill? — No
- Estimated Read? — No
- 4.6 Create Bill Messages Based on Configuration
- Apply Credit? — Yes → 4.8 Apply Credit to SA(s)
- 4.5 Create Estimated Meter Read Message
- Apply Credit? — No → 4.7 Keep Credit on Excess Credit SA
- 4.9 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount

Bill Completion
- 5.0 Determine Due Date, Late Payment Charge Date, and Credit Review Date
- Requires LPC Calculation? — Yes → 5.1 4.3.2.5a Manage Late Payment Charge
- Autopay for Account? — Yes → 5.2 4.3.1.1d Manage Autopay
- Requires Cancel Severance Process? — Yes → 5.3 4.3.2.2 Manage Severance Process
- Requires Cancel Write Off Process? — Yes → 5.4 4.3.2.5 Write Off Uncollectible Receivables

Post Bill Completion
- 5.5 Create Additional Required Bill Message(s)
- 5.6 Update Bill with Completion Details
- 6.3 Extract Bill for Printing

- 6.4 Print Bill → 6.5 Send Bill to Customer → 6.6

PROCESS	PRODUCT FAMILY	CREATED BY	FILE
4.2.2.2 Manage Metered Charges	TUGBU	PM URM Team	
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page
	CC&B v2.3.1		
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REV

Meter Charges Page 3

6.5 → **6.6 Receive Bill** → Take No Action

Batch Billing

Generate Bill Segment

Get Consumption

6.7 Select Accounts for Open Bill Cycle

6.8 Check Eligibility for Batch Billing

Allow Proration? — No

1.4 Determine Bill and Consumption Period, Service Point, Meter, and Meter Read

Meter Read Available? — Yes

Use This Read to replace Previous Estimation? — Yes

1.8 Determine and Cancel Applicable Estimated Segments — No

1.5 Determine Bill and Consumption Period, Service Point, Meter, and Meter Read — Yes

1.6 Verify Eligibility for Estimation — No

Estimate Meter Read

Netmeter? — No → **1.7** Estimate Meter Read — Yes

1.9 Calculate Bill Segment Lines and Create Bill Segment(s) Using Rates

Is Final Bill Segment? — No

Bill Segment Generated Successfully? — Yes

2.0 Create Financial Transaction(s)

2.1 Add Final Bill Switch for Bill Segment(s) — Yes

6.9 Highlight Bill Segment Exceptions — No

Freeze Bill Segment

3.0 Freeze Bill Segment(s)

Bill Segment Generated Successfully? — No

6.9 Highlight Bill Segment Exceptions

Bill Completion

Pre-Bill Completion

4.4 Create Bill Message

Require Custom Message? — No

Excess Credit SA Exist? — No

Additional Financial Transactions for this Bill? — Yes

5.0 Determine Due Date, Late Payment Charge Date, and Credit Review Date

Requires LPC Calculation? — No

Autopay for Account? — No

Requires Cancel Severance Process? — No

Requires Cancel Write Off Process? — No

Post Bill Completion

5.5 Create Additional Required Bill Message(s)

Estimated Read? — No — Yes

4.6 Create Bill Messages Based on Configuration — Yes

Apply Credit? — Yes

4.8 Apply Credit to SA(s)

4.9 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount

5.1 4.3.2.5 Manage Late Payment Charge — Yes

5.2 4.3.1.1d Manage Autopay — Yes

5.3 4.3.2.2 Manage Severance Process — Yes

5.4 4.3.2.5 Write Off Uncollectible Receivables — Yes

5.6 Update Bill with Completion Details

Completed Successfully? — No

4.5 Create Estimated Meter Read Message — Yes

4.7 Keep Credit on Excess Credit SA — No

7.0 Highlight Bill Exceptions

Schedule Batch Billing

6.4 Print Bill → **6.5** Send Bill to Customer → 6.6

PROCESS	PRODUCT FAMILY	CREATED BY	FILE
4.2.2.2 Manage Metered Charges	TUGBU	PM URM Team	
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page
	CC&B v2.3.1		
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REV

C&B v2.3.1 *Manage Meter Charges*

| 7.3 Evaluate and Investigate Error | → | 7.4 Resolve Error | 7.6 Request Complete To Do | Requires Rebill? | Yes 3.1 |

No

| 7.5 Update Data | 7.7 Complete To Do Entry | Take No Further Action |

Page 3

TO DO Bill Segment Error Process

| Schedule Bill Segment To Do Error Process | 7.1 Identify Bill Segments in Error Status | 7.2 Create Bill Segment Exceptions To Do |

Schedule Bill To Do Error Process

| 7.3 Evaluate and Investigate Error | → | 7.4 Resolve Error | 7.6 Request Complete To Do | Requires Complete Bill? | Yes |

No

| 7.5 Update Data | 7.7 Complete To Do Entry | Take No Further Action |

TO DO Bill Error Process

| 7.8 Identify Bills in Error Status | 7.9 Create Bill Exceptions To Do |

PROCESS	PRODUCT FAMILY	CREATED BY	FILE
4.2.2.2 Manage Metered Charges	TUGBU	PM URM Team	
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page
	CC&B v2.3.1		
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVI

C&B v2.3.1 *Manage Meter Charges - Mass Cancellation and Reopen*

| 8.0 Evaluate Entire Batch of Bills | Requires Mass Cancellation? | —No— | | Requires Mass Reopen? | —No— | Take No Further Action |

Mass Cancellation Process

Batch Billing Process

| 8.1 Identify Bill Cycle, Window Start Date or Given Bill Date | 8.2 Cancel Entire Batch of Bill | Batch Bill Again? | —Yes— | 6.7 |

No
Take No Further Action

Mass Reopen Process

| 8.1 Identify Bill Cycle, Window Start Date or Given Bill Date | 8.3 Reopen Entire Batch of Bill | Batch Bill Again? | —Yes— | 6.7 |

