# Oracle® Financial Services Climate Change Analytics Cloud Service

## User Guide

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# 1 About This Content

This guide provides information on the newly released Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS).

### Audience

This document is intended for users of the Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS) application.

### Documentation Accessibility

For information about Oracle's commitment to accessibility, visit the Oracle Accessibility Program website at http://www.oracle.com/pls/topic/lookup?ctx=acc&id=docacc.

### Access to Oracle Support

Oracle customers that have purchased support have access to electronic support through My Oracle Support. For information, visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=info or visit http://www.oracle.com/pls/topic/lookup?ctx=acc&id=trs if you are hearing impaired.

### Related Resources

See these Oracle resource on the Oracle Help Page:

- Getting Started with Oracle Cloud
- Admin Console User Guide
- OFS Climate Change Analytics Cloud Service User Guide

### Conventions

The following text conventions are used in this document.

| Convention | Meaning |
|---|---|
| **boldface** | Boldface type indicates graphical user interface elements associated with an action, or terms defined in text or the glossary. |
| *italic* | Italic type indicates book titles, emphasis, or placeholder variables for which you supply particular values. |
| `monospace` | Monospace type indicates commands within a paragraph, URLs, code in examples, text that appears on the screen, or text that you enter. |

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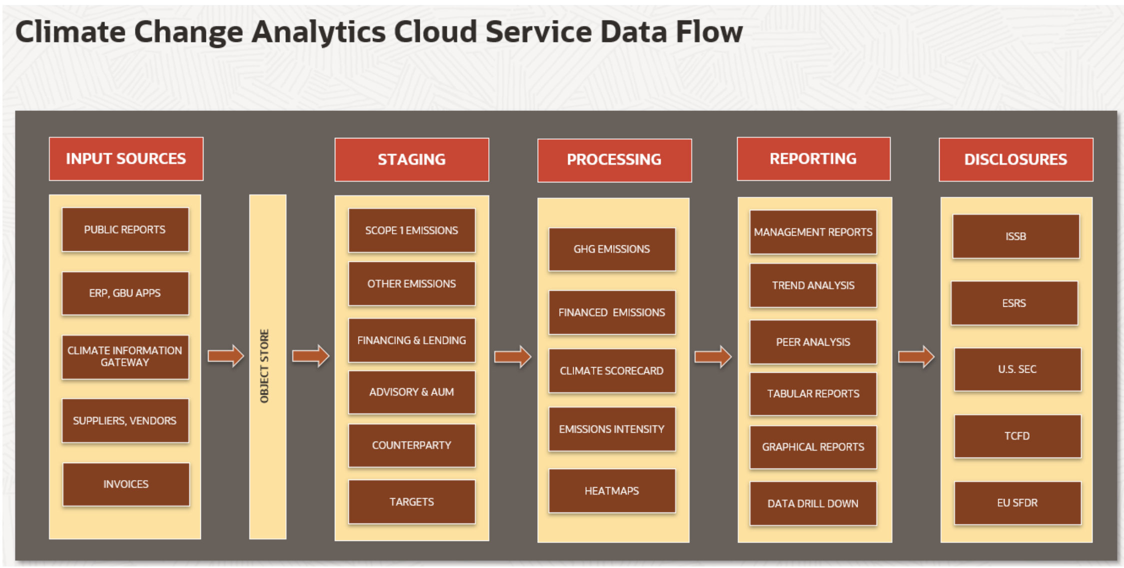
# Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS)

This chapter provides the functional and business overview of the Oracle Financial Services Climate Change Analytics Cloud Service workflow.

**Figure 2-1 The OFS Climate Change Analytics Cloud Service Workflow**




Oracle Financial Services Climate Change Analytics Cloud Service (OFS CCA CS) is a one-stop-shop-solution to help banks and financial institutions in their endeavor of complying with their climate change-related reporting and analytical requirements across the following standards and/or frameworks:

- The sustainability Disclosure Standard is issued by the International Sustainability Standards Board (ISSB) by the IFRS Foundation.
- European Sustainability Reporting Standard (ESRS) issued by the European Financial Reporting Advisory Group (EFRAG).
- Climate-related Disclosures issued by the U.S. Securities and Exchange Commission (SEC), USA.
- Task Force on Climate-related Financial Disclosures (TCFD) issued by The Financial Stability Board (FSB).
- Sustainable Finance Disclosure Regulation (SFDR) by the European Union

**Note**

This standard uses draft/interim provisions, and requirements of ISSB, ESRS, and U.S. SEC standards/rules. Over time, application calculations and reports may change in line with updates made in these respective standards/rules.

The application supports compliance with these standards and/or frameworks by having specific and out-of-the-box analytics for the following reporting requirements:

- Greenhouse Gas (GHG) Emissions
- Climate Change Risk Management
- The Upstream and Downstream impact of Climate Change Risk
- Climate Change Targets, and Performance Evaluation
- Management Overview

# Frameworks Supported by Oracle Financial Services Climate Change Analytics Cloud Service

This section provides information on the various frameworks that are supported by Oracle Financial Services Climate Change Analytics Cloud Service:

**Note**

The purpose of this section is to only highlight the various requirements of the mentioned frameworks and/or standards. Over time, the application calculations and reports may change in line with updates made in these respective standards/rules.

- European Sustainability Reporting Standards (ESRS)
- International Sustainability Standards Board (ISSB)
- U.S. Securities Exchange and Commission (SEC Rules)
- Task Force on Climate-Related Financial Disclosures (TCFD Requirements)
- Sustainable Finance Disclosure Regulation (EU's SFDR Regulation)

## ESRS

The following is the set of disclosure requirements from ESRS relating to climate change that a reporting entity needs to report:

- **Disclosure Requirement E1-1** – Transition plan for climate change mitigation
- **Disclosure Requirement E1-2** – Policies related to climate change mitigation and adaptation
- **Disclosure Requirement E1-3** – Actions and resources about climate change policies
- **Disclosure Requirement E1-4** – Targets related to climate change mitigation and adaptation
- **Disclosure Requirement E1-5** – Energy consumption and mix

- **Disclosure Requirement E1-6** – Gross Scopes 1, 2, 3 and Total GHG emissions
- **Disclosure Requirement E1-7** – GHG removals and GHG mitigation projects financed through carbon credits
- **Disclosure Requirement E1-8** – Internal carbon pricing
- **Disclosure Requirement E1-9** – Potential financial effects from material physical and transition risks and potential climate-related opportunities

# ISSB

The following are the set of disclosure requirements from ISSB relating to climate change that a reporting entity needs to report.

- **Governance**
- **Strategy**
- **Risk Management**
- **Metrics**

## Governance

An entity shall disclose information about the identity of the governance body or bodies that are responsible for the oversight of climate-related risks and opportunities; a reflection of its policies on board mandates, and other policies; updates on climate-related risks and opportunities; consideration given to climate-related risks and opportunities when overseeing entity's strategy.

## Strategy

An entity shall disclose information about the significant climate-related risks and opportunities that it reasonably expects could affect its business model and strategy; the effects of such risks and opportunities on its business model, value chain, strategy, transition plans, and financial position; and the climate resilience of its strategy.

## Risk Management

An entity shall disclose processes used to identify climate-related risks and opportunities; monitor, manage, and prioritize climate-related risks and opportunities; and the extent of integration of such risks and opportunities into the overall Risk Management Process.

## Metrics

An entity shall disclose financial disclosures on metrics and targets related to the relevant cross-industry metric categories; industry-based metrics; other metrics used by the board or management to measure progress towards the targets; and targets set by the entity relating to climate-related risks and opportunities.

# U.S. SEC Rules

The following are the set of disclosure requirements from the SEC relating to climate change that a reporting entity needs to comply report.

- The oversight and governance of climate-related risks by the registrant's board and management;

- How many climate-related risks identified by the registrant have had or are likely to have a material impact on its business and consolidated financial statements, which may manifest over the short-, medium-, or long-term;
- How many identified climate-related risks have affected or are likely to affect the registrant's strategy, business model, and outlook;
- The registrant's processes for identifying, assessing, and managing climate-related risks and whether any such processes are integrated into the registrant's overall risk management system or processes;
- If the registrant has adopted a transition plan as part of its climate-related risk management strategy, a description of the plan, including the relevant metrics and targets used to identify and manage any physical and transition risks;
- If the registrant uses scenario analysis to assess the resilience of its business strategy to climate-related risks, a description of the scenarios used, as well as the parameters, assumptions, analytical choices, and projected principal financial impacts;
- If a registrant uses an internal carbon price, information about the price and how it is set;
- The impact of climate-related events (severe weather events and other natural conditions) and transition activities on the line items of a registrant's consolidated financial statements, as well as the financial estimates and assumptions used in the financial statements;
- The registrant's direct GHG emissions (Scope 1) and indirect GHG emissions from purchased electricity and other forms of energy (Scope 2), separately disclosed, expressed both by disaggregated constituent greenhouse gases and in the aggregate, and absolute terms, not including offsets, and in terms of intensity (per unit of economic value or production);
- Indirect emissions from upstream and downstream activities in a registrant's value chain (Scope 3), if material, or if the registrant has set a GHG emissions target or goal that includes Scope 3 emissions, in absolute terms, not including offsets, and in terms of intensity; and
- If the registrant has publicly set climate-related targets or goals, information about:
  - The scope of activities and emissions included in the target, the defined time horizon by which the target is intended to be achieved, and any interim targets;
  - How the registrant intends to meet its climate-related targets or goals;
  - Relevant data to indicate whether the registrant is making progress toward meeting the target or goal and how much progress has been achieved, with updates each fiscal year; and
  - If carbon offsets or renewable energy certificates ("RECs") have been used as part of the registrant's plan to achieve climate-related targets or goals, certain information about the carbon offsets or RECs, including the amount of carbon reduction represented by the offsets or the amount of generated renewable energy represented by the RECs.

## TCFD Requirements

The following are the set of disclosure suggestions from TCFD relating to climate change that a reporting entity needs to report:

- Governance
- Strategy
- Risk Management

- Metrics and Targets

## Governance

Discloses the organization’s governance around climate-related risks and opportunities including a description of the board’s oversight of climate-related risks and opportunities; and management’s role in assessing and managing climate-related risks and opportunities.

## Strategy

Discloses the actual and potential impacts of climate-related risks and opportunities on the organization’s businesses, strategy, and financial planning where such information is material. The required information would include a description of the identified climate-related risks and opportunities in the company; the impact of such risks and opportunities on the company’s businesses, strategy, and financial planning; and describe the resilience of the company’s strategy.

## Risk Management

Discloses how the company identifies, assesses, and manages climate-related risks by including a description of the company’s processes for identifying and assessing such risks; processes for managing them; and their integration into the company’s overall Risk Management.

## Metrics and Targets

Discloses the Metrics and Targets used to assess and manage relevant climate-related risks and opportunities where such information is material. Disclosures include metrics used by the organization to assess climate-related risks and opportunities; Greenhouse Gas (GHG) Emissions; Climate Targets; and a performance evaluation against targets.

## EU’s SFDR Regulation

The following are the set of indicator/metric requirements from the EU’s SFDR relating to climate change that a reporting entity needs to report:

- GHG Emissions
- Carbon footprint
- GHG intensity of investee companies
- Exposure to companies active in the fossil fuel sector
- Share of non-renewable energy consumption and production
- Energy consumption intensity per high-impact climate sector
- Exposure to fossil fuels through real estate assets
- Exposure to energy-inefficient real estate assets

# Working with Oracle Financial Services Climate Change Analytics Cloud Service

The following sections provide an overview of the OFS CCA CS User Groups, Guidelines for working with the application, launching the application, and common features.

