

**Oracle Utilities Customer Care and Billing  
Release 2.3.1**

Utility Reference Model

4.2.2.3 Manage Item Charges

July 2012

Oracle Utilities Customer Care and Billing Utility Reference Model 4.2.2.3, Release 2.3.1

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# Chapter 1

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## Overview

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

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

---

## Brief Description

**Business Process:** .2.3 Manage Item Charges

**Process Type:** Sub Process

**Parent Process:** .2 Manage Bill

**Sibling Processes:** .2.2 Manage Meter Charges, .2.4 Manage External and Miscellaneous Charges, .2.5 Manage Loan Charges, .2.6 Manage Deposit Charges, 4.3.1.1 Payments

This process describes Billing for Item-based services. Utility Companies may charge for some equipment - budgeted and non-budgeted items installed on Service Points Premises due to various reasons. When such an item(s) installed Utility Company expects to get paid for these items usage.

Billing process evaluates type and amount (if multiple items are installed), apply appropriate rates and generate Bill(s). Most bills are produced in a Batch Billing process. However the CSR or Authorized User can create Bills manually if required. If a Bill is generated, but contains error(s) the CSR or Authorized User has the ability to modify the Bill or Bill Segment.

As soon as Bill is created, Company makes it available for Customer and every person linked to the Customer's Account who requires a copy of the Bill

## Actors/Roles

The Manage Item 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

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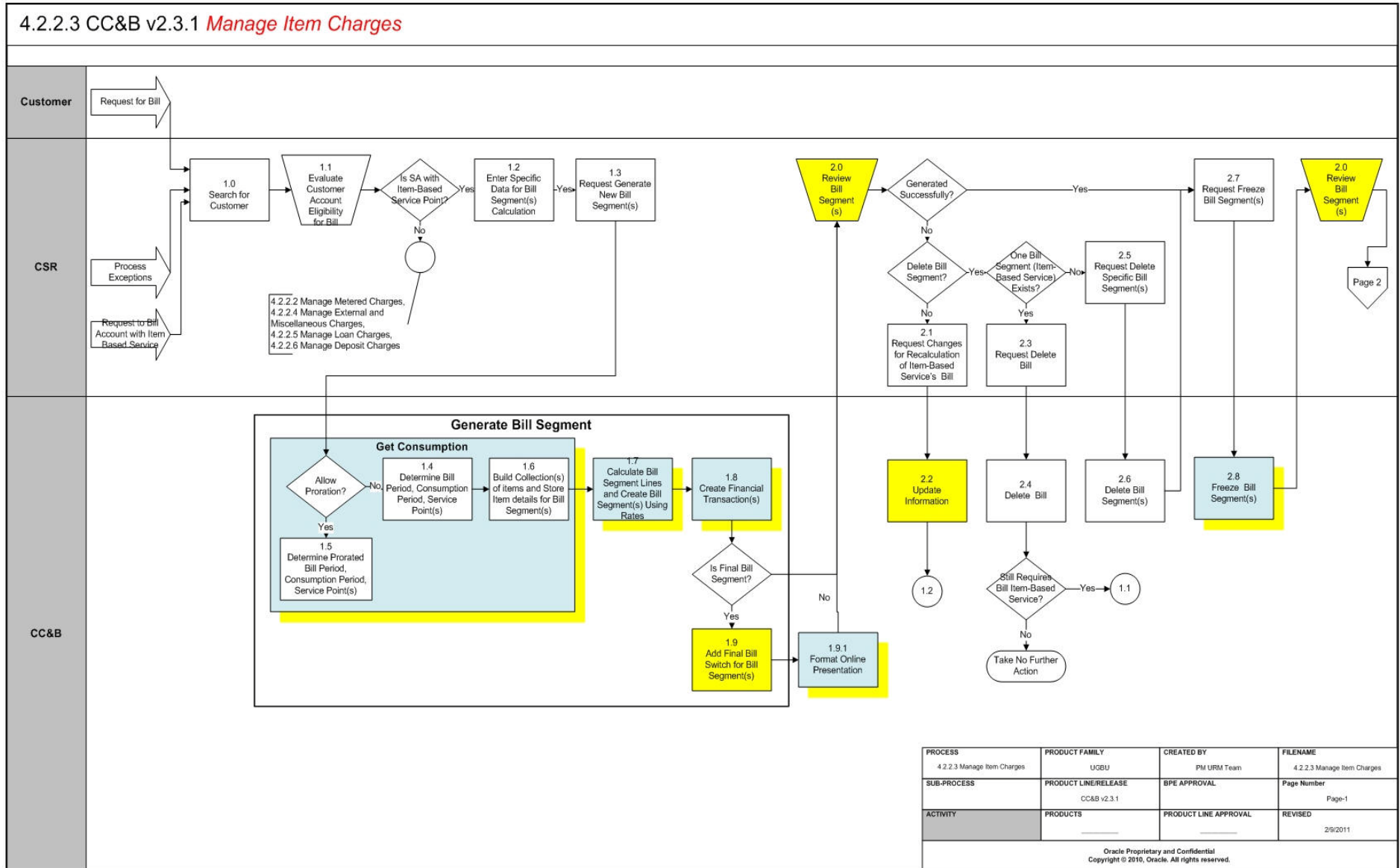
## Detailed Business Process Model Description