No
Take No Further Action

PROCESS	PRODUCT FAMILY	CREATED BY	FILE
4.2.2.2 Manage Metered Charges	TUGBU	PM URM Team	
SUB-PROCESS	**PRODUCT LINE/RELEASE**	**BPE APPROVAL**	**Page**
	CC&B v2.3.1		
ACTIVITY	**PRODUCTS**	**PRODUCT LINE APPROVAL**	**REVI**

Manage Meter Charges Description

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

- **1.0 Search for Customer**

- **1.1 Evaluate Customer Account Eligibility for Bill**

- **1.2 Enter Specific Data for Bill (Segment)(s) Calculation**

- **1.3 Request Generate New Bill (Segment)(s)**

- **1.4 Determine Bill Period, Consumption Period, Service Point, Meter, and Meter Read**

- **1.5 Determine Prorated Bill Period, Consumption Period, Service Point, Meter, and Meter Reads**

- **1.6 Verify Eligibility for Estimation**

- **1.7 Estimate Meter Read**

- **1.8 Determine and Cancel Applicable Estimated Segments**

- **1.9 Calculate Bill Segment Lines and Create Bill Segment(s) Using Rates**

- **2.0 Create Financial Transaction(s)**

- **2.1 Add Final Bill Switch for Bill Segment(s)**

- **2.0.1 Format Online Presentation**

- **2.2 Review Bill Segment(s)**

- **2.3 Request Changes for Recalculation of Metered Service's Bill**

- **2.4 Update Information**

- **2.5 Request Delete Bill**

- **2.6 Delete Bill**

- **2.7 Request Delete Specific Bill Segment(s)**

- **2.8 Delete Bill Segment(s)**

- **2.9 Request Freeze Bill Segment(s)**

- **3.0 Freeze Bill Segment(s)**

- **3.1 Request ReBill Bill Segment(s)**

- **3.2 Update Bill Segment(s) to Pending Cancel and Create New Bill Segment(s)**

- **3.3 Request Undo ReBill Bill Segment(s)**

- **3.4 Delete New Segment(s) and Return Original Bill Segment(s) to Frozen**

- **3.5 Request Cancel Frozen Segment(s)**

- **3.6 Update Bill Segment(s) to Pending Cancel**

- **3.7 Request Undo Cancel Bill Segment(s)**

- **3.8 Return Original Bill Segment(s) to Frozen**

- **3.9 Request Finalize Cancel Bill Segment(s)**

- **4.0 Update Bill Segment(s) to Canceled**

- **4.1 Request Add Bill Message(s)**

- **4.2 Add Bill Message(s)**

- **4.3 Request Complete Bill**

- **4.4 Create Bill Message**

- **4.5 Create Estimated Meter Read Message**

- **4.6 Create Bill Messages Based on Configuration**

- **4.7 Keep Credit on Excess Credit SA**

- **4.8 Apply Credit to SA's**

- **4.9 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount**

- **5.0 Determine Due Date, Late Payment Charge Date, and Credit Review Date**

- **5.1 4.3.2.5a Manage Late Payment Charge**

- **5.2 4.3.1.1d Manage Autopay**

- **5.3 4.3.2.2 Manage Severance Process**

- **5.4 4.3.2.5 Write Off Uncollectible Receivables**

- **5.5 Create Additional Required Bill Message(s)**

- **5.7 Review Bill**

- **5.8 Make Necessary Changes for Bill**

- **5.9 Request Reopen Bill**

- **6.0 Update Current Bill to Reopen**

- **6.1 Request Changes to Impact Balance**

- **6.2 Update Balance**

- **6.3 Extract Bill for Printing**

- **6.4 Print Bill**

- **6.5 Send Bill to Customer**

- **6.6 Receives Bill**

- **6.7 Select Accounts for Open Bill Cycle**

- **6.8 Check Eligibility for Batch Billing**

- **6.9 Highlight Bill Segment Exceptions**

- **7.0 Highlight Bill Exceptions**

- **7.1 Identify Bill Segments in Error Status**

- **7.2 Create Bill Segment Exceptions**

- **7.3 Evaluate and Investigate Error**

- **7.4 Resolve Error**

- **7.5 Update Data**

- **7.6 Request Complete To Do**

- **7.7 Complete To Do Entry**

- **7.8 Identify Bills in Error Status**

- **7.9 Create Bill Exceptions**

- **8.0 Evaluate Entire Batch of Bills**

- **8.1 Identify Bill Cycle, Window Start Date or Given Bill Date**

- **8.2 Cancel Entire Batch of Bills**

- **8.3 Reopen Entire Batch of Bills**

1.0 Search for Customer

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: Upon receipt of request or inquiry for Billing the CSR or Authorized User accesses Control Central Search to locate the customer in CC&B.

Entities to Configure
Installation Options

1.1 Evaluate Customer Account Eligibility for Bill

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: CC&B provides the CSR or Authorized User with valuable insight and overall analysis of the Customer's financial situation. The CSR or Authorized User evaluates the Customer's Account. Account Financial History, Premise and Service Agreement Billing History, Credit Rating, and Credit and Collection History may be reviewed. Control Central Alerts and other Dashboard information assist the CSR or Authorized User in determining eligibility for adding new Bill or any rebilling based on established business rules.

Entities to Configure
Installation Options

Available Algorithms
Installation Options - Control Central Alert Algorithms
Installation Options - BIFN-BL-INFO This algorithm formats the Bill Information that appears throughout the system. Four different formats are used.

1.2 Enter Specific Data for Bill (Segment)(s) Calculation

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: If the CSR or Authorized User identifies a need to create a Bill for the customer, the CSR or Authorized User provides information about the Billing period for the bill to be created. The CSR or Authorized User must specify Cutoff Date or Use Schedule to determine the end date of each Bill Segment Bill period. The Accounting Date defaults to current date however the CSR

or Authorized User may change this date based on established business rules. The CSR or Authorized User may choose to allow for system estimation and will mark accordingly.