## User Groups

The following table provides information on User Groups and the related activities:

**Table 2-1 User Groups and Activities**

| User Groups | Activities |
| --- | --- |
| CCA Administrator User Group | • Set User and Application Preferences<br>• Set Setup Parameters<br>• Currency and Rate Management<br>• Dimension Management |
| CCA Analyst User Group | • Data Management: Metadata and Data Loaders<br>• Schedule Batch Processes |
| CCA Auditor User Group | • View privileges for all application-specific modules:<br>• Review/Analyze Results<br>• Review Process Logs<br>• View Reports |
| CCA Approver User Group | • Emissions Calculator<br>• Data Model Interface<br>• Data Model Extension<br>• Data Quality Framework |
| CCA Climate Scorecard Administrator Group | Set User and Application Preferences |
| CCA Climate Scorecard Analyst Group | • Data Management: Metadata and Data Loaders<br>• Create definition<br>• Schedule Batch Processes<br>• Execute Process |
| CCA Climate Scorecard Auditor Group | • View privileges for Climate Scorecard<br>• Review/Analyze Results<br>• Review Process Logs |

In addition to this, custom user groups can be created and managed as per requirement. For more information, see the User Roles and Privileges section.

## Guidelines for working with Oracle Financial Services Climate Change Analytics Cloud Service

This topic describes an approach to designing and building applications based on your Security Role and the tasks it enables you to perform.

**Table 2-2 List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Module | Access Code | Functionality | Module Role Code | CCA Approver | CCA Admin | CCA Analyst | CCA Auditor |

**Table 2-2 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
|---|---|---|---|---|---|---|---|
| File Upload | File Upload, File Download, File Delete, List of Files (summary) | User mapped to this role can perform File upload, download, delete and view the list of files uploaded | File advance | N | Y | N | N |
| File Upload | File List | This role will have access to view the list of File uploaded into the Object Store | File read | N | Y | Y | Y |
| Batch Scheduler | Batch Advanced | This role can perform Batch create, edit, delete, purge, schedule, execute, copy, view | Batch adv | N | Y | N | N |
| Batch Scheduler | Batch Operator | This role can perform Batch execute, schedule, view, list of batches | Batch oper | N | N | Y | N |
| Batch Scheduler | Batch Read | This role can view batch, list of batches | Batch read | N | N | N | Y |
| Dimension Member | Member Advanced | This role can add, edit, view, delete, authorize, view list of members | Member adv | N | Y | N | N |

**Table 2-2 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
|---|---|---|---|---|---|---|---|
| Dimension Member | Member write | This role can add, edit, view, view list of members | Member write | N | N | Y | N |
| Dimension Member | Member read | This role can view member and list of members (summary) | Member read | N | N | N | Y |
| Hierarchy | Hierarchy Advanced role | This role can add, edit, view, delete, authorize, view list of hierarchies | Hierarchy Adv | N | Y | N | N |
| Hierarchy | Hierarchy Write role | This role can add, edit, view, view list of hierarchies | Hierarchy write | N | N | Y | N |
| Hierarchy | Hierarchy Read role | This role can view hierarchy definition and view the list of hierarchies | Hierarchy read | N | N | N | Y |
| Attribute | Attribute Advanced role | This role can add, edit, view, delete, authorize, view list of attribute definitions | Attribute advanced | N | Y | N | N |
| Attribute | Attribute write role | This role can add, edit, view, view list of attribute definitions | Attribute write | N | N | Y | N |
| Attribute | Attribute read role | This role can view, view list of attribute definitions | Attribute read | N | N | N | Y |

**Table 2-2 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
|---|---|---|---|---|---|---|---|
| Currency | Currency Admin role | This role can add, edit, View, delete currency definition | Currency admin | N | Y | Y | N |
| Currency | Currency auditor role | This role can view currency definition | Currency auditor | N | N | N | Y |
| Currency rates | Currency rates Admin role | This role can add, edit, view, delete the Currency rates | Currency rates admin | N | Y | Y | N |
| Currency Rates | Currency Rates Auditor | This role can view the Currency rates | Currency rates auditor | N | N | N | Y |
| Data File Specification | Data File Specification Advanced | This role can add, edit, view, delete, copy, data upload | Data file specification adv | N | Y | Y | N |
| Data File Specification | Data File Specification Read | This role can view the Data file specification definition | Data file specification read | N | N | N | Y |
| Data Model Extension | Data Model Column Extension Advanced Access | The User Group mapped to this role will have advanced access to columns in the Data Model Extension Service. | DMEXTCOLADV | Y | N | N | N |

**Table 2-2 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
|---|---|---|---|---|---|---|---|
| Data Model Extension | Data Model Column Extension Authorization Access | User Group mapped to this role will have access to Authorize the changes in Data Model Extension Service column segment | DMEXTCOLAUTH | Y | N | N | N |
| Data Model Extension | Data Model Column Extension Read Access | User Group mapped to this role will have access to Data Model Extension Service | DMEXTMLREAD | Y | N | N | N |
| Emissions Calculator | Emission Calculator Approver | Emission Calculator Auditor | RLEMICALAPPROVER | Y | N | N | N |
| Data Model Maintenance | DMM Write | The Data Model Maintenance Write Role | DMMWRITE | Y | N | N | N |
| Data Quality | DQ AccessRole | This is the Read role in the Data Quality Framework service. | DQACC | Y | N | N | N |
| Data Quality | DQ Read | Data Quality Read-only Role | DQREAD | Y | N | N | N |
| Data Quality | DQ Phantom | Data Quality Phantom Role | DQPHTM | Y | N | N | N |
| Data Quality | DQ Write | Data Quality Write Role | DQWRITE | Y | N | N | N |
| Data Quality | DQ Auto Authorize Role | Data Quality Auto Authorize Role | DQAUTOAUTHR | Y | N | N | N |

**Table 2-2 (Cont.) List of Roles referred to in Oracle Financial Services Climate Change Analytics Cloud Service**

| Module Details | | | | OFS CCA CS Roles | | | |
|---|---|---|---|---|---|---|---|
| Data Quality | DQ Advanced | Data Quality Advanced Role | DQADVND | Y | N | N | N |
| Data Quality | DQ Authorize | Data Quality Authorize Role | DQAUTH | Y | N | N | N |

# Accessing Oracle Financial Services Climate Change Analytics Cloud Service

See the Getting Started Guide for information on how to subscribe and set up the service.

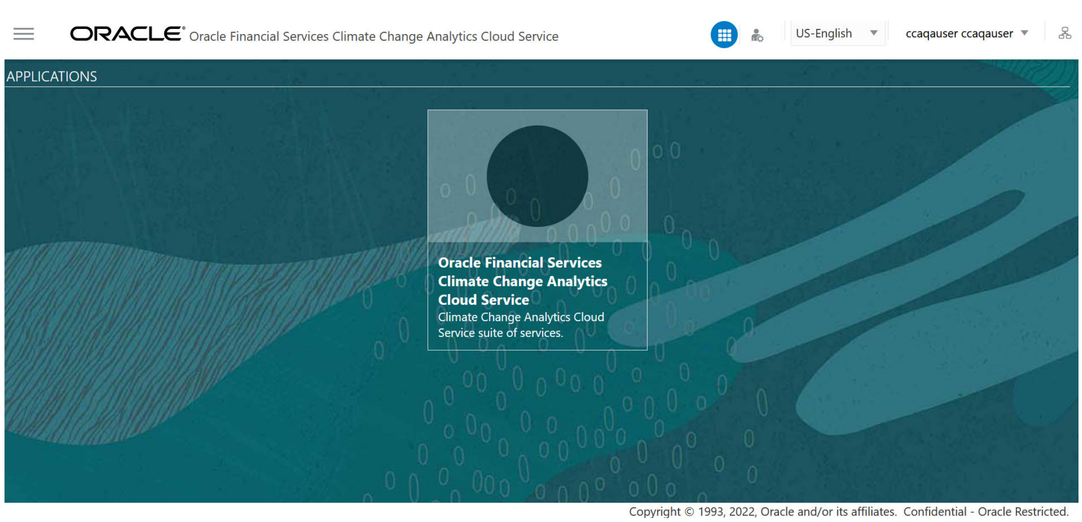
# Launching Oracle Financial Services Climate Change Analytics Cloud Service

1. In the Web browser, click the link provided by Oracle.
2. Enter your user name and password.

   If requested, select an application. The password is case-sensitive.
3. Click **Sign In**.

   The **Oracle Financial Services Climate Change Analytics Cloud Service** Home page is displayed.

**Figure 2-2 Oracle Financial Services Climate Change Analytics Cloud Service Home Page**



## Oracle Financial Services Climate Change Analytics Cloud Service Home Page

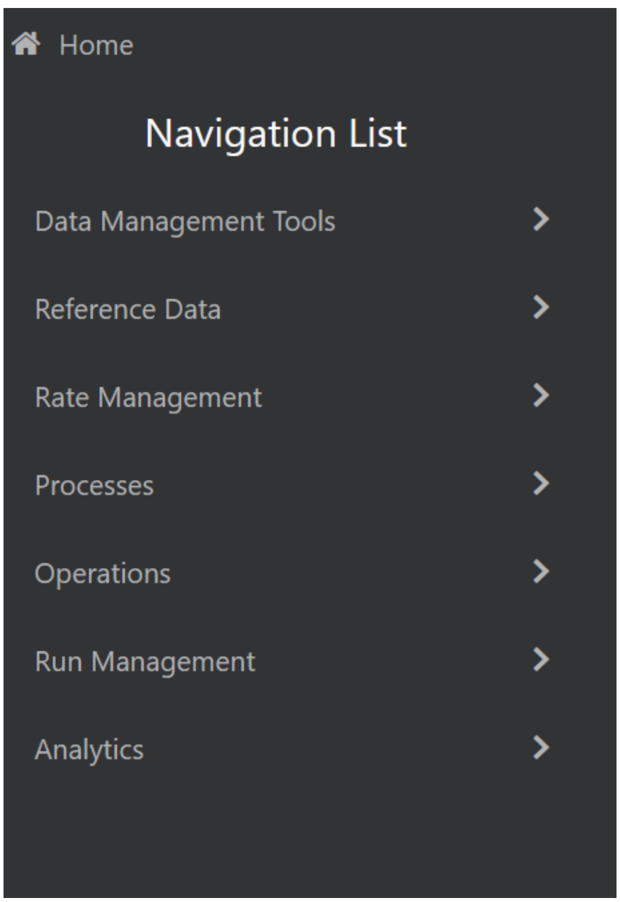
When you log in, you see the Oracle Financial Services Climate Change Analytics Cloud Service Home page.

Click the **Navigator Screen** icon

**Figure 2-3 Navigator Screen Icon**

to display the Navigator screen. This screen serves as a sitemap of the application features and displays links to all of the pages you can access. Use the Navigator screen to navigate among the rules and processes required to define, review, and analyze the application, and to report results.

**Figure 2-4 The LHS Navigation**




The OFS CCA Cloud Service Navigation Paths are displayed in the List of Navigation Paths. Access all these pages through the CCA Admin, or CCA Analyst, CCA Auditor or CCA Approver User.

## Common Icons

Use the icons to view and analyze data and related information for each feature.

