



C2M.v2.7.CCB

4.2.2.15 Manage Net Energy Metering Charges

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Brief Description

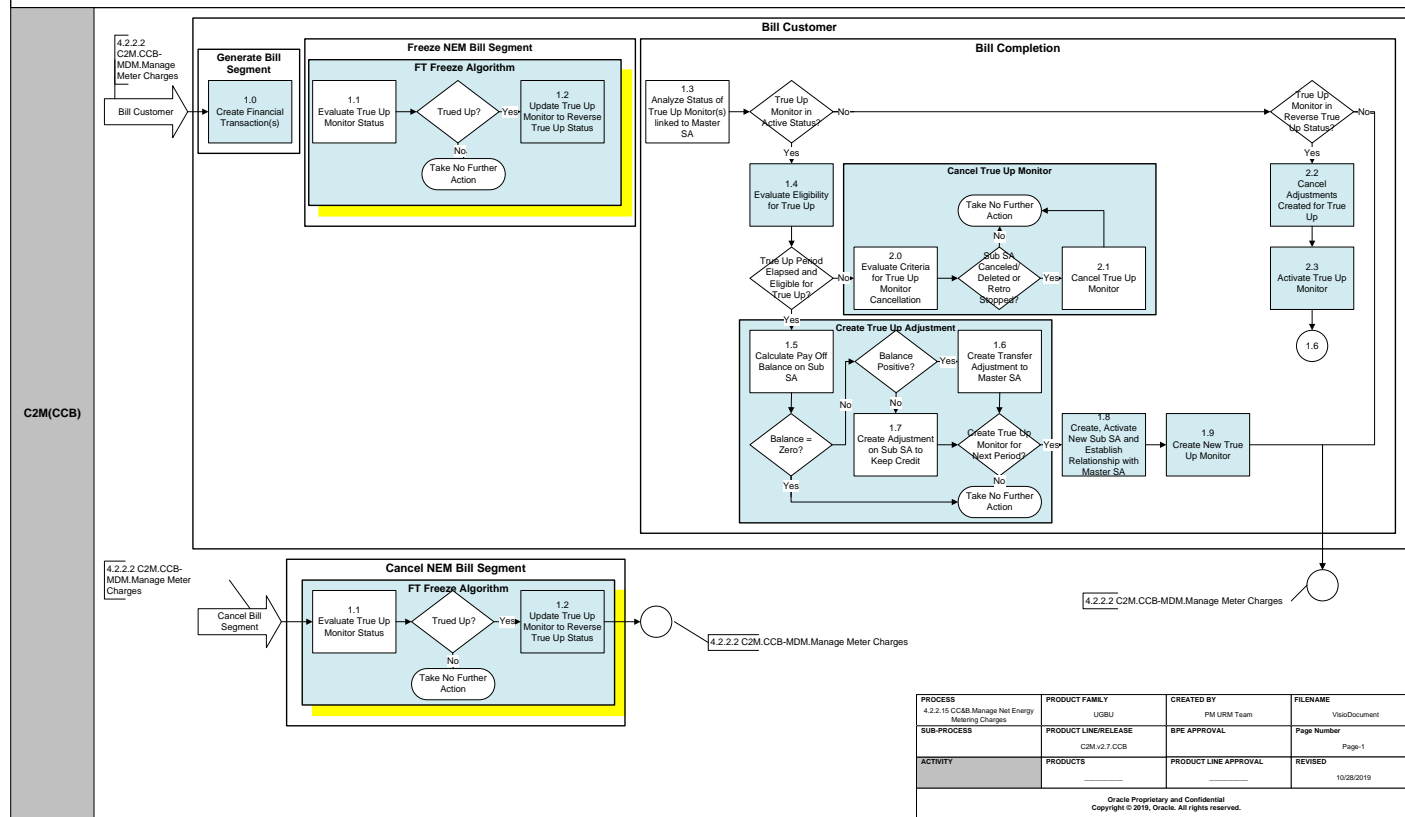
Business Process:	4.2.2.15 C2M.CCB.Manage Net Energy Metering Charges
Process Type:	Sub Process
Parent Process:	4.2.2 C2M.CCB.Manage Bill
Sibling Processes:	4.2.2.2 C2M.CCB-MDM.Manage Metered Charges, 3.3.8.1 C2M.CCB.Establish and Manage Net Energy Metering Service

Customers in a distributed generation energy market may have renewable energy devices such as solar panels or wind turbines connected to their meters. The energy generated at this service point, as well as any energy used, could possibly be measured by a single meter, with the energy generated being netted against the energy used. This is called net energy metering (NEM). The meter records a positive number when customers use more energy than they generate, and a negative number when they generate more than they consume. These customers may owe a minimum charge each month.