1.3 Request Generate New Bill (Segment)(s)

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The Manual billing process consists of several steps. The first step is to request system to calculate and create the Bill and Bill Segment. The CSR or Authorized User requests to generate a new online Bill. This online Bill may contain one or more segments. If only one Service Agreement exists for the Account, then only one Bill Segment is created.

> **Note:** The "Generate" function is used when creating a new Bill, Bill Segment, or re-generating an existing freezable or error segment. A deleted Bill Segment may be generated again once information is changed.

1.4 Determine Bill Period, Consumption Period, Service Point, Meter, and Meter Read

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Get Consumption

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: As a first step of Metered Service Bill Segment calculation, CC&B determines consumption to be billed. The system determines the Bill Period boundary, and next determines the Consumption Period boundary. The system retrieves appropriate Service Point, Meter, and associated Meter Reads. Meter Reads determine the start and end date for the Bill Segment Consumption Period.

Manual Process: CSR or Authorized User provides the Bill period details if required. If not, the system defaults Bill period dates following the business rules:

Start date:

-If this is the first Bill Segment for the Service Agreement, the start date is set to the start date of the Service Agreement

-If this is the regular Bill Segment the start date is the previous Bill Segment's end date.

End Date:

-If this is the last Bill Segment for the Service Agreement, Bill Segment's the end date is the Service Agreement's end date

-If this is the regular Bill Segment end date is the end date of Bill Cycle schedule window.

Automated Process: System identifies start and end date for the billing period using the same business rules as described in manual process.

The consumption period is the inclusive period passed to the Rates. It is used for calculating the charges for the Bill Segment. The system looks at every Service Point linked to the Service Agreement. The system retrieves each meter linked to each Service Point during the Bill period (a service point has multiple meters when a meter exchange has occurred during the Bill period).

Note: The system ignores Service Points that are not billable, disconnected before the Bill period started, or are yet to be connected as of the Bill end date.

Entities to Configure

Frequency

Bill Cycles

Bill Segment Type

Rates

SA Types

Available Algorithms

BSGC-SP - This algorithm is used to get consumption from the SPs linked to the SA. To determine consumption from meters, meter reads are retrieved from the Meter Configurations installed at the SA's SPs during the Bill period. The reads are stored in the Bill Segment's read details.

Customizable Processess

 BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

1.5 Determine Prorated Bill Period, Consumption Period, Service Point, Meter, and Meter Reads

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Get Consumption

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: As a first step of Metered Service Bill Segment calculation, CC&B determines consumption to be billed. The system determines the Bill Period boundary, and next determines the Consumption Period boundary. The system retrieves appropriate Service Point, Meter, and associated Meter Reads. Meter Reads determine the start and end date for the Bill Segment Consumption Period.

Manual Process: CSR or Authorized User provides the Bill period details if required. If not, the system defaults Bill period dates following the business rules:

Start date:

-If this is the first Bill Segment for the Service Agreement, the start date is set to the start date of the Service Agreement

-If this is the regular Bill Segment the start date is the previous Bill Segment's end date.

End Date

-If this is the last Bill Segment for the Service Agreement, Bill Segment's the end date is the Service Agreement's end date

-If this is the regular Bill Segment end date is the end date of Bill Cycle schedule window.

Automated Process: System identifies start and end date for the billing period using the same business rules as described in manual process.

The consumption period is the inclusive period passed to the Rates. It is used for calculating the charges for the Bill Segment. The system looks at every Service Point linked to the Service Agreement. The system retrieves each meter linked to each Service Point during the Bill period (a service point has multiple meters when a meter exchange has occurred during the Bill period).

If this is the first or final Bill Segment for the customer, the number of days may be more or less than the normal Bill period. Based on established business rules, the system allows for proration of first or final Bill Segment as well as other Bill Periods outside the normal time period.

> **Note:** Every SA type defines the minimum number of days on a Bill Segment. Whenever the system attempts to create a Bill Segment other than the final Bill Segment, it checks if the number of days is at least as great as the minimum defined on the SA type.

> **Note:** The system ignores Service Points that are not billable, disconnected before the Bill period started, or are yet to be connected as of the Bill end date.

Entities to Configure

Frequency

Bill Cycles

Bill Segment Type and associated algorithms

Rates

SA Types

Available Algorithms

BSGC-SP - This algorithm is used to get consumption from the SPs linked to the SA. To determine consumption from meters, meter reads are retrieved from the Meter Configurations installed at the SA's SPs during the Bill period. The reads are stored in the Bill Segment's read details.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

1.6 Verify Eligibility for Estimation

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Get Consumption

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: If no reads can be found, CC&B verifies the Customer's Service Agreement is eligible to estimate a read. This step is executed from online and batch processing.

Entities to Configure

Frequency

Bill Cycles

Bill Segment Type

Rates

SA Types

Trends

Available Algorithms

TSMRE-LA - This algorithm uses a combination of methods: it looks historically one year ago, the immediate preceding Bill period, or uses Trend if no historical reads can be found.

BSGC-SP - This algorithm is used to get consumption from the SPs linked to the SA. To determine consumption from meters, meter reads are retrieved from the Meter Configurations installed at the SA's SPs during the Bill period. The reads are stored in the Bill Segment's read details.

MR EST TREND - This algorithm uses trends for estimating meter reads.

Customizable Processess

 BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

1.7 Estimate Meter Read

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Get Consumption

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: If eligibility requirements are met and the SP is not setup for Negative Consumption, the system estimates consumption and generates a corresponding system estimated read. This step is executed from online and batch processing.

Entities to Configure

Frequency

Bill Cycles

Bill Segment Type

Rates

SA Types

Trends

Available Algorithms

BSGC-SP - This algorithm is used to get consumption from the SPs linked to the SA. To determine consumption from meters, meter reads are retrieved from the Meter Configurations installed at the SA's SPs during the Bill period. The reads are stored in the Bill Segment's read details.