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

- **Business Process Diagrams**
  - **Manage Item Charges Page 1**
  - **Manage Item Charges Page 2**
  - **Manage Item Charges Page 3**
  - **Manage Item Charges Page 4**
- **Manage Item Charges Description**
- **Installation Options - Control Central Alert Algorithms**
- **Rates**
- **Related Training**

# Business Process Diagrams

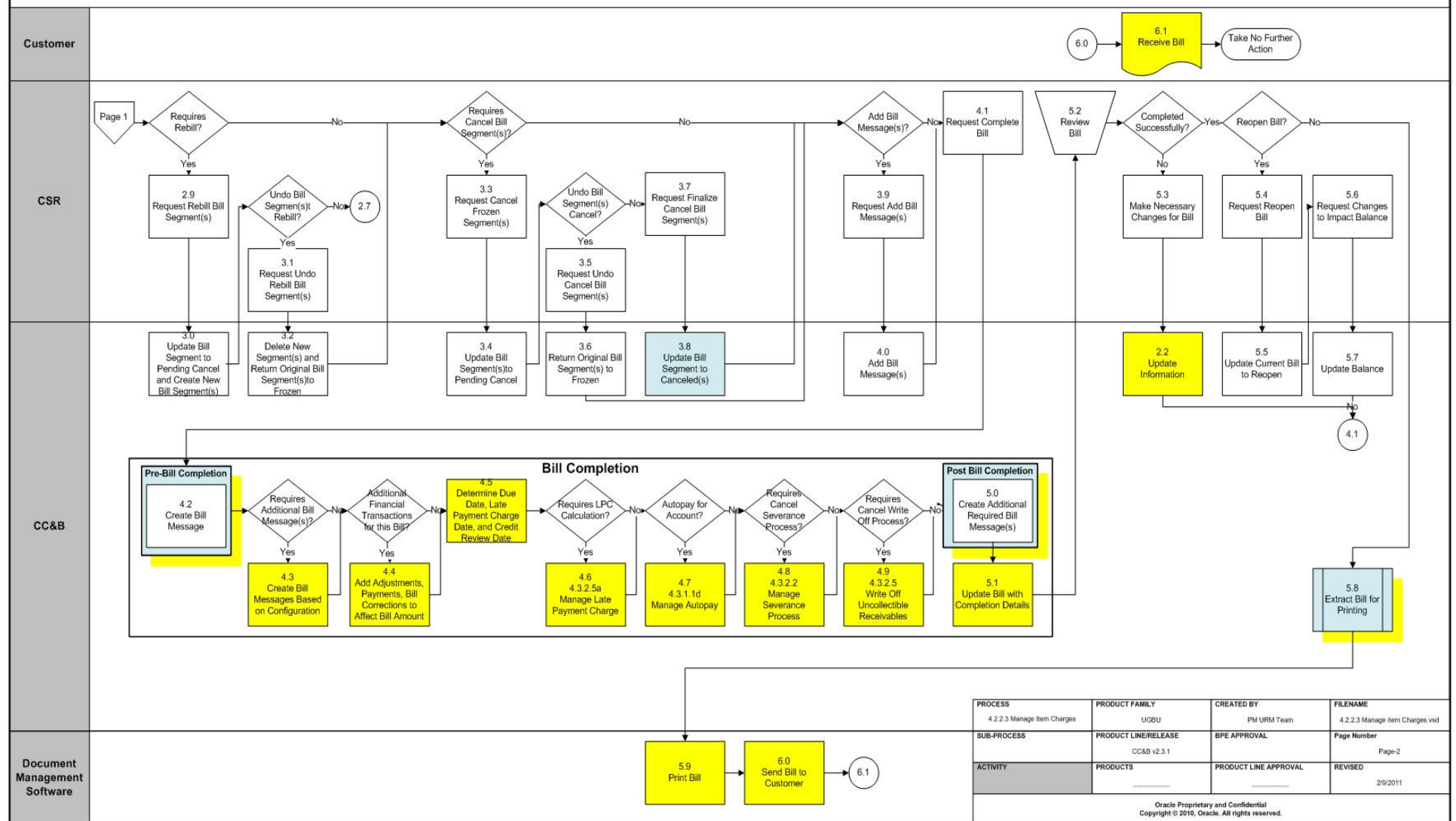
## Manage Item Charges Page 1





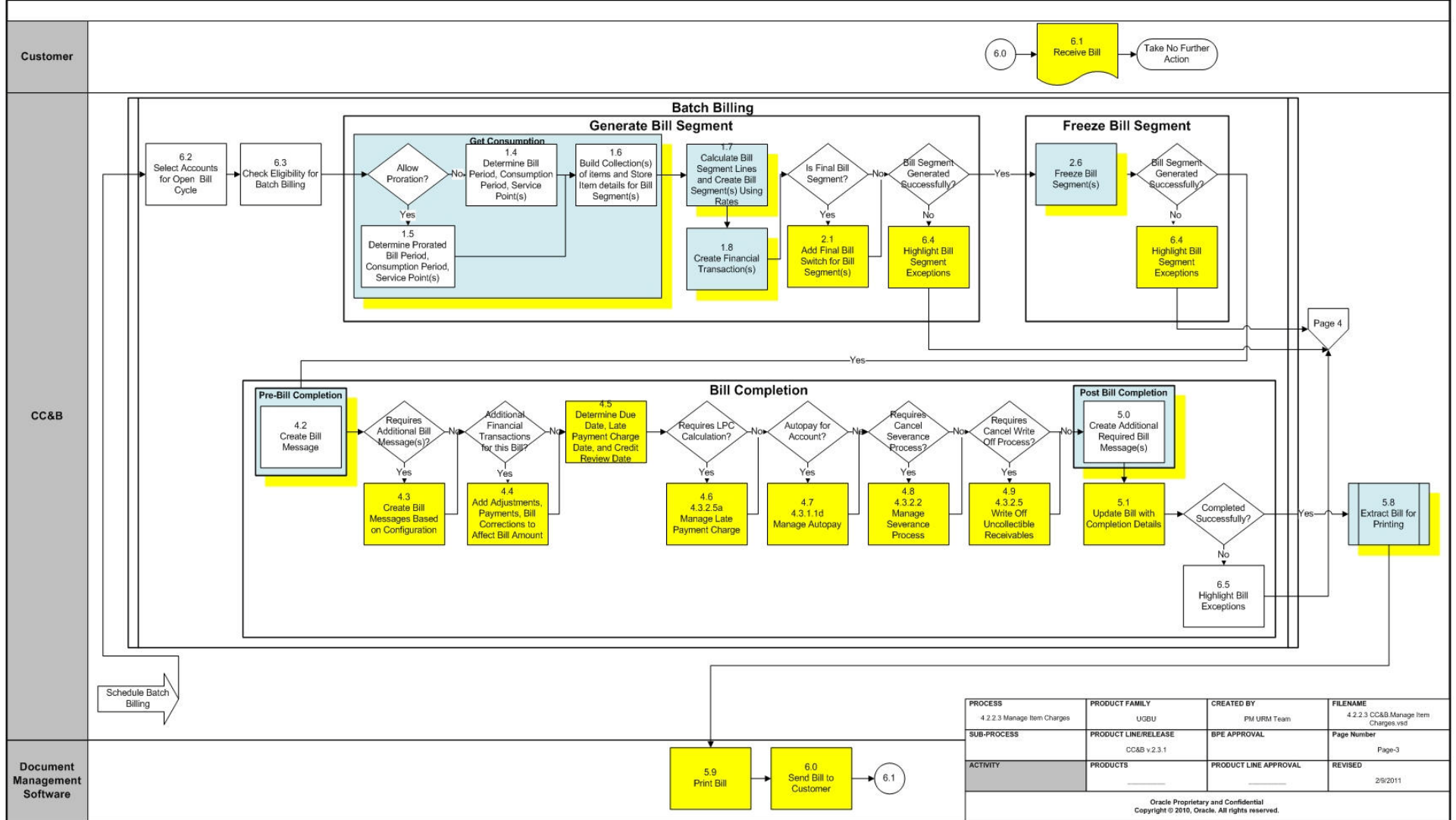
# Manage Item Charges Page 2

## 4.2.2.3 CC&B v2.3.1 *Manage Item Charges*



# Manage Item Charges Page 3

## 4.2.2.3 CC&B v2.3.1 *Manage Item Charges*

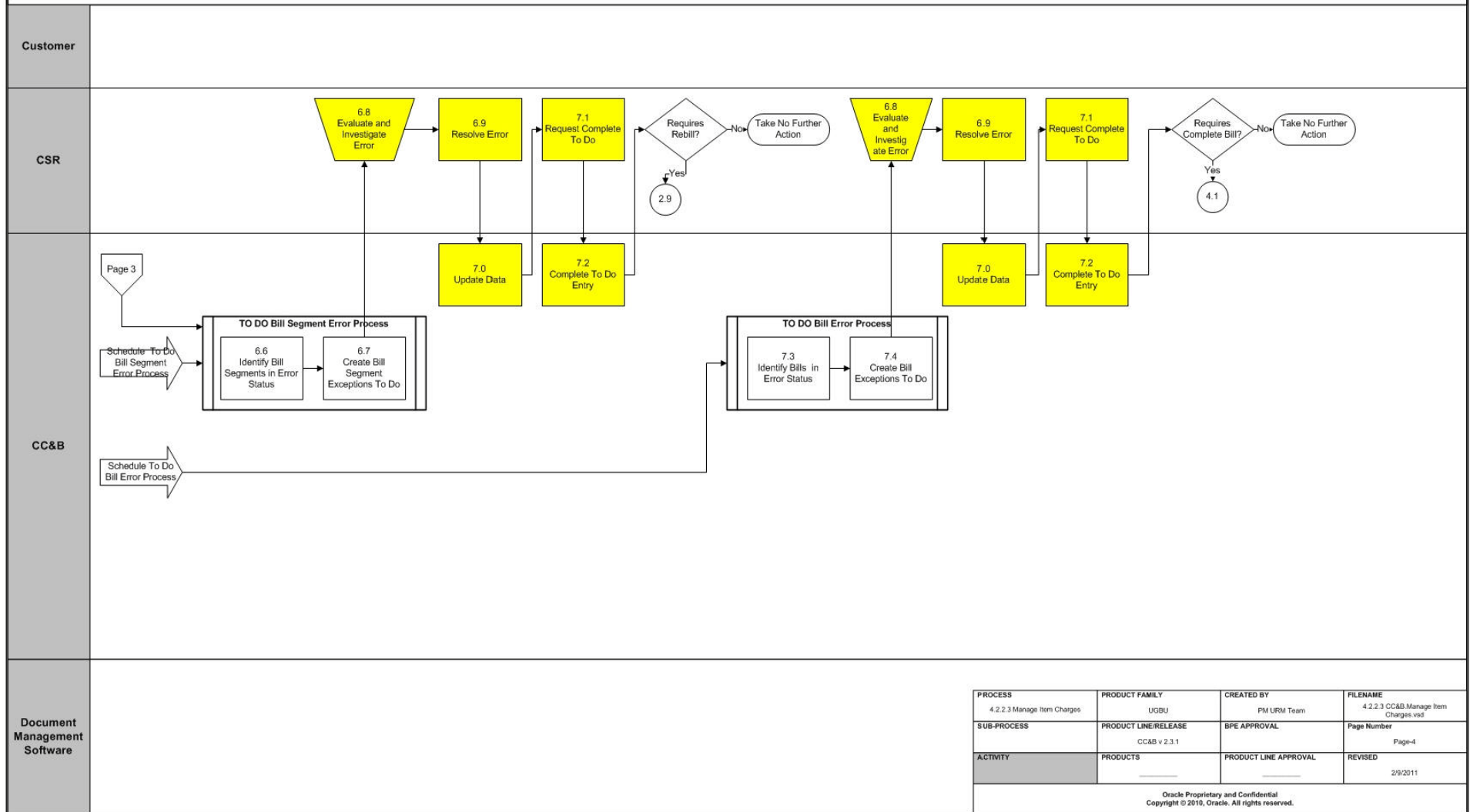


PROCESS	PRODUCT FAMILY	CREATED BY	FILENAME
4.2.2.3 Manage Item Charges	UGBU	PM URM Team	4.2.2.3 CC&B Manage Item Charges.vsd
SUB-PROCESS	PRODUCT LINE/RELEASE	BPE APPROVAL	Page Number
	CC&B v2.3.1		Page-3
ACTIVITY	PRODUCTS	PRODUCT LINE APPROVAL	REVISED
			2/9/2011