This process describes how actual energy charges and generation credits are accrued until the account is adjusted at the end of a specified period, called the true up period. The true up process occurs during billing. C2M(CCB) evaluates the consumption charges and generation credits for the period and determines if the customer owes money to the utility or has a credit. The customer's bills reflect charges / credits accordingly.

Business Process Model - Page 1

4.2.2.15 C2M.v2.7.CCB *Manage Net Energy Metering Charges*



Detail Business Process Model Description

1.0 Create Financial Transaction(s)

Group: Generate Bill Segment

Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) creates the financial details related to the Service Agreement's 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.

Process Plug-in enabled Y

Available Algorithm(s):

C1-C0-GL - This bill segment financial transaction algorithm creates a financial transaction for a bill segment where:

- Payoff amount = bill amount
- Current amount = 0
- The general ledger is affected

This algorithm should be plugged-in on all bill segment types that do not affect a service agreement's current balance (e.g., prepaid with smart meter, net energy metered (NEM)).

C1-C0-NOGL This bill segment financial transaction algorithm creates a financial transaction for a bill segment where:

- Payoff amount = bill amount
- Current amount = 0
- The general ledger is not affected

This algorithm should be plugged-in on all bill segment types that do not affect a service agreement's current balance (e.g., prepaid with smart meter, net energy metered (NEM)).

This algorithm would be configured if the organization banked the credits on the NEM Sub SA.

Customizable process N

Process Name:

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y	Entities to Configure:	SA Type
		Bill Segment Type

1.1 Evaluate True Up Monitor Status

- Group: FT Freeze Algorithm**
- Group: Freeze NEM Bill Segment**
- Group: Cancel NEM Bill Segment**
- Group: Bill Customer**

Actor/Role: C2M(CCB)

Description:

C2M(CCB) evaluates the status of the True Up Monitor (TUM) to determine if it has been trued up and determine if true up process must be reversed.

Process Plug-in enabled Y	Available Algorithm(s):	C1-RV-TRUP - This SA Type - FT Freeze algorithm transitions the true-up monitor to the Reverse True-Up state if a bill segment or bill segment cancellation is frozen and the true-up monitor linked to the Master SA's Sub SA is in the Trued-Up state.
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Business Object Exists Business Object

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

SA Type

C1-NEMTrueUpTask - True Up Monitor Task - This business object defines the behavior of the true up monitor (TUM) used in net energy metering scenarios. Each true up period is covered by an SA relationship and sub-SA, which is associated with a specific TUM. At the end of the true up period, the TUM performs true up processing: bringing the sub-SA balance to zero and transferring any positive balance to the master SA for the customer to pay off. It also sets up the SA relationship, sub-SA and TUM for the next true up period.

C1-NEMTrueUpTaskType - This business object is used to maintain the various configuration options that are used by the true up monitor (TUM) BO's algorithms. It defines the length of the true up period as well as the adjustments types used during the true up process. For true up reversals, the adjustment cancel reason to use is also captured here.

**Customizable process N
Process Name:**

**Configuration required Y
Entities to Configure:**

1.2 Update True Up Monitor to Reverse True Up Status

Group: FT Freeze Algorithm
Group: Freeze NEM Bill Segment
Group: Cancel NEM Bill Segment
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) transitions the True Up Monitor (TUM) to the Reverse True Up state when a Bill Segment or Bill Segment Cancellation FT is frozen for the NEM Sub SA and the current TUM state is Trued Up.

Process Plug-in enabled Y	Available Algorithm(s):	C1-RV-TRUP - This SA Type - FT Freeze algorithm transitions the true-up monitor to the Reverse True-Up state if a bill segment or bill segment cancellation is frozen and the true-up monitor linked to the Master SA's Sub SA is in the Trued-Up state.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	Entities to Configure:	SA Type

1.3 Analyze Status of True Up Monitor(s) linked to Master SA

Group: Bill Completion
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) identifies and evaluates all True Up Monitors linked to Customer's Master SA determine if any further actions are required depending on the current True Up Monitor status.