MR EST TREND - This algorithm uses trends for estimating meter reads.

TSMRE-LA - This algorithm uses a combination of methods: it looks historically one year ago, the immediate preceding Bill period, or uses Trend if no historical reads can be found.

Customizable Processess

 BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

1.8 Determine and Cancel Applicable Estimated Segments

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Get Consumption

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B can cancel previously estimated Bill Segment(s) and bill over an extended period of time from one non-estimated read to another. If the system creates a Bill Segment with a defined Good Read Type, CC&B cancels previous Bill Segments that contain system-estimated meter reads until it detects a Bill Segment with a reading that is less than the reading on the current Bill Segment. The maximum number of Bills automatically canceled is configurable.

Entities to Configure

Frequency

Bill Cycles

Bill Segment Type

Rates

SA Types

Trends

Available Algorithms

BSAXERLIM - This algorithm cancels historical, estimated Bill Segments when a defined "real" read is used on the current Bill.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

1.9 Calculate Bill Segment Lines and Create Bill Segment(s) Using Rates

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B passes the consumption information to rates to calculate the Bill Segment. The rate components are used to build the Bill Segment calculation lines and referenced on these calculation lines. This step is executed from online and batch processing

Entities to Configure

Bill Segment Type

Rates

Billing Process Sequence defined on SA Type

Available Algorithms

BSBS-RT-DFT - This Bill Segment creation algorithm creates a Bill Segment using the service agreement's rate This option would typically be used for metered services and ratable non-metered services.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

2.0 Create Financial Transaction(s)

See **Manage Meter Charges Page 1** on page 2-2 for the business process diagram associated with this activity.

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B creates the associated financial details related to the Bill Segment. The Financial Transaction contains the financial effects of the Bill Segment on the Service Agreement's current and payoff balances and on the General Ledger. This step is executed from online and batch processing.

Entities to Configure

Rates

Customer Class

Available Algorithms

BSBF-BA-DFT - This Bill Segment financial transaction algorithm creates a financial transaction for a Bill Segment where: - Payoff amount = Bill amount - Current amount = Bill amount / zero / recurring charge amount

BSFZ-Empty - This is a Customer Class Bill Segment freeze/cancel algorithm

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

2.1 Add Final Bill Switch for Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Generate Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: If this is the final Bill Segment for this Service Agreement it is marked as a closing Bill Segment.

> **Note:** The Service Agreement must be stopped for this switch to be turned on.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

2.0.1 Format Online Presentation

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Formatting information to be presented Online.

Entities to Configure

Bill Segment Type - Bill Segment Information

Installation Options - Framework- Bill Segment Information

Available Algorithms

C1-BSI-INFO - This algorithm formats the "Bill Segment Information" that appears throughout the system. It concatenates the fields and delimiters specified as algorithm parameters.

C1-BST-INFO - This algorithm formats the "Bill Segment Information" that appears throughout the system. It concatenates the fields and delimiters specified as algorithm parameters.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

2.2 Review Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User reviews the Bill Segment for accuracy and determines the next action. The CSR or Authorized User decides if billing process could be continued, Bill Segment is incorrect, or created by mistake and needs to be deleted, rebilled, or canceled.

Business Objects

Bill - Bill business object (simple bill elements only)

This business object is used for simple access to bill information

CI_BillSegmentStatus - Bill Segment Status

This business object is used to retrieve the status of a bill segment

---

2.3 Request Changes for Recalculation of Metered Service's Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: After review CSR or Authorized User identifies a problem with the generated Bill segment. The CSR or Authorized User, based on established business rules, then adds or changes the data used for the Bill Segment calculation. Typical changes can include the addition of a new read, removing the use on Bill switch from an existing read, allow for estimation, or changes to dates. There are no specific restrictions on changes that need to be done across the application to calculate the correct Bill Segment.

2.4 Update Information

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Changes requested by the CSR or Authorized User are applied in CC&B.

2.5 Request Delete Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: During the review process it is determined the Bill Segment was created incorrectly or by mistake. The CSR or Authorized User requests to delete the Bill or Bill Segment. When a Bill has only one Bill segment, the Bill and the corresponding segment are deleted at the Bill level.

Note: The Bill can be deleted prior to completion when Bill Segments are Freezable or in Error status.

2.6 Delete Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Bill is deleted in CC&B and the financial record is removed from the database. There is no financial impact to the Customer's Account.

2.7 Request Delete Specific Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User determines specific Metered Service Bill Segment(s) associated with a given Bill require deletion and requests to delete the Bill Segment(s).

2.8 Delete Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The specific Bill Segments are deleted in CC&B and the financial records are removed from the database. There is no financial impact to the Customer's Account related to the deleted Bill Segments.

2.9 Request Freeze Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: If the CSR or Authorized User does not identify a problem and decides to continue the Billing process, he/she requests to Freeze the Bill Segment(s).

3.0 Freeze Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Bill Segment(s) and associated Financial Transaction are frozen in CC&B. The Bill Freeze Option on the Installation Options controls when a Service Agreement's balance and General Ledger is affected by the Bill Segment and must be configured to meet the organization's accounting practices.

Manual Process- Process is initiated by CSR or Authorized User when he/she requests to Freeze Bill Segments created for Service Agreement.

Automated Process-This is a component of Batch Billing process and gets executed as a part of scheduled batch billing process that runs periodically. Functionality is the same as described in Manual process.

Entities to Configure

Installation Options - Bill Freeze Options

Available Algorithms

BSFZ-Empty - This is a Customer Class Bill Segment freeze/cancel algorithm

---

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

3.1 Request ReBill Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: As more information is available, or there is further review or investigation, the CSR or Authorized User now determines a need to ReBill the Bill Segment(s). If the problem identified in the frozen Bill Segment has been resolved, the CSR or Authorized User requests to Cancel and Rebill the Bill Segment(s).