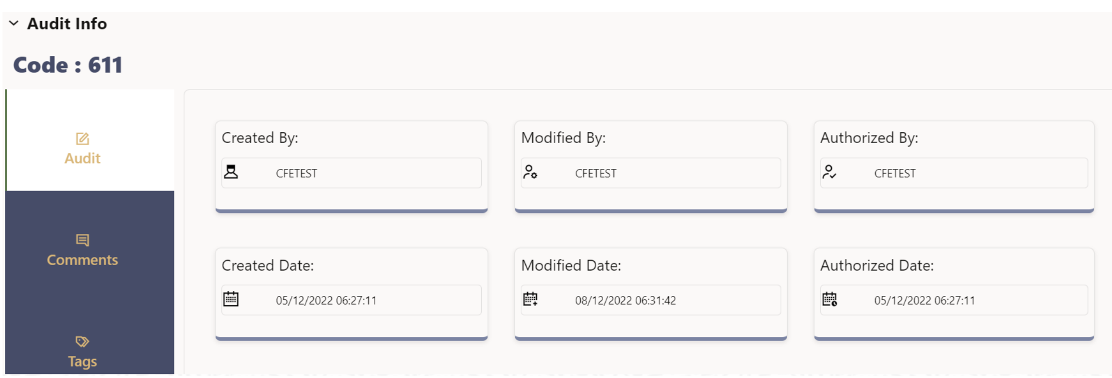
**Figure 2-5 Common Icons**

| Icon Name | Icon | Uses |
|---|---|---|
| Action | • • • | Click to perform view various action options. |
| View/Edit | | Click in the Action column and select View/Edit to view or edit the contents of a rule in Read/Write format.<br>Depending on User Privileges, the rule will open in either View or Edit mode. |
| Copy or Save As | | Click in the Action column and select Save As to create a copy of an existing rule. |
| Delete | | Click in the Action column and select Delete to delete an existing rule. |
| Execute | | To execute a process. |
| Execution Details | | To view the execution details of the process. |
| Add New | + | Click Add icon to add new items on Rule screen. |

## Common Feature Controls

The OFS CCA Cloud Service includes many common feature controls.

**Figure 2-6 Audit Info**




### Audit

The Audit Trail container is a standard footer container for every OFS CCS CS rule type. It displays Created By, Creation Date, Last Modified By, Modification Date, Authorized By, and Authorized Date on the Audit tab.

### User Comments

The User Comments tab may be used to add comments to any rule, subject to a maximum of 4000 characters.

### Tags

The Tags tab allows you to add a tag to the selected Rule ID.

## Audit Pane

The Audit pane is a standard footer pane for every OFSAA rule type.

The Audit pane displays the following tabs – **Audit**, **Comments** and **Tags**.

- **Audit**: It displays the audit data for the object such as:
  - Created By
  - Created Date
  - Modified By
  - Modified Date
  - Authorized By
  - Authorized Date

  The details in this tab are automatically populated when the rule or process is saved.
- **Comments**: The Comments panel shows the existing comments for the object. Only the latest comment is editable and deletion of existing comments is not allowed. Users can also add new comments for the current object.
- **Tags**: The Tags panel shows the tag associated with the object. The user can add new tags or remove the existing tags.

## Quick Tour

The following table provides a bird's eye view of the tasks and the order to execute these tasks using the application. Click the links to read the details of each task. You can use the links on this page to help you immediately begin using Oracle Financial Services Climate Change Analytics Cloud Service.

**Table 2-3 Quick Tour**

| Order | Task | Who Does This? | Action |
|---|---|---|---|
| 1 | CPQ Order Placement | Tenant Admin | Subscribe to the application. You will receive a Welcome e-mail with the URL and temporary password.<br>See Getting Started with Oracle Cloud. |

**Table 2-3 (Cont.) Quick Tour**

| Order | Task | Who Does This? | Action |
|---|---|---|---|
| 2 | Provision Users | Sys Admin | Configure the Security Management System (SMS) to create users, assign roles, and implement user authorization and authentication. For more information, see Getting Started with Oracle Cloud.<br>Review Standard User Groups and Roles<br>Create Groups and Roles<br>Create/Import Users<br>Assign applications and groups to users<br>Send notification to users. |
| 3 | Data File Specification (DFS) file Upload | CCA Admin or CCA Analyst | Load data from files to stage tables. User can create their own DFS definitions. |
| 4 | Load Stage Location Master | CCA Admin or CCA Analyst | Loads data from files to stage **STG_LOCATION_MASTER** |
| 5 | Load DIM Location | CCA Admin or CCA Analyst | Load **DIM_LOCATION**, **DIM_LOCATION_B**, and **DIM_LOCATION_TL** from **STG_LOCATION_MASTER** |
| 6 | Load Dimensions Data | CCA Admin or CCA Analyst | Loads all dimension data from staging to the respective dimension tables. |
| 7 | Currencies Configuration | CCA Admin or CCA Analyst | From the Currencies screen, activate the required currencies and mark them as the Reporting Currency |
| 8 | Currency Rates | CCA Admin or CCA Analyst | 1. Upload or create the currency rates by using the Currency Rate screen.<br>2. Use the Generic Loader Component to load the currency rates for **AS_OF_DATE** |
| 9 | Global Preference Configuration | CCA Admin or CCA Analyst | From the Preferences screen, set the default or preferred value for each of the preference parameters. |
| 10 | Load Stage Instrument Tables | CCA Admin or CCA Analyst | Execute the seeded batch by setting required values for the stage loader component |
| 11 | Load Processing Instrument Tables | CCA Admin or CCA Analyst | Execute the seeded batch by setting the required values for the CCA Processing Loader Component |
| 12 | Expression Builder | CCA Admin or CCA Analyst | This is used for building the custom expressions for the Emission Calculator |

**Table 2-3 (Cont.) Quick Tour**

| Order | Task | Who Does This? | Action |
|---|---|---|---|
| 13 | Emission Elements Mapping UI Configuration | CCA Admin or CCA Analyst | Used to configure the emission category to the asset class, expression and method of activity. This is used by the Emission Calcualor. |
| 14 | Reporting Preference Configuration | CCA Admin or CCA Analyst | This is used to configure the threshold and conversion of standard units. |
| 15 | Emission Calculation Definitions Creation | CCA Admin or CCA Analyst | This is used for defining the mapping for the emission category to the emission source databases. |
| 16 | Climate Scorecard Definitions | CCA Admin or CCA Analyst | This is used to define the score card definition. It also allows the user to rate a customer based on qualitative and quantitative parameters. |
| 17 | Pre-processing Data Preparation | CCA Admin or CCA Analyst | This is a seeded batch that is a pre-step for the Emission Calculator or Score Card Definition execution. |
| 18 | YTD Loader Execution | CCA Admin or CCA Analyst | This is a seeded batch that executes the Emission Calculator and YTD computation. |
| 19 | Scorecard Execution | CCA Admin or CCA Analyst | This is a seeded batch that executes the Climate Score Card computation. |
| 20 | Heatmaps | CCA Admin or CCA Analyst | This is a seeded batch that process Heatmaps. |
| 21 | IFRS9 Output Generation | CCA Admin or CCA Analyst | This batch generates the financed emissions output that can be used in IFRS9. |
| 22 | Generate Reports | CCA Analyst | Review the reporting canvases. For more information, see the Reports document. |

3

# Business Rules Administration

This chapter covers the following topics.

- Reference Data
  - Dimension Management: Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.
  - Currencies: Currency module supports the definitions and maintenance of currencies.
  - Currency Rates: Currency Rates Module uses the currencies defined and activated in the Currency Module to support the creation and maintenance of Historical Exchange Rates.
- Common Rules: This section explains about rules which are common across all multiple applications in the Cloud Service
  - Preferences: This section covers the procedures to set the Global Preference Settings.

## Reference Data

This section covers the following topics:

1. Dimension Management: Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.
   - Members: Dimension Members refer to the individual items that constitute a dimension when data is categorized into a single object such as Product, Organization, Time, and so on.
   - Attributes: Attributes refers to the distinguished properties or qualifiers that describes a Dimension Member.
   - Hierarchies: Hierarchies refer to Dimension Members that are arranged in levels, with each level representing the aggregated total of the data from the level below. One dimension type can have multiple hierarchies associated with it.
2. Currencies: Currencies module allows you to define and maintain the currencies and currency rates.
   - Currencies: Currency module supports the definitions and maintenance of currencies.
   - Currency Rates: Currency Rates module uses the currencies defined and activated in the Currency module to support the creation and maintenance of Historical Exchange Rates.

### Dimension Management

Dimension Management facilitates you to categorize data into a single object as a Member; define levels and aggregate data to form the Hierarchies, and distinguish each member by defining the required Attributes.

The roles mapped to Dimension Management are as follows:

- Dimension Advanced
- Dimension Authorization
- Dimension Read Only
- Dimension Write

## Object Security

Object Security helps to secure data and also to decide what each user can access. You can apply Object Security to various object definitions like Hierarchy definitions, Filters, Expressions and Migration definitions.

You can assign specific user roles and functions to user groups, to implement Object Security. To assign user roles and functions, Seeded User Groups and Seeded User Roles are mapped to the User Groups. If you are using the Seeded User Groups, the security to access objects depends on the associated User Groups.

Map your User Group to the folder in case of public or shared folder, for creating/editing/copying/removing an object in Dimension Management module. You should also be the owner of the folder in case of Private Folder. Additionally, the WRITE role should be mapped to your User Group.

To access the link and the Summary page, map your User Group to ACCESS role. You can view all objects created in Public Folders - Shared Folders to which you are mapped and Private Folders for which you are the owner.

## Components of Dimension Management

You can create and manage the following Object Definitions using from Dimension Management:

- Members
- Attributes
- Hierarchy

## Attributes

Attributes refers to the distinguished properties or qualifiers that describes a Dimension Member. Attributes are applicable to key dimensions only.

### Attribute Summary Page

The list of created attribute definitions are displayed in the Attribute Summary.

To access the attribute summary page :

1. From the left menu, click **Reference Data.**
2. Select **Dimension Management** and select **Attribute**, to access the The **Attribute Summary Page** .

   The Attribute Summary Page provides the list of attribute Definitions with the following details:

   - **Code** - The Numeric Code assigned to the Attribute Definition.
   - **Name** - The unique Attribute Definition Name.

- **Data Type** - The Data Type associated with the attribute. The Data Type is set to Date, Dimension, Number or String.
- **Required** - Select **Yes** or **No** to make this attribute a mandatory value for the associated dimension.
- **Seeded** - Select **Yes**, if the attribute is seeded by the service or **No** if the attribute is created by the user.
- **Action** - Click to view, edit, copy or delete an attribute definition. You can also access the list of objects dependent on this definition.

To filter the summary based on specific search criteria, select and add the required search criteria to the **Search** field and enter/select the specific values.

> **Note**
>
> **Dimension** is a default and mandatory search filter. Select the dimension to access the member definitions available in that dimension. By default the first dimension from the **Dimensions** list is added as the search entry.

## Navigating Attribute Summary Page

To access records in a Summary page, you can search, sort and navigate to multiple pages.