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# Manage Item Charges Page 4

## 4.2.2.3 CC&B v2.3.1 *Manage Item Charges*



## Manage Item Charges Description

This section includes detailed descriptions of the steps involved in the Manage Item 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(s)**
- **1.5 Determine Prorated Bill Period, Consumption Period, Service Point(s)**
- **1.6 Build Collection of Items and Store Item Details for Bill Segment(s)**
- **1.7 Calculate Bill Segments Lines and Create Bill Segment(s) Using Rates**
- **1.8 Create Financial Transaction(s)**
- **1.9 Add Final Bill Switch for Bill Segment(s)**
- **2.0 Review Bill Segment(s)**
- **2.1 Request Changes for Recalculation of Item Bill Segment**
- **2.2 Update Information**
- **2.3 Request Delete Bill**
- **2.4 Delete Bill**
- **2.5 Request Delete Specific Bill Segment(s)**
- **2.6 Delete Bill Segment(s)**
- **2.7 Request Freeze Bill Segment(s)**
- **2.8 Freeze Bill Segment(s)**
- **2.9 Request Re-Bill Bill Segment(s)**
- **3.0 Update Bill Segment(s) to Pending Cancel and Create New Bill Segment(s)**
- **3.1 Request Undo Re-Bill Bill Segment(s)**
- **3.2 Delete New Segment(s) and Return Original Bill Segment(s) to Frozen**
- **3.3 Request Cancel Frozen Segment(s)**
- **3.4 Update Bill Segment(s) to Pending Cancel**
- **3.5 Request Undo Cancel Bill Segment(s)**
- **3.6 Return Original Bill Segment(s) to Frozen**
- **3.7 Request Finalize Cancel Bill Segment(s)**
- **3.8 Update Bill Segment(s) to Canceled**
- **3.9 Request Add Bill Message(s)**
- **4.0 Add Bill Message(s)**
- **4.1 Request Complete Bill**
- **4.2 Create Bill Message**
- **4.3 Create Bill Messages Based on Configuration**
- **4.4 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount**

- 4.5 Determine Due Date, Late Payment Charge Date, and Credit Review Date
- 4.6 4.3.2.5a Manage Late Payment Charge
- 4.7 4.3.1.1d Manage Autopayments
- 4.8 4.3.2.2 Manage Severance Process
- 4.9 4.3.2.6 Write Off Uncollectible Receivables
- 5.0 Create Additional Required Bill Message(s)
- 5.1 Update Bill with Completion Details
- 5.2 Review Bill
- 5.3 Make Necessary Changes for Bill
- 5.4 Request Reopen Bill
- 5.5 Update Current Bill to Reopen
- 5.6 Request Changes to Impact Balance
- 5.7 Update Balance
- 5.8 Extract Bill for Printing
- 5.9 Print Bill
- 6.0 Send Bill to Customer
- 6.1 Receives Bill
- 6.2 Select Accounts for Open Bill Cycle
- 6.3 Check Eligibility for Batch Billing
- 6.4 Highlight Bill Segment Exceptions
- 6.5 Highlight Bill Exceptions
- 6.6 Identify Bill Segments in Error Status
- 6.7 Create Bill Segment Exceptions To Do
- 6.8 Evaluate and Investigate Error
- 6.9 Resolve Error
- 7.0 Update Data
- 7.1 Request Complete To Do
- 7.2 Complete To Do Entry
- 7.3 Identify Bills in Error Status
- 7.4 Create Bill Exceptions To Do

## 1.0 Search for Customer

See **Manage Item 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.