> **Note.** When something has been wrong for an extended period of time with Billing Service Agreement, CSR or Billing Analyst may use Multi Cancel/Rebill page to request Cancel/Rebill.

Entities to Configure

Bill Cancel Reasons

3.2 Update Bill Segment(s) to Pending Cancel and Create New Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The original Bill Segment(s) is updated to Pending Cancel, and new Bill Segment(s) created. A new Financial Transaction is associated with the new Bill Segment and the original Financial Transaction is pending Cancel.

Entities to Configure

Bill Cancel Reasons

3.3 Request Undo ReBill Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User determines not to freeze the new Bill Segment(s). If the undo function is used, the newly generated segment is deleted.

3.4 Delete New Segment(s) and Return Original Bill Segment(s) to Frozen

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: CC&B deletes the newly generated segment and returns the original Bill Segment to frozen. There is no impact to Financial Transactions.

3.5 Request Cancel Frozen Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The Bill Segment(s) may need to be canceled and not created again. The customer's balance should not be impacted by the original transaction. The CSR or Authorized User initiates the Cancel function.

Entities to Configure
Cancel Reasons

3.6 Update Bill Segment(s) to Pending Cancel

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: When the CSR or Authorized user requests Initiate Cancel, the system updates the Bill Segment to Pending Cancel.

3.7 Request Undo Cancel Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User has the option to undo the pending Cancel Bill Segment(s). Prior to the cancellation the CSR or Authorized User determines the Bill Segment(s) should not be canceled, and uses the Undo function.

Entities to Configure
Cancel Reasons

3.8 Return Original Bill Segment(s) to Frozen

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The original Bill Segment(s) is returned to Frozen in CC&B. There is no impact to financial transactions. The Billing process could be resumed.

3.9 Request Finalize Cancel Bill Segment(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User confirms the cancellation of Bill Segment(s).

Entities to Configure
Cancel Reasons

4.0 Update Bill Segment(s) to Canceled

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The existing Bill Segment(s) is updated to Canceled status in CC&B. If a Bill Segment is cancelled, another Financial Transaction is created to reverse the original Financial Transaction. The cancellation Financial Transaction appears on the next Bill produced for the account as a Bill correction.

Available Algorithm(s)
BSFZ-Empty - This is a Customer Class Bill Segment freeze/ cancel algorithm

4.1 Request Add Bill Message(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User may add Service Agreement related Bill Messages for a given Bill Segment(s). The CSR or Authorized User may also add Bill Messages at the Account Level. The CSR or Authorized User adds these Bill Messages for an online Bill.

Entities to Configure
Bill Messages

4.2 Add Bill Message(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The Bill Message is added in CC&B.

4.3 Request Complete Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: When the CSR or Authorized User cannot find any problem with the Frozen Bill Segment(s) he/she initiates the Complete Bill function.

4.4 Create Bill Message

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Pre-Bill Completion

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: Bill Completion is the last and one of the most critical components of the Billing process. The system completes the Bill and it's ready for extract and print. This process could be initiated manually and automatically. CC&B makes use of Pre-Bill Completion algorithms. Based on configuration, one such algorithm can delete Bill Segments in error, create Bill messages for the deleted segments, and create a To Do entry.

Manual Process: Based on configuration, additional Bill Messages can be added

Automated Process: (Batch billing) if required, such algorithms can:

Delete Bill Segments in error, create Bill Messages for deleted Bill Segments, and create a To Do entry

Delete bill certain type of Financial Transactions linked to the bill, for example, if only payments exist for newly created bill.

Entities to Configure
To Do Type
To Do Role
Bill Message
SA Type
Customer Class

Business Objects	Available Algorithms
C1-AccountBillMessage - Account Bill Message	DEL-BSEG -This Bill pre-completion algorithm deletes Bill Segments that are in Error CPBC-DB - This customer class pre bill completion algorithm determines to delete a bill if it only contains frozen financial transactions of given types C1-CPBC-TAXT - This customer class pre-bill completion algorithm checks if taxes should be charged by conmparing the bill's accumulated tax amount with the tax threshold amount. For v2.3.1, this algorithm was enhanced to accumulate not only bill segment calc amounts, but also the adjustment calc amounts prior to comparing the total to the threshold amount; and if required, both bill segments and adjustments are re-generated.

Customizable Processess
BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

4.5 Create Estimated Meter Read Message

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B creates an estimated read Bill message if an estimated read was used for Billing.

Entities to Configure
Bill Messages

Available Algorithms
BCMP-ESTBSM This Bill Segment completion algorithm attaches a Bill Message Code to a Bill Segment that used an estimated read. C1-BLCMP - This Bill Completion algorithm related to freezing and completing pending bills C1-SUP-PR-BL -This Bill Completion algorithm is used for suppressing bills under certain conditions.

Customizable Processess
BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

4.6 Create Bill Messages Based on Configuration

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B can also automatically add - Bill Messages during Bill completion. Bill Messages come from a variety of sources:

- Account Bill Messages

- Customer Class Bill Messages

- Service Agreement related Messages that are linked to Bill Segments

- Rate Schedule Bill Messages

- Service Provider Bill Messages

- Meter Reader Remark Bill Messages

- Ad hoc Messages by CSR or Authorized User

- Custom Background Processes and Algorithm Bill Messages

Entities to Configure

Customer Class Bill Messages

Rate Schedule Bill Messages

Meter Reader Remark Bill Messages

Account and Service Agreement Bill Messages

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

4.7 Keep Credit on Excess Credit SA

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: When specifically defined, CC&B can keep any excess credit on an Excess Credit SA.

Entities to Configure

SA Type

Available Algorithms

CREDIT-XFER - This Bill Segment completion algorithm will transfer the balance of a credit SA to other SAs linked to the account.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

4.8 Apply Credit to SA's

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: When specifically defined, CC&B can apply existing credit on an Excess Credit SA to other SA's. Refer to 4.3.1.1 Manage Payments.