## Creating Attribute Definition

To create a new Attribute for a dimension, complete the following steps:

1. Click the **Add** in the Attribute Summary Page.

   The **Add Attribute Definition** Page is displayed.
2. Enter the following **Attribute Details** :
   - **Dimension** - Select the Dimension for which the new Attribute is getting created.
   - **Numeric Code** - The Numeric Code to be assigned to the new Attribute Definition. You can enter any number between 0 and 999,999,999, or click **Generate Code**, to auto-generate a unique code. If you enter the value manually, the system will verify if the value is unique and assigns it.
   - **Name** - The unique Attribute Definition Name. You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
   - **Alphanumeric Field Value** - The name of physical column name that will be used to store attribute value in the Report Dimension Table. You can enter up to 100 characters. We recommend using only Underscore (“_”) as a special character.
   - **Description** - A brief description about the Attribute Definition. You can enter up to 1000 characters. All characters are allowed except " & ' + @ and ~.
3. Enter the following **Attribute Properties** :
   - **Data Type** - Set the Data Type as Date, Dimension, Number, or String from the drop-down list.

> **Note**
>
> If the data type is **Number**, enter a Scale value >= 0. If it equal to 0, only Integers are enabled. To enable decimal entries, the maximum Scale Value must be > 0 and <= the scale defined for NUMBER in the dimension's underlying attribute table. The maximum value of the NUMBER is set to 22.

- **Dimension** - (Enabled only for Dimension data type.) Select the Dimension to be associated with the new Attribute Definition.
- **Default Value** - The default value is set based on the selected data type. The Maximum characters allowed in Default Value field for String Data Type is 1000. The default value is mandatory if this attribute is set as a required attribute.

**Table 3-1 Data Type and Default Values**

| Data Type | Default Value |
|---|---|
| Dimension | Select the Default Value from the drop-down list of members mapped to the selected Dimension |
| Number | Enter a Numeric Value based on the define Scale. |
| Date | Set a valid date. |
| String | Enter the Alphanumeric Value |

- **Required Attribute** - Select **Yes**, if this attribute is mandatory for the associated dimension members. To set it as an optional attribute, select **No**.
- **Seeded Value** - Select **Yes**, only when the attribute is seeded out of box by the Cloud Service. For a new attribute, select **No**.

4. After entering the required information, click **Save**, to create a new attribute.

## Managing Attribute Definitions

You can view, edit, copy and delete the existing Attribute Definitions from the Summary Page.

In the Attribute Summary Page, highlight a specific Attribute Definition and click the **Action**. The following Options are displayed.

- **View**- View the **Attribute Details** for a specific attribute definition.
- **Edit**- Edit the **Attribute Details** for a specific attribute definition.
- **Copy**- Copy the definition details and create another attribute Definition by changing the Alphanumeric Code, Numeric Code and Name.
- **Delete**- Delete the Attribute definition.
- **Check Dependency** - View the list of objects dependent on this definition.

| Field | Description |
|---|---|
| View | View the **details** for a selected Attribute. |
| Edit | Edit theselected Attribute. |
| Copy | Copy the Attribute Definition Details and create another Attribute Definition by changing the unique values like Alphanumeric Field Value, Numeric Code and Name. |
| Delete | Delete the selected Attribute. |

## Viewing Attribute Definition

You can view individual Attribute Definition Details at any given point. The Read Only role should be mapped to your User Group.

To view the existing Attribute Definition details in the Attribute page:

1. Highlight the Attribute Definition and click **Action**.
2. Click **View** .

   The **Attribute Definition** Page is displayed with the details Code, Name, Data Type, Required and Seeded status.

## Modifying Attribute Definition

Modify the Name, Description, or Default Value fields of an Attribute Definition. The Write role should be mapped to your User Group.

To modify an existing Attribute Definition in the Attributes summary:

1. Highlight the Attribute Definition and click **Action**.
2. Click **Edit**, to access the Attribute Definition page.

   Edit the required information and click **Save**.
   You can view the updates in the Attributes summary.

## Copying Attribute Definition

The Copy Attribute Definition facilitates you to quickly create a new Attribute Definition based on the existing attributes or by updating the values of the required attributes.

To copy an existing Attribute Definition, the Write role should be mapped to your User Group.

Refer to the following steps, to copy an Attribute Definition.

1. Highlight the Attribute Definition and click **Action**.
2. Click **Copy**.

   The Attribute Definition page is displayed with the details: Code, Name, Data Type, Required and Seeded status.

   Edit the unique information such as Name, Alphanumeric Field Value, Numeric Code and click **Save**.

## Deleting Attribute Definition

You can remove the Attribute Definitions which are not required in the system by deleting from the Attributes Summary.

To delete an attribute definition, the Write role should be mapped to your User Group.

1. Highlight the Attribute Definition and click the **Menu** button.
2. Click the **Delete** button.

   The Attribute Definition is deleted after confirmation.

> **Note**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

## Dimensions and Associated Attributes

Dimensions and the associated attributes.

The following tables lists the seeded attributes with the details, associated with each dimension.

**Table 3-2 Dimensions and Associated Seeded Attributes**

| Attribute Name | Data Type | Mandatory |
|---|---|---|
| Dimension - **Common Chart of Accounts** | | |
| Account Type | Dimension | Yes |
| Accrual Basis | Dimension | No |
| Rollup Signage | Dimension | Yes |
| Dimension - **Financial Element** | | |
| Weighting Financial Element | Dimension | No |
| Account Type | Dimension | Yes |
| Column Property | Dimension | Yes |
| Rollup Signage | Dimension | Yes |
| Dimension - **General Ledger Account** | | |
| Accrual Basis | Dimension | No |
| Common Chart of Accounts | Dimension | Yes |
| Rollup Signage | Dimension | Yes |
| Account Type | Dimension | Yes |
| Reconciliation Product | Dimension | Yes |
| Dimension - **Legal Entity** | | |
| Rate Data Source | Dimension | Yes |
| Group Company Party | String | Yes |
| Dimension - **Organizational Unit** | | |
| Offset Organizational Unit | Dimension | No |
| Dimension - **Product** | | |
| Accrual Basis | Dimension | No |
| Common Chart of Accounts | Dimension | Yes |
| Rollup Signage | Dimension | Yes |
| Account Type | Dimension | Yes |
| Amenability Rate | Dimension | Yes |
| Interest Rate Sensitivity | Dimension | Yes |
| Product Time Value | Number | Yes |

# Members

Dimension Members refer to the individual items that constitute a dimension when data is categorized into a single object such as Product, Organization, Time, and so on. Members are available within Dimension Management section.

## Member Summary Page

The list of created member definitions are displayed in the Member Summary.

To access the member summary page:

1. From the left menu, click **Reference Data**.
2. Select **Dimension Management** and select **Members**.

   The **Member Summary page** containing the following details is displayed.

   - **Alphanumeric Code**- The alphanumeric code assigned to a member.
   - **Numeric Code**- The numeric code assigned to a member.
   - **Name**- The unique member name.
   - **Is Leaf**- The leaf node status of the member definition.
     - **Yes**- The member is set as a leaf node in any hierarchy and Child cannot be added to this node.
     - **No**- The member is a not a leaf and can have child nodes.
   - **Enabled** - The status of the member definition (Yes/No).
   - **Action**- Click to view, edit, copy or delete a member definition. You can also access the list of objects dependent on this definition.

   To filter the summary based on specific search criteria, select and add the required search criteria to the **Search** field and enter/select the specific values. Use **More Filters** to add additional search criteria.

   > **Note**
   >
   > **Dimension** is a default and mandatory search filter. Select the dimension to access the member definitions available in that dimension. By default the first dimension from the **Dimensions** list is added as the search entry.

## Creating Member Definitions

You can add new Member Definitions from the Member Summary page.

To create a member definition :

1. To create a member definition, click the **Add** in the **Member Summary** page, to access the **Member Details** page.
2. Enter the following **Member Details** :
   - **Dimension**- Select the dimension to be associated with the new Member.
   - **Numeric Code**- The numeric code to be assigned to the new member definition. You can enter the value between 0 and 999,999,999 manually or click **Generate Code**, to auto-generate a unique code.

If you enter the value manually, it is assigned after validation.

- **Alphanumeric Field Value**- The alphanumeric Code to be assigned to the new Member Definition.
  You can enter up to 100 characters and enter only Underscore (“_”) as a special character.
- **Name**- The unique member definition name.
  You can enter up to 100 characters. All characters are allowed except " & ' and " ' ".
- **Description**- A brief description about the member definition.
  You can enter up to 1000 characters. All characters are allowed except " & ' and " ' ".
- **Is Leaf**- Check this option if the member is a leaf of another member. By default, it is set to **Yes**.
  - **Yes**- The member can be used as a leaf node in any hierarchy and child cannot be added to this node.
  - **No**-The member is not set as a leaf and can have child nodes.

  > **Note**
  >
  > If a member is set as a non-leaf and is associated with child nodes, it cannot be set as a leaf again.

- **Enabled**- This field is set to **Yes** by default. You can modify the **Enabled** status, after creating the member. To edit a member, refer Editing Member Definition Details.

  > **Note**
  >
  > You can change the option to **No** only when the particular member is not used in any hierarchy. The disabled members will not be displayed in Hierarchy Rules, or utilities which are based on Hierarchies, such as Hierarchy Filters and Hierarchical Assumption Browsers used in applications.

3. (Optional). Click **Copy**, to attach an existing attribute to this new member definition.

   You can also set the attribute values for a new member definition, manually. Enter/select the attribute values in the **Member Attributes** pane. All the attributes associated with the selected dimension are displayed in the Member Attributes pane.
4. Locate the Attribute to be copied and click **Move** and select **Copy**, located under **Actions.**
5. Click **Save**, to create the new Member definition and view it the Member Summary.

   Click **Actions** and select **Edit Member Details** to edit the member details or select **Save and Add New**, to create the new member definition and proceed with adding another definition.

## Managing Member Definitions

You can View, Edit, Copy, and Delete the existing Member Definitions from the Member Summary page.

In the members summary page, highlight a specific Member Definition and click the **Action**. The following Options are displayed:

- **View**- View the **Member Details** for a specific Member Definition.

- **Edit**- Edit the **Member Details** for a specific Member Definition.
- **Copy**- Copy the Member Definition Details and create another Member Definition by changing Alphanumeric Code, Numeric Code and Name.
- **Delete**- Delete the member definition.
- **Check Dependency** - View the list of objects dependent on this definition.

## Viewing Member Definition Details

You can view the details of an individual Member Definition, from Member Summary page.

To view a Member Definition, the Read Only Role should be mapped to your User Group.

You can view the details of an individual Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **View** button.

   The Member Definition page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

## Editing Member Definition Details

To edit the existing Member Definition details, the Write role should be mapped to your User Group.

You can edit individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Edit** button.

   The Member Definition page is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

   Edit the required information and click **Save**.

## Copying Member Definition Details

To copy the Member Definition Details, the Write role should be mapped to your User Group.

You can copy individual Member Definition Details, to recreate another new Member Definition, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Copy** button.

   The **Member Definition Page** is displayed with the details Dimension, Alphanumeric Code, Numeric Code, Name, Is Leaf and Enabled status.

   Edit the unique information such as Name, Alphanumeric Code, Numeric Code and click **Save**.

## Deleting Member Definition Details

To delete a Member Definition, the Write role should be mapped to your User Group.

You can delete individual Member Definition Details, using the following procedure:

1. Highlight the Member Definition and click the **Action**.
2. Click the **Delete** button.

The Member Definition is deleted after confirmation.

# Hierarchy

Hierarchies refer to Dimension Members that are arranged in levels, with each level representing the aggregated total of the data from the level below. One dimension type can have multiple hierarchies associated with it. Hierarchies are available within the Dimension Management section.