## 1.1 Evaluate Customer Account Eligibility for Bill

See **Manage Item 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

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 Item 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.

## 1.3 Request Generate New Bill Segment(s)

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

**Actor/Role:** CSR

**Description:** The CSR or Authorized User requests a new online Bill created. This online Bill may contain one or more segments. The Manual billing process consists of several steps. The first step is to request system to calculate and create the Bill and Bill Segment for the Items. If only one Item based 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(s)

See **Manage Item 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:** This step could be executed from online and batch billing process. The system first determines the Bill Period boundary. The end date is either the end date of Bill cycle schedule window, the Service Agreement's end date, or, determined by the CSR or Authorized User for online Billing.

**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 a 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, the Bill Segment's the end date is the Service Agreement's end date

-If this is a regular Bill Segment the 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.

---

### Entities to Configure

---

Frequency

Bill Cycles

Bill Segment Type

### Rates

SA Types

---



---

### Available Algorithms

---

BSGC-SP - Get consumption from metered Service Point(s) and Item-Based Service Point(s) linked to the SA.

---



---

### Customizable Processes

---

BILLING

---

## 1.5 Determine Prorated Bill Period, Consumption Period, Service Point(s)

See **Manage Item 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:** The system first determines the prorated Bill Period boundary. The end date is either the end date of Bill cycle schedule window, the Service Agreement's end date, or, determined by the CSR or Authorized User for manual Billing. If this is the first Bill Segment for the Service Agreement, the Bill Segment start date is set to the start date of the Service Agreement, otherwise the start date is the previous Bill Segment's end date. The system next determines the Consumption Period boundary.

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. If the minimum number of days is not met, the Bill Segment will not be created at this time. The system waits until the number of days in the Bill Segment is at least as large as the minimum and the account's Bill cycle must be open.

This step is executed from online and batch billing process.

---

### Entities to Configure

---

Frequency

Bill Cycles

Bill Segment Type and associated algorithms

### Rates

SA Types

---



---

### Available Algorithms

---

BSGC-SP - Get consumption from the Metered and item-Based Service Point(s) linked to the SA.

---



---

### Customizable Processes

---

BILLING

---



## 1.6 Build Collection of Items and Store Item Details for Bill Segment(s)

See **Manage Item 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:** System creates collection of billed and non-billed Items installed at the SA's SPs during the identified Billing 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.

This step is executed from online and batch billing process.

---

### Entities to Configure

---

Frequency

Bill Cycles

Bill Segment Type

### Rates

SA Types

Item

---



---

### Available Algorithms

---

BSGC-SP - Get consumption from the Metered and item-Based Service Point(s) linked to the SA

---



---

### Customizable Processes

---

BILLING

---

## 1.7 Calculate Bill Segments Lines and Create Bill Segment(s) Using Rates

See **Manage Item 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 (Item details) to Rates to calculate the Bill Segment and build the Bill Segment calculation lines

This step is executed from online and batch billing process.

---

**Entities to Configure**

---

Bill Segment Type

**Rates**

SA Types

---



---

**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.

---



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**Customizable Processess**

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BILLING

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## 1.8 Create Financial Transaction(s)

See **Manage Item 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.

---

**Entities to Configure**

---

**Rates**

Customer Class

Bill Segment Type

SA Type

---



---

**Available Algorithms**

---

BSBF-BA-DFT - creates 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 Processes**


---

BILLING

## 1.9 Add Final Bill Switch for Bill Segment(s)

See **Manage Item 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:** 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 Processes**


---

BILLING

### 1.9.1 Format Online Presentation

See **Manage Item Charges Page 1** on page 2-2 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.