Entities to Configure

SA Type

Available Algorithms

CREDIT-XFER - This Bill Segment completion algorithm will transfer the balance of a credit SA to other SAs linked to the account.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

4.9 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: During Bill Completion CC&B adds Adjustments, Payments or Bill corrections not included in the previous Bills to the newly created Bill.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.0 Determine Due Date, Late Payment Charge Date, and Credit Review Date

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: During Bill Completion the Due Date, Late Payment Charge Date, and next Credit Review Date are determined and made available as information for the Bill and Account. CC&B

accommodates calculation requirements for Late Payment Charges to be added to the Bill. Two algorithms are listed below for information only.

Entities to Configure

Late Payment Profile on SA Type

Customer Class - Due Date, LPC Eligibility, Late Payment Charge Grace Days

Adjustment Types

Rates

Available Algorithms

BILLPC-Total - This algorithm type is used to calculate the late payment charge amount for a specific service agreement linked to an account.
BILPE-ALL - This algorithm type is used during the late payment charge background process to determine if an account is eligible for late payment charges.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.1 4.3.2.5a Manage Late Payment Charge

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: Late Payment Charges may be calculated during Bill Completion. Refer to 4.3.2.5a Manage Late Payment Charge.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.2 4.3.1.1d Manage Autopay

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: An Autopay payment may be created during Bill Completion. Refer to 4.3.1.1d Manage Autopay.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.3 4.3.2.2 Manage Severance Process

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: The status of a Severance Process can change due to Bill Completion. Refer to 4.3.2.2 Manage Severance Process.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.4 4.3.2.5 Write Off Uncollectible Receivables

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: The status of a Write Off Process or Write Off SA can change due to Bill Completion. Refer to 4.3.2.5 Write Off Uncollectible Receivables.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.5 Create Additional Required Bill Message(s)

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Post Bill Completion

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: CC&B can perform various post Bill completion activities. Additional custom Bill Message(s) can be added to the specific bill.

> **Note:** Post completion activity allows for adding various custom functionality based on business rules to impact/modify the bill overall.

Entities to Configure

SA Type

Customer Class

Adjustment Type

Bill Message

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.6 Update Bill with Completion Details

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Group: Post Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: All Bill completion details are now updated in CC&B.

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

5.7 Review Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User evaluate the Account and reviews the Bill for accuracy. The Bill may not be in a Complete status. Some data may be missing or has incomplete information. At times it may be necessary to reopen the most recent Bill. Possibly a payment or adjustment was not included in the original Bill. A Bill Segment may need rebilling and changes reflected in a new Bill.

Business Objects

Bill - Bill business object (simple bill elements only)

This business object is used for simple access to bill information

CI_BillSegmentStatus - Bill Segment Status

This business object is used to retrieve the status of a bill segment

---

5.8 Make Necessary Changes for Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: During Bill Completion information may be missing or incomplete. One example is the mailing address may be missing. The CSR or Authorized User reviews and resolves the error, enters correct data, and completes the Bill as needed.

5.9 Request Reopen Bill

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: After review the CSR or Authorized User determines to reopen a Bill for the Customer's account.

6.0 Update Current Bill to Reopen

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The current Bill is reopened in CC&B and available for applicable changes.

6.1 Request Changes to Impact Balance

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: Based on investigation and established business rules, the CSR or Authorized User requests various changes that impact the balance. Typically these changes can be: creation of a new Bill Segment, Rebill of a Bill Segment, Cancellation of a Bill Segment, Creation of a Payment or Adjustment, or Cancellation of a Payment or Adjustment.

6.2 Update Balance

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: The financial balance is updated in CC&B.

6.3 Extract Bill for Printing

See **Manage Meter Charges Page 2** on page 2-3 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Typically CC&B prepares required billing data and makes data available for the Document Management application.

> **Note:** An additional custom process may be created to interface with the Document Management Software as needed.

Business Objects	Available Algorithms
BillRoutingR - Bill business object to read bill routing details. **Note:** This BO is currently used for reprint Bills	DEL-BSEG -This Bill pre-completion algorithm deletes Bill Segments that are in Error CPBC-DB - This customer class pre bill completion algorithm determines to delete a bill if it only contains frozen financial transactions of given types C1-CPBC-TAXT - This customer class pre-bill completion algorithm checks if taxes should be charged by conmparing the bill's accumulated tax amount with the tax threshold amount. For v2.3.1, this algorithm was enhanced to accumulate not only bill segment calc amounts, but also the adjustment calc amounts prior to comparing the total to the threshold amount; and if required, both bill segments and adjustments are re-generated.

Customizable Processess
POSTROUT - CIPBXBLB
Custom Extract Process

6.4 Print Bill

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: Document Management Software

Description: Document Management Software reads and process bill information produced by CC&B. It prints actual bills or prepare bills in another format (e-mail, PDF online format, short message service (SMS)).

6.5 Send Bill to Customer

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: Document Management Software

Description: The printed Bill is sent or made available for the Customer.

6.6 Receives Bill

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Actor/Role: Customer

Description: The Customer receives the Bill.

Entities to Configure

Bill Route Type

6.7 Select Accounts for Open Bill Cycle

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Batch Billing

Actor/Role: CC&B

Description: Using the established Bill Cycle Schedule, CC&B selects Accounts defined within a specific Open Bill Cycle. The Bill cycle's schedule controls when the system attempts to create Bills for the account. Every Bill cycle has a Bill cycle schedule that defines the dates when a cycle's accounts are to be billed. Rather than attempt to create Bills on one evening, most Bill cycles use a concept of "Window Billing" where the system attempts to produce Bills for accounts over a few nights. The first night (opening date) should be the earliest day that meter reads for the account are available in CC&B. The last night (closing date) should be the last possible day that meter reads are available for this Bill cycle window.