A Default Hierarchy definition is required to support BI Users to perform multidimensional analysis, in the BI reporting. The hierarchy name of a default hierarchy definitions are suffixed with the term **System Hierarchy**. You can only view the details of the default hierarchy, from the Hierarchy Summary page. All orphan members under their corresponding default hierarchy, are automatically updated, when they are added/deleted to/from the system.

## Hierarchies Summary Page

The list of existing hierarchy definitions is displayed in the Hierarchies Summary page.

To access the hierarchies summary page:

1. From the left menu, click **Reference Data**.
2. Click **Dimension Management** and select **Hierarchies**, to access the Hierarchies Summary page containing a list of existing hierarchies with the following details:
   - **Name** - The unique Hierarchy Name.

     > **Note**
     >
     > The name of a default hierarchy is always suffixed with the term **System Hierarchy**.

   - **Folder** - Folder in which the hierarchy is stored.
   - **Dimension** - Dimension associated with the hierarchy.
   - **Tags** - Labels to simplify the data search and locate the required details.
   - **Action** - Click to view, edit, copy or delete a hierarchy definition. You can also access the list of objects dependent on this definition.

### Navigating Hierarchy Summary Page

To access records in a Summary page, you can search, sort and navigate to multiple pages.

## Creating Hierarchy Definitions

To create a Hierarchy Definition in the Hierarchy Summary page, complete the following steps:

1. Click **Add** in the **Hierarchy Summary** page. The **Hierarchy Details** page is displayed.
2. Enter the **Hierarchy Details** as described in the following table:

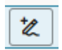
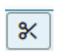
**Table 3-3 Field Description**

| Field | Description |
|---|---|
| Name | The unique Hierarchy Definition Name.<br><br>**Note**<br>You can enter up to 100 characters. All characters are allowed except " & ' and " ' ". |
| Description | A brief description about the Hierarchy Definition.<br><br>**Note**<br>You can enter up to 1000 characters. All characters are allowed except " & ' + @ and ~. |
| Folder | Select the Folder in which the Hierarchy is to be stored. |
| Dimensions | Select the Dimension to be associated with the new Hierarchy Definition. |
| Click **Apply**. | |
| **Hierarchy View** | The Members associated with the selected Dimension are displayed.<br>You can sort this list in Ascending/Descending order, expand or collapse the list to view in details and search for a specific Member.<br>You can focus on a Member to view the Member Properties.<br>You can add a Child or add a Sibling to an existing Member in the data grid. |
| **Search View** | The search results based on the specific keyword entered to search a Member is populated. |

**Table 3-4 Viewing interactive options for a Member**

| Icon | Description |
|---|---|
| Mouse-over a Member to see the following options. Select the required option to take action such as adding a child, deleting a node, paste as child, paste as sibling | |
| **Figure 3-1 Add child, sibling, and leaf**<br> | Add a child, sibling and/or leaf. |

**Table 3-4 (Cont.) Viewing interactive options for a Member**

| Icon | Description |
| --- | --- |
| **Figure 3-2 Create and add**  | Create and a child, sibling and/or leaf to the Member. |
| **Figure 3-3 Delete/undo delete**  | Delete a node or undo deletion. |
| **Figure 3-4 Cut and paste child/siblings**  | Move child/siblings up or down as required. |

**To Add a Child to the Hierarchy:**

a. In the **Hierarchy View** tab, mouse-over the hierarchy to which you want to add a child and click the **Add child, sibling and leaf** icon.
b. Select **Add Child** option. The **Add Members** page is displayed.
c. Select the required Member and click **Move Right**, to move the Member to the Selected Members panel. To select multiple members, press CTRL and select the members.
   The selected members are added to the **Selected Members** pane.
   - Click **Move All Right** to move all members listed in the Available Members pane, to the Selected Members pane. Click **Fetch from DB** to select all nodes/ members in the server.
   - Select a member and click **Move Left** to deselect a Member. To remove multiple members, press CTRL and select the members.
   - To remove all the members from the **Selected Members** pane, click **Move All Left**.
   - You can click **Search** button for the required member using Alphanumeric Code, Numeric Code, Name, Description, Attribute Name, or Attribute Value. Enter the search criteria and Click **Search**, in the Search Panel.
   - You can also click **Search** button to toggle the display of Numeric Code left, right, or name and click button to display Alphanumeric Code left, right, or name.
d. Click **Add**. The selected member is displayed as child under data grid panel in the **Hierarchy View** tab.

3. **To add a Sibling to the Child in the Hierarchy Definition:**

a. Mouse-over the child to which you want to add a sibling and click the **Add child, sibling and leaf** icon.).
b. Select the option **Add Sibling**.
The **Add Sibling** Page is displayed.
c. Select the required Members and **Move Right**, to move the Member to the Selected Members panel.
The Member is displayed in the **Selected Members** panel.
d. Click **Add**. The selected Member is added as **Sibling** below the **Parent** under data grid Panel in the **Hierarchy View** tab.

4. **To add a Leaf under a Parent/Child or Sibling**:
   a. Mouse-over the Parent or Child and click the **Add child, sibling and leaf** icon.
   b. Select **Add Leaf**.
   The Add Member Page is displayed.
   c. Select the required Members and click **Move Right**, to move the Member to the Selected Members panel.
   The Member is displayed in the **Selected Members** panel.
   d. Click **Add**. The selected Member is displayed as Leaf below the Parent or Sibling under **Show Hierarchy** Panel in the **Hierarchy View** tab.
5. **To cut and paste Child or Sibling:**
   a. Right-click on any node and select **Cut**.
   b. Right-click on any node and **Paste as Child** or **Paste as Sibling**.
6. **To Delete/Undelete**
   a. Right-click on the node to be deleted and select **Delete Node**.
   The node deleted is struck out.
   b. Right-click and select **UnDelete** to cancel deletion of the node.
7. To view the Member Properties and Member Attributes of a node in the **Hierarchy View** Panel:
   a. Click on a Member.
   The properties such as Alphanumeric Code, Numeric Code, Name, Description, Enabled, Is Leaf, Created By, Creation Date, Last Modified By, Last Modification Date, Attribute, and Value of the selected Member are displayed in the Member Properties and Member Attributes Grids.

   In the Hierarchies page you can also:
   - Click **Collapse** or Expand, to collapse or expand a branch .
   - Click **Focus** or **Unfocus**, to focus or unfocus a selected node except the Root Node.
   - Click **Sort** to sort the list in ascending or descending order.
8. Click **Save**.
The new Hierarchy Definition is created successfully.

## Audit Info

The Audit Info section provides details such as Created By and Modified By Users, Creation and Modification Date, and Authorized By user Details. You can add additional information as comments and tags. Tags are labels that help to simplify the data search and locate the required details.

## Managing Hierarchy Definitions

You can View, Edit, Copy, and Delete the existing Hierarchy Definitions from the Hierarchy Summary page.

In the Hierarchy Summary page, highlight a specific Hierarchy Definition and click **Action**. The following options are displayed:

- **View** - View the hierarchy details for a specific definition.
- **Edit** - Edit the hierarchy details for a specific definition.
- **Copy** - Copy the hierarchy details and create another definition by changing the unique values like name, description and so on.
- **Delete** - Delete the hierarchy definition.
- **Check Dependency** - View the list of objects dependent on this definition.

### Viewing Hierarchy Definition Details

You can view the details of an individual Hierarchy Definition, using the following procedure:

1. Highlight the Hierarchy Definition and click **Action (three dots)**.
2. Click **View**.

   The Hierarchy Definition page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

### Editing Hierarchy Definition Details

You can edit individual Hierarchy Definition Details at any given point.

To edit the existing Hierarchy Definition Details:

1. Highlight the Hierarchy Definition and click the **Action (three dots)**.
2. Click **Edit**.

   The Hierarchy Definition Page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the required information and click **Save**.

### Copying Hierarchy Definition Details

You can copy individual Hierarchy Definition Details, to recreate another new Member Definition. To copy the Member Definition Details:

1. Highlight the Hierarchy Definition and click **Action**.
2. Click **Copy**.

   The Hierarchy Definition page is displayed with the details Name, Description, Folder, Dimension, Start Date and Hierarchy View details.

   Edit the unique information such as Name, Description, Folder, Dimension, Start Date and Hierarchy View details and click **Save**.

### Deleting Hierarchy Definition Details

To delete a Hierarchy Definition:

1. Highlight the Hierarchy Definition and click **Action**.
2. Click **Delete**.

   The Hierarchy Definition is deleted after confirmation.

> **Note**
>
> You cannot delete a definition if any dependency like Attribute, Hierarchy or Filter is attached to it. Detach the dependency before deleting the definition.

## Viewing Data in a Summary Page

A Summary page will contain a list of definitions associated with a specific Dimension Data, Filters, Batch or Schedules.

You can search, filter and customize the view to access the required data faster.

### Searching Summary

Search for a specific Definition based on the following criteria. Select/Enter one or more unique values/tag or Leaf and Enabled status associated with the definition and click **Search**.

### Sorting a Summary Page

Sort the list of definitions, to view a specific definition, in a definition Summary .

To sort the various Definitions list:

- **Sort By**: Group the based on the following fields:
  – **Member Summary -** Dimension, Name, Alphanumeric Code, Numeric Code, Enabled and Is Leaf Status, Attribute Name (if the selected Dimension has Dimension Type Attribute) and Attribute Value.
  – **Attribute Summary -** Branch, Name, Code and Data Type.
  – **Hierarchy Summary -** Dimension, Name, Tag and Folders.
  – **Filter Summary** - Name, Folder and Filter Type.
- **Sort Order**: Sort the Complete list in Ascending/Descending order.

### Setting Number of Records per Page

Customize the number of records per page, to access the required record easily.

At the bottom of the page, you can enter the number of entries that are available on a single page in the **Records** box. By default, this value is set to 8. You can increase or decrease the number of entries that are displayed using the up and down arrows.

To access a particular page, enter that page number in the Page Box located at the bottom of the page.

To navigate between pages:

- Use **First page** to view the entries in the first page.
- Use the **Previous page**, to view the entries in the previous page.

- Use the **Next page**,to view the entries in the next page.
- Use the **Last page**, to view the entries in the last page.

# Currency Setup

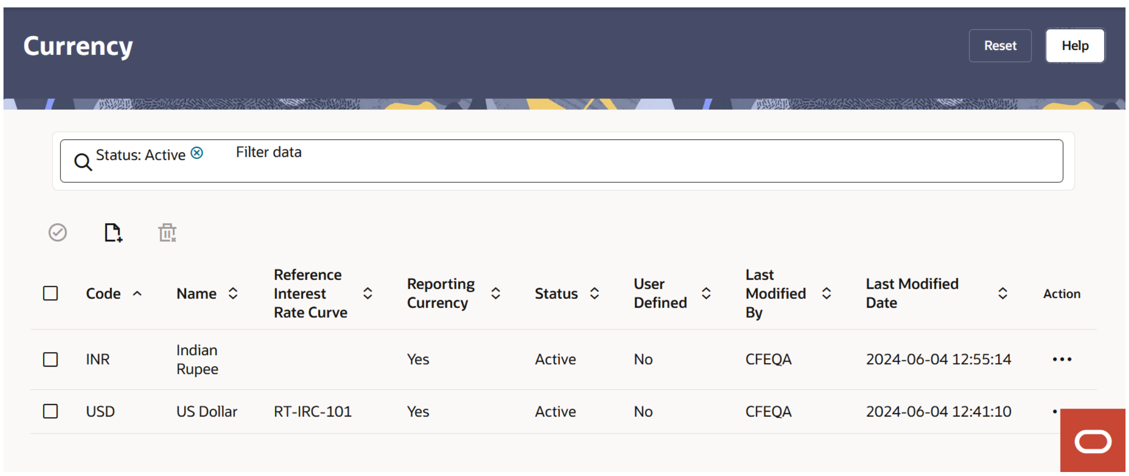
Financial institutions transact business in more than one currency. Transacting business in multiple currencies demands functional capabilities for multi-currency accounting and currency rate management.