---

## 2.0 Review Bill Segment(s)

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

**Actor/Role:** CSR

**Description:** The CSR or Authorized User reviews the Bill Segment(s) for accuracy and determines the next action. The CSR or Authorized User decides if the billing process could be continued. The Bill Segment(s) may be 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

---

## 2.1 Request Changes for Recalculation of Item Bill Segment

See **Manage Item Charges Page 1** on page 2-2 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 for an Item based Service Agreement may include a change to the number of Items, or date information. There are no specific restrictions on changes that need to be done across the application to calculate the correct Bill Segment.

## 2.2 Update Information

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

**Actor/Role:** CC&B

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

## 2.3 Request Delete Bill

See **Manage Item Charges Page 1** on page 2-2 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.

## 2.4 Delete Bill

See **Manage Item Charges Page 1** on page 2-2 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

## 2.5 Request Delete Specific Bill Segment(s)

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

**Actor/Role:** CSR

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

## 2.6 Delete Bill Segment(s)

See **Manage Item Charges Page 1** on page 2-2 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.

## 2.7 Request Freeze Bill Segment(s)

See **Manage Item 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 does not identify any problem and decides to continue the Billing process, he/she requests to Freeze the Bill Segment(s).

## 2.8 Freeze Bill Segment(s)

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

**Group:** Freeze Bill Segment

**Group:** Batch Billing

**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 - This process is initiated by CSR or Authorized User when he/she requests to Freeze Bill Segments created for the Item based 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 Processes**


---

BILLING

---

## 2.9 Request Re-Bill Bill Segment(s)

See **Manage Item 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 Cancel and Rebill the Bill Segment(s). If the problem identified in frozen Bill Segment has been resolved, CSR or Authorized User requests to Rebill the Bill Segment.

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

---

**Entities to Configure**


---

Bill Cancel Reasons

---

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

See **Manage Item 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

---

### 3.1 Request Undo Re-Bill Bill Segment(s)

See **Manage Item 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 cancellation, the CSR or Authorized User determines the Bill Segment(s) should not be canceled, and uses the Undo function.

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

See **Manage Item 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.

### 3.3 Request Cancel Frozen Segment(s)

See **Manage Item 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

---

### 3.4 Update Bill Segment(s) to Pending Cancel

See **Manage Item 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 Status to Pending Cancel.

### 3.5 Request Undo Cancel Bill Segment(s)

See **Manage Item 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

---

### 3.6 Return Original Bill Segment(s) to Frozen

See **Manage Item 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.

### 3.7 Request Finalize Cancel Bill Segment(s)

See **Manage Item 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

---

### 3.8 Update Bill Segment(s) to Canceled

See **Manage Item 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.

---

**Entities to Configure**


---

Cancel Reasons

---



---

**Available Algorithms**


---

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

---

### 3.9 Request Add Bill Message(s)

See **Manage Item 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 Message

---

## 4.0 Add Bill Message(s)

See **Manage Item 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.

## 4.1 Request Complete Bill

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

**Actor/Role:** CSR

**Description:** When CSR or Authorized User cannot find any problem with the Frozen Bill Segment as well as with other Bill Segments (if any) that belong to the same bill, he/she initiates the Complete Bill function. The CSR or Authorized User initiates the Complete Bill function.

## 4.2 Create Bill Message

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

**Group:** Pre-Bill Completion

**Group:** Generate Bill Segment

**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. 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. Process could be initiated from online or from Batch billing.

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 the deleted 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

---

C1-AccountBillMessage -  
Account Bill Message

---

### Available Algorithms

---

DEL-BSEG -This Bill pre-completion algorithm deletes Bill Segments that are in Error

CPBC-DB - 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 comparing 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 Processes

---

BILLING

## 4.3 Create Bill Messages Based on Configuration

See **Manage Item 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

This step could be initiated from online and batch.

---

#### Entities to Configure

---

Customer Class Bill Messages

Rate Schedule Bill Messages

Meter Reader Remark Bill Messages

Account and Service Agreement Bill Messages

---



---

#### Business Objects

---

C1-AccountBillMessage - Account Bill Message

---



---

#### Customizable Processess

---

BILLING

---

## 4.4 Add Adjustments, Payments, and Bill Corrections to Affect Bill Amount

See **Manage Item 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.

Step could be initiated from online and batch.