Process Plug-in enabled Y	Available Algorithm(s):	C1-TRN-TUM - This SA Type - Bill Completion algorithm transitions any true up monitors (TUM) in the Active or Reverse True Up states.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	Entities to Configure:	SA Type

1.4 Evaluate Eligibility for True Up

Group: Bill Completion

Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) evaluates if it time to perform the true up process. The True Up Monitor (TUM) is eligible for true up when the latest non-cancelled Bill Segment for the NEM Sub SA is a Closing Bill Segment or the minimum true up period has elapsed. The elapsed time period is calculated from the earliest Bill Segment Start Date to the latest Bill Segment End Date of the NEM Sub SA.

Process Plug-in enabled Y	Available Algorithm(s):	C1-TRU-ELIG - This Business Object - Monitor algorithm checks eligibility for True up.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

1.5 Calculate Pay Off Balance on Sub SA

Group: Create True Up Adjustment

Group: Bill Completion

Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) transitions the True Up Monitor (TUM) from Active status to Trued Up status, and initiates the true up process. The first step in the true up process is to calculate payoff balance on the NEM Sub SA.

Process Plug-in enabled Y	Available Algorithm(s):	C1-NEM-TRUUP - This Business Object - Enter Status algorithm performs the true up process. It first syncs the payoff and current balances of the sub-SA. Then it calculates the payoff balance of all the non-cancelled bill segments on the associated sub-SA and, if the balance is positive (the customer owes), creates a transfer adjustment from the sub-SA to the master SA for the amount of the payoff balance. If the payoff balance is negative (utility owes the customer), it creates an adjustment on the sub-SA to zero out the balance (the utility gets to keep the credit). The adjustment types to use for each of these adjustments are defined on the service task type.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	Entities to Configure:	Adjustment Type

1.6 Create Transfer Adjustment to Master SA

Group: Create True Up Adjustment

Group: Bill Completion

Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

If the Payoff Balance on the NEM Sub SA is positive (the customer owes), a Transfer Adjustment is created from the NEM Sub SA to the NEM Master SA for the amount of the Payoff Balance.

Process Plug-in enabled Y **Available Algorithm(s):**

C1-NEM-TRUUP - This Business Object - Enter Status algorithm performs the true up process. It first syncs the payoff and current balances of the sub-SA. Then it calculates the payoff balance of all the non-cancelled bill segments on the associated sub-SA and, if the balance is positive (the customer owes), creates a transfer adjustment from the sub-SA to the master SA for the amount of the payoff balance. If the payoff balance is negative (utility owes the customer), it creates an adjustment on the sub-SA to zero out the balance (the utility gets to keep the credit). The adjustment types to use for each of these adjustments are defined on the service task type.

Business Object Exists **Business Object**

C1-NEMTrueUpTask
C1-NEMTrueUpTaskType

Customizable process N **Process Name:**

BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y **Entities to Configure:**

Adjustment Type

1.7 Create Adjustment on Sub SA to Keep Credit

Group: Create True Up Adjustment
Group: Bill Completion
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

If the Payoff Balance is negative (utility owes the customer), a Write Down Adjustment is created on the NEM Sub SA to zero out the Payoff and Current Balances (the utility gets to keep the credit).

Process Plug-in enabled Y	Available Algorithm(s):	C1-NEM-TRUUP - This Business Object - Enter Status algorithm performs the true up process. It first syncs the payoff and current balances of the sub-SA. Then it calculates the payoff balance of all the non-cancelled bill segments on the associated sub-SA and, if the balance is positive (the customer owes), creates a transfer adjustment from the sub-SA to the master SA for the amount of the payoff balance. If the payoff balance is negative (utility owes the customer), it creates an adjustment on the sub-SA to zero out the balance (the utility gets to keep the credit). The adjustment types to use for each of these adjustments are defined on the service task type.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.
Configuration required Y	Entities to Configure:	Adjustment Type

1.8 Create, Activate New Sub SA and Establish Relationship with Master SA **Group: Bill Completion**
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) creates a new NEM Sub SA and links it to Master SA.