Currency module supports the definitions and maintenance of currencies. Currency definitions are fundamental to the definition of both interest rate yield curves and currency exchange rates. A key attribute of every yield curve is the currency with which it is associated, and currency exchange rates can only be established between defined currencies. A comprehensive list of ISO-defined currencies is provided; you can also define and add your user-defined currencies.

### Currency Summary

This page is the gateway to all Currencies and related functionality. You can navigate to other pages relating to Currencies from this point.

**Figure 3-5 Currency Summary**




### Search Currency

**Prerequisites**: Predefined Currency

To search for a Currency:

Click **Search** after entering the search criteria. The search results are displayed in a table containing all the Currencies that meet the search criteria.

Or

An alternative method to search a Currency Rule is through the **Field Search** option. This is an inline wildcard UI search that allows you to enter a search value (such as code, name, etc.) partially or fully. Rows that contain the string you are searching for are fetched and displayed in the Currency Rule Summary. Enter the **Code, Name, Status, Reporting Currency**, or **User Defined** of the Currency and click **Search** .

The Currency Rule Summary displays the following information:

**Add:** Click the Add icon on the page header to build a new Currency Rule.

**Multiple Delete:** Enables you to select and delete one or multiple rules in the table simultaneously.

**Activate:** Select one or more currency and click Activate icon to change status to active.

- **Code:** The 3-letter ISO code of Currency
- **Name:** The Currency's short name.
- **Reference Interest Rate Curve:** Displays the Reference Interest Rate Curve of Currency
- **Reporting Currency:** Indicates whether currency is marked for use as Reporting Currency
- **Status:** Displays the Active or Inactive status of Currency.
- **User Defined:** Identifies any user-defined currency, that is, a currency not seeded by Cloud Service
- **Action:** Click this icon to view a list of actions that you can perform on the Currency Rule.
  - **View/Edit:** Based on the user privilege assigned, you can either only view or edit existing Currency Rules. To edit a rule, you must have Read/Write privilege.
  - **Delete:** You can delete Currency Rules that you no longer require. Note that only Currency Rule owners and those with Read/Write privileges can delete Currency Rules. A Currency Rule that has a dependency cannot be deleted. A rule cannot be retrieved after deletion.
  - **Dependency Check:** You can perform a dependency check to know where a particular Currency Rule has been used. Before deleting a rule, it is always a good practice to do a dependency check to ensure you are not deleting Currency Rules that have dependencies. A report of all rules that utilize the selected Currency Rule is generated.

**Also See:**

- Add a Currency

## Currency Summary Page

This page is the gateway to all Currencies and related functionality. You can navigate to other pages relating to Currency from this point. The Currency Summary Page displays the following columns.

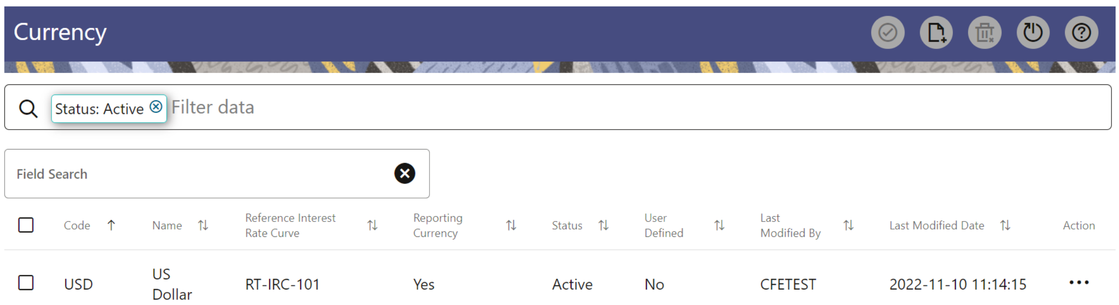
**Table 3-5 Table: Currency – Fields and Descriptions**

| Column | Description |
| --- | --- |
| Code | Displays the 3-letter ISO code of Currency |
| Name | Displays the name of currency |
| Reference Interest Rate Curve | Displays the Reference Interest Rate Curve of Currency |
| Reporting Currency | Indicates whether currency is marked for use as Reporting Currency |
| Status | Displays the Active or Inactive status of Currency. |
| User Defined | Identifies any user-defined currency, that is, a currency not seeded by Cloud Service |
| Last Modified By | Displays the Name of the user who last modified the Currency |

**Table 3-5 (Cont.) Table: Currency – Fields and Descriptions**

| Column | Description |
|---|---|
| Last Modified Date | Displays the Date and Time when Currency was modified last |
| Action | Displays the list of actions that can be performed on the Currency. For more information, see Currency – Icons and Descriptions . |

**Figure 3-6 Currency Summary Page**




The **Action** column on the **Currency Summary** page and icons on top right of the page offers several actions that allow you to perform different functions. The following actions are available for the Currency.

**Table 3-6 Table: Currency– Icons and Descriptions**

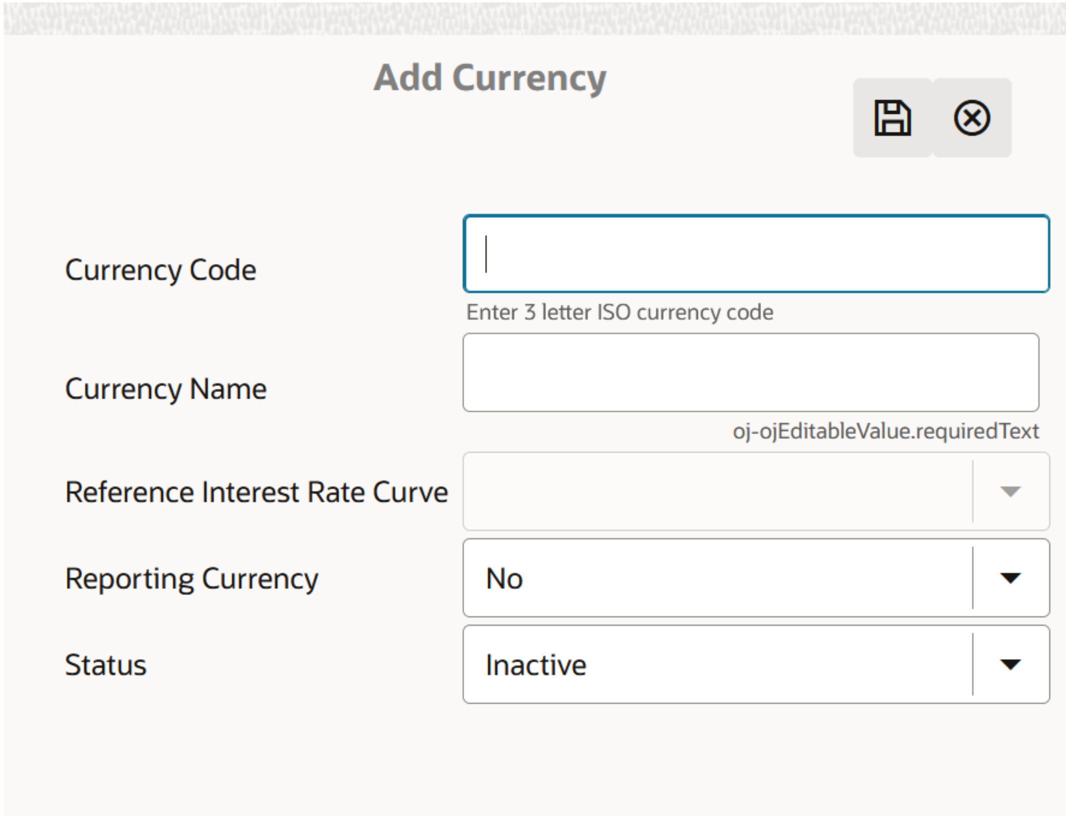
| Fields | Description |
|---|---|
| Activate | Select one or more currency and click Activate icon to change status to active. |
| Add | Click Add icon to create a new Currency. |
| Multiple Delete | Select one or more currencies in the table and then click the Delete icon at the top right of the summary page to delete more than one Currencies at the same time. |
| View/Edit | Click on the **Action** icon against the Currency Name and select View/Edit to view or edit the contents of a Currency in read/write format. Depending on user privileges the currency will open in either View or Edit mode. |
| Delete | Click on the **Action** icon against the Currency Name and select Delete to delete an existing Currency. |

## Add Currency

To add a Currency, follow these steps:

1. Navigate to **Reference Data** and select **Currency**.
2. Click **Add** icon on Currency summary page. The **Add Currency** page is displayed.

**Figure 3-7 Add Currency Page**




3. Enter the following details:

**Table 3-7 Adding a Currency – Fields and Descriptions**

| Fields | Description |
| --- | --- |
| Currency Code | For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any pure character string (no numbers) up to a length of 3 characters. |
| Currency Name | For seeded currencies, these are ISO Currency Codes. For user-defined currencies, these can be any string up to a length of 40 characters. |
| Reference Interest Rate Curve | Reference Interest Rate Curve is the Interest Rate Curve with which currency is associated for exchange rate forecasting purposes. Define multiple yield curves each of which has the same Reference Currency, but a currency can only have one Reference Interest Rate Curve. |

**Table 3-7 (Cont.) Adding a Currency – Fields and Descriptions**

| Fields | Description |
| --- | --- |
| Reporting Currency | A reporting currency is an active currency to which balances in other currencies can be consolidated to facilitate reporting. Balances in reporting currencies can be, in turn, consolidated to the functional currency. For example, an American multinational bank might consolidate its holdings in Asian currencies to the Japanese yen (Reporting Currency) and its balances in European currencies to the Euro (Reporting Currency) after which it might consolidate these reporting currencies to the U.S. dollar (Functional Currency). |
| Status | The status of any currency can be either Active or Inactive. You must Activate a currency before doing the followings:<br>a. Define that currency as a Reference Currency for an Interest Rate curve.<br>b. Enter Exchange Rate data for a currency.<br>c. Define Forecast Rates for that currency.<br>d. Define any other business rule like Prepayment, Transfer Pricing for that currency. |

> **Note**
>
> - For the Oracle Financial Services Climate Change Analytics Cloud Service application, select '*Yes*' for the Reporting Currency. This supports the Exchange Rate Conversion in the Currency Rate feature.
> - The Reference Interest Rate Curve is not applicable for processing and analytical purposes in Oracle Financial Services Climate Change Analytics Cloud Service.

4. Click **Save**.

## Search a Currency

Search for a Currency to perform any of the following tasks:

- Activate
- View
- Edit
- Delete

**Prerequisites**

Predefined Currencies

**Procedure**

To search the Currency, follow these steps:

1. Navigate to **Reference Data** and select **Currency** .
2. Enter the **Code, Name, Status, Reporting Currency**, or **User Defined** status of the Currency.
3. Click **Search**.

Only Currencies that match the search criteria are displayed.

## View and Edit Currency

You can view existing Currency, and you can edit existing Currencies, provided you have read/write privileges.