---

#### Customizable Processess

---

BILLING

---

## 4.5 Determine Due Date, Late Payment Charge Date, and Credit Review Date

See **Manage Item 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. Some Companies require Late Payment Charges calculated and added to the Bill. If this is the case, the system allows doing so. Two algorithms are listed below for information only. Step could be initiated from online and batch

This step could be initiated from online and batch.

---

### Entities to Configure

---

Late Payment Profile on SA Type

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

Adjustment Types

### Rates

---



---

### Available Algorithm(s)

---

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 Processes

---

BILLING

---

## 4.6 4.3.2.5a Manage Late Payment Charge

See **Manage Item 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.

---

#### 4.7 4.3.1.1d Manage Autopayments

See **Manage Item 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.

---

#### 4.8 4.3.2.2 Manage Severance Process

See **Manage Item 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.

---

#### 4.9 4.3.2.6 Write Off Uncollectible Receivables

See **Manage Item 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 Processes

---

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

---

## 5.0 Create Additional Required Bill Message(s)

See **Manage Item 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. This step could be initiated from online and batch.

---

### Entities to Configure

---

SA Type

Customer Class

Adjustment Types

---



---

### Available Algorithm(s)

---

C1-CN-ADNB - This customer class post Bill completion algorithm recreates adjustments after a credit note is completed.

---



---

### Customizable Processes

---

BILLING

---

## 5.1 Update Bill with Completion Details

See **Manage Item 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 Processes

---

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

---

## 5.2 Review Bill

See **Manage Item 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 evaluates 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

---

## 5.3 Make Necessary Changes for Bill

See **Manage Item 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.

## 5.4 Request Reopen Bill

See **Manage Item 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.

## 5.5 Update Current Bill to Reopen

See **Manage Item 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.

## 5.6 Request Changes to Impact Balance

See **Manage Item 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.

## 5.7 Update Balance

See **Manage Item 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.

## 5.8 Extract Bill for Printing

See **Manage Item 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.

---

### Customizable Processes

---

POSTROUT - CIPBXBLB

Custom Extract Process

---

Business Objects	Available Algorithms
BillRoutingR - Bill business object to read bill routing details. <b>Note:</b> This BO is currently used for reprint Bills	Bill Route Type - BLEX-EX - This algorithm constructs the records that contain the information that appears on a printed Bill (for Doc 1). C1-BLEX-CR - This Bill Route Type extract algorithm prepares the report information needed to create a Bill using a Reporting Engine.



## 5.9 Print Bill

See **Manage Item 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)).

## 6.0 Send Bill to Customer

See **Manage Item 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.

## 6.1 Receives Bill

See **Manage Item 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

---

## 6.2 Select Accounts for Open Bill Cycle

See **Manage Item 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

Account

---

---

### Customizable Processes

---

BILLING

---

## 6.3 Check Eligibility for Batch Billing

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

**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 Algorithm(s)

---

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 Processes

---

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

---

## 6.4 Highlight Bill Segment Exceptions

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

**Group:** Create 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 Processes

---

BILLING

---

## 6.5 Highlight Bill Exceptions

See **Manage Item 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 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 Processes

---

BILLING

---

## 6.6 Identify Bill Segments in Error Status

See **Manage Item 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 Processes

---

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

---

## 6.7 Create Bill Segment Exceptions To Do

See **Manage Item 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 Processes

---

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

---

## 6.8 Evaluate and Investigate Error

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

**Actor/Role:** CC&B

**Description:** The CSR or Authorized User will review the Bill Segment error and supporting information in CC&B SP/Item History, Item 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.

## 6.9 Resolve Error

See **Manage Item 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.

## 7.0 Update Data

See **Manage Item 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.

## 7.1 Request Complete To Do

See **Manage Item 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.

## 7.2 Complete To Do Entry

See **Manage Item 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.

## 7.3 Identify Bills in Error Status

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

**Group:** TO DO Bill 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 Processes

---

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

---

## 7.4 Create Bill Exceptions To Do

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

**Group:** TO DO Bill Error Process

**Actor/Role:** CC&B

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

---

**Entities to Configure**

---

To Do Role

To Do Type

---

---

**Customizable Processes**

---

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

---

## 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
RCVALTHRSQS	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