Process Plug-in enabled Y	Available Algorithm(s):	C1-TUM-SARL - This Business Object - Enter Status algorithm creates a new SA relationship for the subsequent true up period. The parameter captures the SA Relationship Type used in creating the SA Relationship. The effective date of the new SA relationship is the same as the true up date of the previous period. This ensures that billing picks up the new sub-SA for the next bill period.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

1.9 Create New True Up Monitor

Group: Bill Completion
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) creates a new True Up Monitor for the next True Up period.

Process Plug-in enabled Y	Available Algorithm(s):	C1-SAT-TUM - This SA Type - SA Creation algorithm creates a true up monitor business object. This algorithm is plugged in on the NEM Sub SA Type.
Business Object Exists	Business Object	C1-NEMTrueUpTask C1-NEMTrueUpTaskType
Customizable process N	Process Name:	BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y **Entities to Configure:** SA Type

2.0 Evaluate Criteria for True Up Monitor Cancellation **Group: Cancel True Up Monitor**
Group: Bill Completion
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) evaluates if an active True Up Monitor (TUM) should be cancelled. A True Up Monitor is eligible for cancellation when the NEM Sub SA has been cancelled / deleted or the NEM Sub SA Stop Date is before the NEM SA Relationship Effective Date.

Process Plug-in enabled Y **Available Algorithm(s):** C1-CK-TUMCN - This Business Object - Monitor algorithm transitions the true up monitor (TUM) to the Cancelled state if its related sub SA has been cancelled or deleted or if the SA's stop date is before the relevant SA relationship's effective date.

Business Object Exists **Business Object** C1-NEMTrueUpTask
C1-NEMTrueUpTaskType

Customizable process N **Process Name:** BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

2.1 Cancel True Up Monitor **Group: Cancel True Up Monitor**
Group: Bill Completion
Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) cancels the NEM True Up Monitor (TUM) by transitioning it to Canceled state

C1-CK-TUMCN - This Business Object - Monitor algorithm transitions the true up monitor (TUM) to the Cancelled state if its related sub SA has been

Process Plug-in enabled Y **Available Algorithm(s):** cancelled or deleted or if the SA's stop date is before the relevant SA relationship's effective date.

Business Object Exists **Business Object** C1-NEMTrueUpTask
C1-NEMTrueUpTaskType

Customizable process N **Process Name:** BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

2.2 Cancel Adjustments Created For True Up **Group: Bill Completion**
Group: Bill Customer

Actor/Role: C2M(CCB)
Description:

If True Up Monitor has been reversed and is currently in Reverse True Up State, C2M(CCB) cancels all frozen Adjustments created for True Up and populates with a cancellation reason.

Process Plug-in enabled Y **Available Algorithm(s):** C1-RT-CNFZAD - This algorithm cancels all adjustments created as part of the true up process. The adjustments are stamped with the true up monitor's ID. The adjustment cancel reason is defined on the true up monitor's service task type.

Business Object Exists **Business Object** C1-NEMTrueUpTask
C1-NEMTrueUpTaskType

Customizable process N **Process Name:** BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Configuration required Y **Entities to Configure:**

Adjustment Cancel Reason

2.3 Activate True Up Monitor

Group: Bill Completion

Group: Bill Customer

Actor/Role: C2M(CCB)

Description:

C2M(CCB) transitions the NEM True Up Monitor to Active status.

Business Object Exists	Business Object	
		C1-NEMTrueUpTask
		C1-NEMTrueUpTaskType

Customizable process	Process Name:	
N		BILLING - The Bill cycle Batch processing creates Bills for accounts with an "open" Bill cycle. Online Billing process creates a Bill for account when requested by an Authorized User.

Test Documentation related to the Current Process

ID	Document Name	Test Type

Document Control

Change Record

Date	Author	Version	Change Reference
12/20/2013	May Wang	V 1.0	Initial draft
05/12/2014	Caroline Prado	V2.1	Draft , various updates
05/28/2014	Galina Polonsky		Reviewed, Approved
08/30/17	Joshua Piccott		Updated Document and Visio to v2.6
09/28/2018	Debby Phelps		Updated Document and Visio
10/23/2018	Galina Polonsky		Reviewed, Approved
6/3/2019	Satya Kalavala		Updated format for v2.7

Attachments