To view and edit a Currency, follow these steps:

1. Navigate to **Currency Summary** Page.
2. Search for a Currency. For further information, see the Searching a Currency section.
3. Click on the **Action** icon against the Currency Name and select **View/Edit** to open the Currency you want to update.
4. Update the Currency details.
5. Click **Save**.

## Delete a Currency

You can delete Currencies that are no longer required.

> **Note**
>
> A Currency cannot be retrieved after deletion. Restrictions on deleting Currencies are:
>
> - You cannot delete Currencies if you have only Read privileges. Only users with read/write privileges and Currency owners can delete Currencies.
> - You cannot delete a Currency that has a dependency.

To delete a Currency, follow these steps:

1. Navigate to Currency Summary Page.
2. Search for a Currency and select it. For further information, see the Searching a Currency section.
3. Click on the **Action** icon against the Currency Name and select Delete.

## Currency Rates

Currency Rates Module uses the currencies defined and activated in the Currency Module to support the creation and maintenance of Historical Exchange Rates. In the Currency Rate Window, you can manage historical Exchange Rates between currencies.

To Currency defaults to the Initial Currency selection from the Assumption Management defaults in the Active Preferences Window. You can select another To Currency from the drop-down list that displays all Active Currencies.

### Editing Exchange Rate Data

Select the check box on the left-hand side of any row to enable the **Edit** icon. After clicking Edit, the row becomes active to edit the **Effective Date** and (or) the **Exchange Rate**. Click **Save** to save the changes.

### Viewing Exchange Rate Data

By default, both the Floating Currency Rates Pane and the Fixed Currency Rates Pane display the most recent month of historical Exchange Rate Data. You can control the amount of data displayed by selecting a different value from the **Effective Date Range** drop-down list in the **Currency Selection** Window.

**From Date** and **To Date** can also be modified to view relevant Currency Rates.

### Deleting Exchange Rate Data

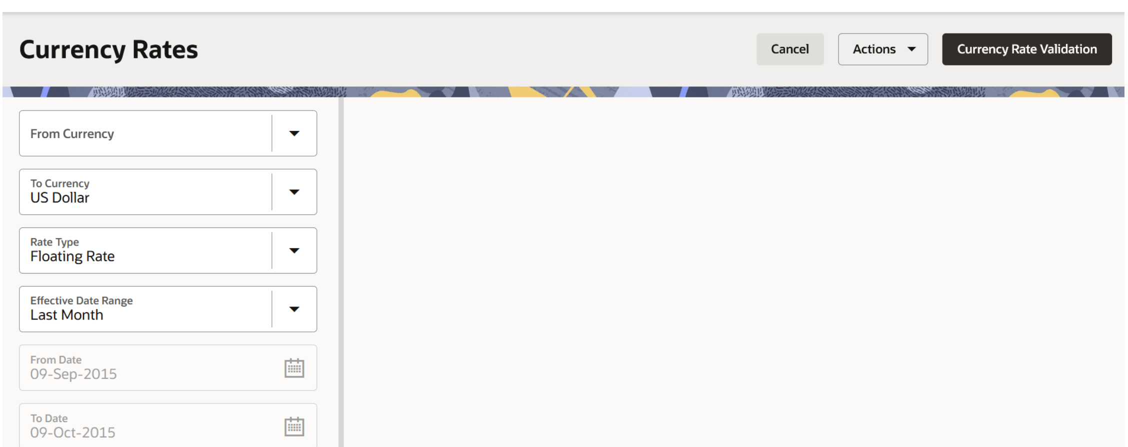
Select one or more check boxes on the left-hand side of any row to enable the **Delete** icon. After clicking Delete, a confirmation message is displayed. Click **Ok**.

## Adding Exchange Rate Data

Based on the Rate Types, you can add the following Exchange Rate Data:

- **Floating Rates**
  Floating Exchange Rates, such as those between the US Dollar (USD), the Pound Sterling (GBP), the Japanese Yen (JPY), and the Euro (EUR), are market-driven and can change from day-to-day, hour-to-hour, or minute-to-minute.
- **Fixed Rates**
  Some countries, especially smaller countries or countries that have experienced significant inflation in the recent past, can wish to “peg” their currency to a larger, more stable currency such as the US Dollar, Japanese Yen, or Euro.

**Figure 3-8 Currency Rates**




### Adding Floating Rate Data

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.
3. Select **Rate Type** as **Floating Rate** (default selection is Floating Rate).
4. The RHS pane is displayed as Floating Currency Rates.
5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

**Table 3-8 Floating Currency Rates**

| Fields | Description |
| --- | --- |
| Effective Date | Directly enter a date or select the Calendar icon to choose an effective date for your new Exchange Rate data point.<br>Rate Management Stores the Historical Exchange Rate Data. You cannot enter Exchange Rate data for dates greater than the current date. |
| Exchange Rate | This must be entered as 1 unit of From Currency are converted to n unit of To Currency. |
| Status | Status is a read-only display that is updated after the Currency Rates Validation has been run. |
| Data Origin | The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader. |

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

**Adding Fixed Rate Data**

To add the Exchange Rate Data, follow these steps:

1. Select a **From Currency**.
2. Select a **To Currency**.
3. Select **Rate Type** as **Fixed Rate**.
4. After selecting a **To Currency** value, the RHS pane is displayed as Fixed Currency Rates.
5. Select **Effective Date Range** to enter the values in From Date and To Date fields.
6. Select the **Rate Provider**.
7. Currency Rate Pane initially displays a single blank row followed by the most recent month's Exchange Rate Data (if any such Exchange Rate Data already exists). To enter a single new Exchange Rate Data Point, enter data into the blank row.

**Table 3-9 Fixed Currency Rates**

| Fields | Description |
| --- | --- |
| Effective From Date | Directly enter a date or select the Calendar icon to choose a starting effective date for your new Exchange Rate Data Point. |
| Effective To Date | Directly enter a date or select the Calendar icon to choose a ending effective date for your new Exchange Rate Data Point. |
| Currency Exchange Rate | This must be entered as 1 unit of From Currency are converted to n unit of To Currency. |
| Status | Status is a read-only display that is updated after the Currency Rates Validation has been run. |
| Data Origin | The Data Origin is displayed read-only and indicates whether the rates were input through the UI or the Data Loader. |

8. Click **Save**.
9. Click **Add** to add additional blank rows to enter the additional Effective Start and End Dates and Exchange Rates. After adding the multiple new Exchange Rates, click **Save**.

## Viewing Exchange Rate Data

By default, both the Floating Currency Rates Pane and the Fixed Currency Rates Pane display the most recent month of historical Exchange Rate Data. You can control the amount of data displayed by selecting a different value from the **Effective Date Range** drop-down list in the **Currency Selection** Window.

**From Date** and **To Date** can also be modified to view relevant Currency Rates.

## Editing Exchange Rate Data

Select the check box on the left-hand side of any row to enable the **Edit** icon. After clicking Edit, the row becomes active to edit the **Effective Date** and (or) the **Exchange Rate**. Click **Save** to save the changes.

## Deleting Exchange Rate Data

Select one or more check boxes on the left-hand side of any row to enable the **Delete** icon. After clicking Delete, a confirmation message is displayed. Click **Ok**.

## Currency Exchange Rate Validation

Exchange Rate Validation has the following features:

- Movement of historical Exchange Rates to the Currency Direct Access Table.
- Calculation of inverse Exchange Rates for Reporting Currencies.
- Calculation of triangulated Exchange Rates where possible.

**Features of Exchange Rate Validation**

The goal of Exchange Rate Validation is to ensure that Exchange Rates from all active currencies to all reporting currencies are available for processing. Some of these rates can come from the validated direct input, others are calculated based on relationships with other rates. To support triangulation, all fixed Exchange Rates are available for all currencies that make up an exchange that needs to be triangulated. Also, a direct Exchange Rate between each Child Currency and each reporting currency is calculated and supplied to support quick access to Exchange Rates. If a Child currency is a Reporting Currency, then Exchange Rates are calculated for all currencies having an exchange relationship with the Parent Currency.

**Validating Exchange Rate Relationships**

You must run the Exchange Rate Validation Process after adding or modifying Exchange Rate Data. Run the process immediately or schedule one or more to be run in the future.

Each Exchange Rate has one of the following statuses:

**Table 3-10 Details of Exchange Rates**

| Fields | Description |
| --- | --- |
| Not Yet Validated | The Exchange Rate has been input or loaded but not yet validated. |
| Valid | The Exchange Rate has been validated. |
| Invalid | The Exchange Rate has violated one or more acceptance rules. |

Only Exchange Rates in valid status are available for processing and they are not subject to future validation unless you edit them. The Rate Validation Status is displayed in the Currency Rates Window of the Rate Management.

**Exchange Rate Validation Criteria**

In the Rate Validation Process, all Exchange Rate relationships in the database are examined for compliance with the following criteria. Error messages and warnings are displayed if one or more criteria are not met.

- If a currency is defined as a Child in a fixed exchange relationship then it must not be in any floating (standard) Exchange Rate Relationship at the same time. Consequently, all floating Exchange Rates to or from the Child Currency must be defined through the Parent Currency. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency exists in a standard Exchange Rate within the same time period.
- A Child Currency within a fixed relationship must not be a Child Currency in any other Fixed Relationship during the same time period. If this criterion is not met then the following message is displayed: Invalid fixed relationship—Child Currency already exists in a fixed relationship for the same time period.
- A Circular Relationship must not exist. In other words, a Child Currency cannot link back to its Parent in any other fixed rate Relationship within the same time period. If it does, then the following message is displayed: Invalid fixed relationship creates a circular relationship with other fixed Exchange Rates.
- Regarding new Floating (standard) Exchange Rates, from and To currencies must not exist as Child Currencies within any Fixed Exchange Rate Relationships. If this criterion is not met then the following message is displayed: From/To/Both currency(ies) in the new Exchange Rate already exist in a fixed relationship for the same time period.
- If any Exchange Rate is equal to 0, then a warning message is displayed. Generally speaking, 0 is a valid value. You can use it, for example, to designate an Exchange Rate with a currency of a country that no longer exists.

If two Exchange Rate Relationships fail to meet these criteria then both of them will be labeled Invalid. (Exception, if one of the relationships is already in Valid status, then the other one will be labeled Invalid.) For example, if a currency is defined as a Child in a Fixed Rate Relationship and is also defined as being in a Floating Relationship at the same time, then both Fixed and Floating Rates for that currency will be labeled Invalid.

If there are both direct and Inverse Floating Exchange Rates defined for any two currencies (in other words, one currency is both a To and a From Currency in relation to the other), then both relationships will be marked valid.