Entities to Configure

Bill Cycle and Schedule

Bill Cycle defined on Account

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

6.8 Check Eligibility for Batch Billing

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Batch Billing

Actor/Role: CC&B

Description: Normally, most Bills are created and completed automatically. At Billing time, CC&B attempts to produce a Bill for an account and create one or more Bill Segments for every non-cancelled / non-closed service agreement linked to the account. The Bill Cycle must be defined for the Account. The Service Agreement must be defined as eligible for Billing and met the minimum number of days defined for Billing.   If defined, CC&B will not create a Bill for accounts with no Billable service agreements, no eligible Financial Transactions, and no temporary account messages.

Entities to Configure

SA Type

Available Algorithms

C1-SKIPINACC -This Customer Class Bill eligibility algorithm stops processing an account if all the following conditions are true: - There are no Billable service agreements - There are no eligible Financial Transactions for the Bill - There are no temporary account messages to be swept onto the Bill

---

Customizable Processess

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

6.9 Highlight Bill Segment Exceptions

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Generate Bill Segment

Group: Freeze Bill Segment

Group: Batch Billing

Actor/Role: CC&B

Description: If a Bill Segment cannot be created, CC&B creates a Bill Segment in "error" status with a message can be analyzed by a CSR or Authorized User.   Typically errors are caused by missing or incomplete data. The error may be reviewed at this time or not. Data may be changed before Batch Billing next runs. When the Batch Billing process next runs, it deletes all "error" Bill Segment(s) and attempts to recreate them. It continues this throughout the Bill window. If a Bill Segment(s) is in error at the end of the Bill window, a user must intervene and fix them. If the Bill Segment(s) is still in error when the cycle's next window opens, a Billing error is generated.

Customizable Processess
BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

7.0 Highlight Bill Exceptions

See **Manage Meter Charges Page 3** on page 2-4 for the business process diagram associated with this activity.

Group: Bill Completion

Group: Batch Billing

Actor/Role: CC&B

Description: If a Bill cannot be completed, CC&B creates a Bill in "error" status with a message that is analyzed by a CSR or Authorized User. Typically errors are caused by missing or incomplete data.

Customizable Processess
BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle.

7.1 Identify Bill Segments in Error Status

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Group: TO DO Bill Segment Error Process

Actor/Role: CC&B

Description: CC&B identifies Bill Segments in error status. CC&B can create a To Do Entry for every Bill Segment in error status.

Entities to Configure
To Do Role
To Do Type

Customizable Processess
TD-BSERR- This background process creates a To Do entry for every Bill Segment that's in error.

7.2 Create Bill Segment Exceptions

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Group: TO DO Bill Segment Error Process

Actor/Role: CC&B

Description: CC&B can create a To Do Entry for every Bill Segment in error status. The To Do functionality allows for online review by a user or group of users. To Do Lists summarize and total entries for different To Do Types. Status of To Do Entries is available for evaluation.

Entities to Configure
To Do Role
To Do Type

Customizable Processess
TD-BSERR- This background process creates a To Do entry for every Bill Segment that's in error.

7.3 Evaluate and Investigate Error

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User will review the Bill Segment error and supporting information in CC&B. Read History, SP/Meter History, Meter and Meter Configuration, Field Activity History, Account, Service Agreement, and Billing History are some of the areas reviewed. Typically errors are caused by missing or incomplete information. Based on established business rules, the CSR or Authorized User investigates possible solutions or workarounds for the missing or incomplete information.

7.4 Resolve Error

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User resolves the error and enters information in CC&B.

7.5 Update Data

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: CC&B

Description: Information required for resolution is updated in CC&B.

7.6 Request Complete To Do

See **Manage Meter Charges Page 4** on page 2-5 for the 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.

7.7 Complete To Do Entry

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Actor/Role: CC&B

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

7.8 Identify Bills in Error Status

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Group: TO DO Bill Segment Error Process

Actor/Role: CC&B

Description: CC&B identifies Bills in error status. CC&B can create a To Do Entry for every Bill in error status.

Entities to Configure
To Do Role
To Do Type

Customizable Processess
TD-BIERR - This background process creates a To Do entry for every Bill that's in error.

7.9 Create Bill Exceptions

See **Manage Meter Charges Page 4** on page 2-5 for the business process diagram associated with this activity.

Group: TO DO Bill Segment Error Process

Actor/Role: CC&B

Description: CC&B can create a To Do Entry for every Bill in error status. The To Do functionality allows for online review by a user or group of users. To Do Lists summarize and total entries for different To Do Types. Status of To Do Entries is available for evaluation.

Entities to Configure
To Do Role
To Do Type

Customizable Processess
TD-BIERR - This background process creates a To Do entry for every Bill that's in error.

8.0 Evaluate Entire Batch of Bills

See **Manage Meter Charges Page 5** on page 2-6 for the business process diagram associated with this activity.

Actor/Role: CSR

Description: The CSR or Authorized User is made aware of a possible anomaly with a particular Batch of Bills.

8.1 Identify Bill Cycle, Window Start Date or Given Bill Date

See **Manage Meter Charges Page 5** on page 2-6 for the business process diagram associated with this activity.

Group: Mass Cancellation Process

Group: Mass Reopen Process

Actor/Role: CC&B

Description: This background processes for canceling or reopening an entire batch of Bills requires identification of the Bill cycle, window start date or given Bill date. These parameters are supplied for execution of the background process.

Customizable Processess

MASSCNCL - The mass Bill cancellation process removes an entire batch of Bills that were created by the BILLING process.
MASSROBL - The mass Bill reopen process reopens an entire batch of Bills that were completed by the BILLING process. It will reopen all the Bills for a given Bill date for the latest run of a given Bill cycle's schedule.

8.2 Cancel Entire Batch of Bills

See **Manage Meter Charges Page 5** on page 2-6 for the business process diagram associated with this activity.

Group: Mass Cancellation Process

Actor/Role: CC&B

Description: This background process cancels all frozen Bill Segments for the latest run of a given Bill cycle's schedule, or for a given date within the Bill cycle's schedule. A cancel reason of mass cancel is used. When the cycle is billed again, new Bill Segments are created. The original Bill Segments and cancellations are not apparent to the Customer.

Entities to Configure

Cancel Reason - MASSCNCL

> **Customizable Processess**
>
> MASSCNCL - The mass Bill cancellation process removes an entire batch of Bills that were created by the BILLING process.

8.3 Reopen Entire Batch of Bills

See **Manage Meter Charges Page 5** on page 2-6 for the business process diagram associated with this activity.

Group: Mass Reopen Process

Actor/Role: CC&B

Description: This background process reopens an entire batch of Bills. All Bills for a given Bill date for the latest run of a given Bill cycle's schedule will be reopened.

> **Customizable Processess**
>
> MASSROBL - The mass Bill reopen process reopens an entire batch of Bills that were completed by the BILLING process. It will reopen all the Bills for a given Bill date for the latest run of a given Bill cycle's schedule.

Installation Options - Control Central Alert Algorithms

PP-Active	Show Count of Active Pay Plans
PP-Broken	Show Count of Broken Pay Plans
PP-Kept	Show Count of Kept Pay Plans
CC-PPDENIAL	Count Pay Plan Denial Customer Contacts
CCAL WFACCTX	Display Active WF for Account Based on Context
CCAL WFPREMX	Display Active WF for Premise Based on Context
CCAL WFACCTR	Display active WF for account based on char
CCAL WFPREMR	Display active WF for premise based on char
CCAL-TD	Highlight Outstanding To Do Entries
CCAL-DECL	Highlight Effective Declarations for Account and Premise
CCAL-CASE	Highlight Open Cases
CCAL-FAERMSG	Highlight FA's with outstanding outgoing messages
CI_WO_BILL	Highlight Written off Bills
CI_OD-PROC	Highlight Active Overdue Processes
CI_OMF_DF	Highlight Open and Disputed Match Even
CI_STOPSA-DF	Highlight Stopped SA's
C1-CCAL-CLM	Highlight Open Rebate Claims
C1-COLL-DF	Highlight Active Collection Processes
C1_COLLRF-DF	Highlight Active Collection Agency Referral
C1_PENDST-DF	Highlight Pending Start Service Agreements
C1_CASH-DF	Cash Only Account
C1_CRRT-DF	Credit Rating Alert
C1_LSSL-DF	Highlight Life Support/Sensitive Load on Person
C1_LSSLPR-DF	Highlight Life Support/Sensitive Load on Premise
C1_SEVPR-DF	Highlight Active Severance Processes
C1-CCAL-OCBG	Highlight Open Off Cycle Bill Generators
F1-SYNRQALRT	Retrieve Outstanding Sync Request

Rates

Rate Schedule Algorithms and Major Configuration Information

Available Algorithms

Bill Factor Rate Selection Date

C1-BFRACCTG	Bill Factor Date based on Accounting Date
C1-BFREND	Bill Factor Date based on Bill Segment End Date
C1-BFRSTRT	Bill Factor Date based on Bill Segment Start Date

Various Rate Component Type Algorithms

Rate Component Calculation

C1-RC-CLAMT	Sum Calc Line Amounts
RCAM-CCL	Calculate CCL
DEEMEDPROF	Create Deemed Profile Data
RCAM-VAT	Standard Rate VAT
RCAM-VATR	Reduced Rate VAT
MAX3KW	Capture maximum three kW interval values

Rate Component Criteria Comparison

RECC>=2YEARS	Check if date is at least two years old

Rate Component Criteria Field

RECF-AUTOPAY	Return True If On Autopay
RECF-HASELEC	Return TRUE if account has electric service
RECF-HASGAS	Return TRUE if account has gas service

Rate Component Interval Pricing

IPRC-CNALL	Continuous cons. curve * price curve (fast)
IPRC-NCNALL	Non continuous cons. curve * price curve (slower)
IPRC-NCNPOS	Non continuous OVERAGE curve * price curve
IPRC-NCNNEG	Non continuous UNDERAGE curve * price curve

Rate Component Interval Pricing Audit

IPRCA-ALL	Show all consumption and prices
IPRCA-EXCESS	Only show excess (positive) consumption and prices
IPRCA-UNDER	Only show underage (negative) consump. and pric

Rate Component Step Algorithm

MULT BY KW	Multiply step by KW
HIGHBP	Set step to high break point
LOW BP	Set step to low break point

Rate Component Time of Use (TOU) Pricing

M&P CONS	Map & Price Continuous, Consumptive Int Data
M&P PEAK	Map & Price Continuous, Peak Interval Data
TOUMAP1	Create SQ entries by applying TOU map to int. cons

Rate Component Time of Use (TOU) Pricing Audit

RCTPRSAU-CON	TOU Pricing Audit - Consumptive
RCTPRSAU-PK	TOU Pricing Audit - Peak

Rate Component Value Algorithm

PX PRICE	Extact avg price from weekly spot market prices
RCVALTHRSHSQ	Calc. price based on threshold 400 KWH OFF
CI_RNDXRF	Round Cross-Reference Amount

Other Algorithms related to Rates

BSBS-RT-DFT	Create bill segment using rate application
ADJG-RT	Adjustment generation - apply rate
CI_ADJ-RT-TX	Adjustment generation - apply rate
CALL RATEAPP	Apply the rate to each billing scenario

Entities to Configure

- Rate Schedule

- Rate Version

- Rate Components

- Service Quantity Rules

- Register Rules

- Service Quantity Identifiers

- Unit of Measure

- Frequency

- Bill Factors

- Characteristics

- Distribution Codes

- Various Algorithm Parameters

- Define Rates on Applicable SA Types

- Meter Configuration Type

- Bill Messages

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

Oracle Utilities UPK for Customer Care and Billing, Rating and Billing