**Running an Exchange Rate Validation**

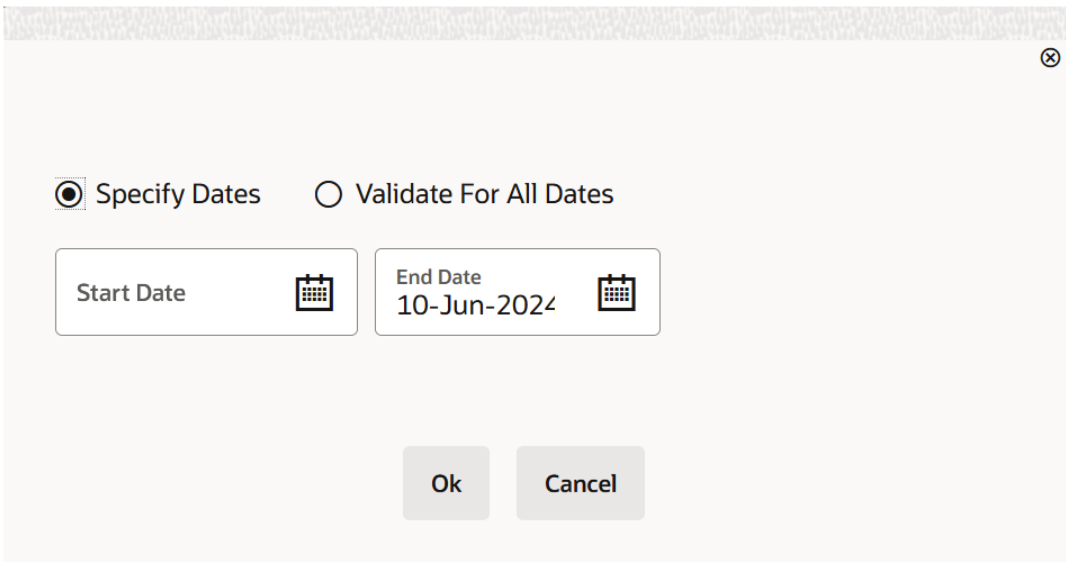
You can run a validation immediately or schedule one or more for later. The Validation Status is displayed in the **Currency Rates** window.

You can execute the Exchange Rate validation using the **Currency Rates Validation** option.

To execute the Exchange Rate Validation, follow these steps:

1. Click **Currency Rates Validation**.

**Figure 3-9 Currency Rates Validation**




2. To execute Exchange Rate validation from the **Currency Rates** window, the following options are available:
   - **Specify Dates:** After selecting this option, a Select Dates Pane is displayed to enter or verify the Start Date and End parameters. These dates will be passed to the batch for execution.
   - **Validate For All Dates:** Select this option to validate all the rates irrespective of dates.
   - **Start Date:** This defaults to the date of last rate validation.
   - **End Date:** This defaults to the current date.

> **Note**
>
> This option will replace all of the validated Exchange Rate History and can be a time-consuming process depending on the amount of history available to be processed.

## Download

The Download functionality is used to download the Historical Exchange Rates in **.csv** format.

## Importing Currency Rates

To import the Currency Rate, follow these steps:

1. Navigate to the **Currency Rate** page.
2. Click **Actions** drop-down and select **Upload Data**.
3. Select the type of Rate as **Floating** or **Fixed**.
4. Click the **Drag and Drop** option to select the file.

   > **Note**
   >
   > The excel file, you are uploading should be in a specific format. You can download the template using the **Download Template** option. The Templates for Fixed and Floating Rate Types.
   > Currency rates UI bulk upload supports only **YYYY-MM-DD** date format

5. Click **Upload**.

# Common Rules

This section covers the following topics:

1. Preferences: This section covers the procedures to set the Global Preference Settings.

# 4 Operations

This chapter covers the following topics:

- Scheduler Services
- Viewing Logs

# 5 Operations

This chapter covers the following topics:

- Scheduler Services
- Viewing Logs

## Scheduler Services

Scheduler Services automates behind-the-scenes work that is necessary to sustain various enterprise applications and their operations. Using Scheduler Services, applications can control unattended background jobs program execution.

> **Note**
>
> The Scheduler Service shows the job relevant to the given workspace. For the Production workspace, the scheduler also includes jobs from the other Oracle Financial Crime and Compliance Management Cloud Services.

Scheduler Service operations:

- **Define Batch** - A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.
- **Define Task** - A batch job is a piece of a program meant to meet specific and business-critical functions. The program is a REST API used in a batch.
- **Schedule Batch** - Schedule batch jobs, to automate tasks that are processed on a regular basis but do not need to occur during the day or require human intervention. Jobs that happen on a regular basis are incorporated into batch schedules. You can also edit pre-conditions for batch group execution and pause scheduled executions.
- **Monitor Batch** - Track and access the real-time feedback on the status of the current encoding job and lists the jobs pending in the batch. You can also **Cancel** or **Restart** the service when required.
- **Scheduler Service Dashboard** - The Scheduler Service Dashboard gives the complete status of the Executed Runs, Successful Runs, Failed Runs, Ongoing Runs, Interrupted Runs, and the Upcoming Runs.

### Accessing Scheduler Services

Using the Scheduler Services, you can create and execute batches and schedules to run various tasks and also monitor them.

To access Scheduler Services:

- Log in to the Service Console and from the left navigation pane in the Service console, click **Operations and Processes > Scheduler**.

## User Roles and Functions

You require specific user roles and functions, to use Scheduler Services, and to create and manage batches and tasks.

The user roles and user privileges for Scheduler Service are available in the Users and User Privileges Guide.

For more information, see the User Group and Roles Mapping for Scheduler Service.

**Table 5-1 User Role Codes and Function Codes**

| Role Codes | Function Codes |
|---|---|
| BATCH_READ | BATCH_ADD |
| BATCH_WRITE | BATCH_DEL |
| BATCH_ADV | BATCH_MOD |
| BATCH_AUTH | BATCH_VIEW |
| BATCH_OPER | BATCH_SCH |
| BATCH_MAINT | BATCH_SUMM |
| | BATCH_AUTH |
| | BATCH_PURGE |
| | BATCH_MON |
| | BATCH_EXEC |
| | BATCH_COPY |
| | LOGVIEW |

## Scheduler Service Dashboard

View the task executions based on the execution status in the Scheduler Service Dashboard.

To access the **Scheduler Service Dashboard** page, from the left Navigation pane in the Service console, click **Operations and Processes** > **Scheduler** > **Dashboard**.

To access the **Scheduler Service Dashboard** page, from the left Navigation pane in the Service console, click **Batch Administration** > **Scheduler**.

On the Workspace Summary, click **Orchestration** and select **Scheduler Dashboard**. The Scheduler Service Dashboard page is displayed.

You can access the following details related to batch/batch group execution from the Dashboard:

- The batches/batch groups are categorized based on their execution status - **Executed Runs**, **Successful Runs**, **Failed Runs**, **Ongoing Runs**, **Interrupted Runs**, and **Upcoming Runs** tabs. Click the respective tab to view the details of the batches/batch groups based on their execution status. For example, click **Ongoing Runs** to view the details of the batches that are currently running.
- The run time, schedule name and the MISDATE associated with each batch/batch group.
- The batch execution summary for all the batches executed in the last 7, 30 and 120 days. The summary is displayed in the form of a color-coded bar graph with legend for the various execution statuses.

- To view the list of all task executions associated with a specific batch/batch group, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group.
- To view the task executions within a specific date range, select the required execution status tab, select Batch/Batch Group and select the required batch/batch group. Specify both the start and end dates.

## Define Batch

You can use batch and batch groups to group a set of background tasks to be executed together.

A Batch contains a group of background tasks that are executed together, on a specific date and time during which the resources are available for batch processing.

Batch Groups consist of batches that need to be executed together. Batch groups help to process date and time-based background tasks based on a defined period when resources are available for batch processing.

Click **Define Batch** from the Header panel to access the Define Batch page.

To access the **Scheduler Service Summary (Define Batch)** page, from the left Navigation pane in the application console, click **Operations and Processes Batch Administration**> **Scheduler** > **Define Batch**.

To access the list of existing batches and batch groups click **Batch** or **Batch Group** tab respectively. You can also view following details related to each batch/batch group.

- **Batch ID** - The unique alphanumeric code assigned to a specific batch/batch group.
- **Name** - The unique batch/batch group name.
- **Description** - The brief description of the batch/batch group.
- **Last Modified** - The last modified By user, date and time details.

To search for a specific batch/batch group, enter the keywords in the **Search** field and click **Search**. You can search based on **Name**, **Code**, and **Description.** You can also sort the batch/batch group list based on **Code**, **Name**, **Created Date**, and **Last Modified Date**.

Perform one of the following operations, to manage batch/batch group, from the **Scheduler Service (Define Batch)** page.

- Create New Batch/Batch Group
- Edit a Batch/Batch Group
- Copy a Batch/Batch Group
- Delete a Batch/Batch Group
- Create/edit tasks

## Creating a Batch/Batch Group

Create a batch/batch group, to execute a group of background tasks together, on a specific date and time, when the resources are available for batch processing.

To create a batch/batch group from the **Scheduler Service (Define Batch)**:

1. In the **Create Batch** page, enter the following **Batch Details**:
   - **Code** - Enter a unique alphanumeric code for the new batch/batch group.

The code must start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.

- **Name** - Enter a unique name for the new batch/batch group.
  The name should start with alphabets, should not contain any spaces, and must not exceed 60 characters. Special characters are not allowed except **underscore (_)**.
- **Description** - The description/details for the batch/batch group.
  The description should start with an alphabet and must not exceed 250 characters.
- Select **Batch** to create a new batch or **Batch Group** to create a new batch group.
- For new batch groups,select the **Batches** to be added to the batch group.
- Select the **Service URL name** from the drop-down list, if it is available.
  To add a new service URL, enter a name to identify the new Service URL Name and enter the proper Service URL. You can give partial URL here and the complete URL in the Task Service URL.
- Enter the complete **Cleanup URL** and enable the check box, to activate the cleanup URL, before you initiate a batch/batch group restart.
  The complete Cleanup URL : `http://fccm-utility-service:8080//fccm-utility-service/cleanupExecutionWatcher`
- Select one of the following options, to get an email notification, based on the selected batch execution status.
  Based on the selected option, an email is sent to the email ID of the logged in user, mentioned in the IAM console.
  - **Every Time** : An e-mail is triggered irrespective of the batch execution status.
  - **Never** : No e-mail will be triggered.
  - **On Error only** : (Default). An e-mail is triggered only when the batch execution has failed.
  - **On Interrupt only** : An e-mail is triggered if the batch execution is successfully interrupted.
  - The system automatically sends an email to all users mapped to the BATCH_NOTIFY_FUNT function and BATCH_NOTIFY_ROLE role. If a batch is mapped to a user (and their email ID), the batch email notifications will be sent only to that configured batch user. If no batch user is configured, the system follows the default email notification process.

> **Note**
>
> Ensure you have the BATCH_ADMIN function code to use this option. You can configure a maximum of five user mappings per batch or batch group.

2. For new batches, after entering the Batch Details, provide the following batch parameters.

   From the **Batch Parameters** pane, click **Add** to add a new batch parameter, in the following format.

   - **Parameter Name -** A valid parameter name for the new Batch parameter.
   - **Parameter Value -** A valid parameter value required for Batch execution.

> **Note**
>
> Enclose the parameter Value for a Run time with $ symbol. For example, `$paramName$`.

By default, **$FICMISDATE$** and **$BATCHRUNID$** are added as batch Parameters.

By default, **$BATCHDATE$**, **$BATCHRUNID$** and **$RUNSKEY$** are added as batch Parameters.

> **Note**
>
> **$RUNSKEY$** parameter is added only if you are creating a new batch or copying from an existing batch. It is not supported for existing batches.

To delete a batch parameter, click **Delete** next to that parameter details.

3. Enter the following **Header Parameter** details:
   - **Parameter Name -** A valid parameter name for the new header parameter.
   - **Parameter Value -** A valid parameter value required for batch execution.
4. Click **Save**. The new batch/batch group is created and displayed in the **Scheduler Services (Define Batch)** page.

   To view the dependent tasks and their components, click the **Dependency Check** icon. Upon clicking this icon, the **Object Dependency** window appears and displays the following:
   - Higher Order Dependencies – Components/batch group that the selected batch depends on. Example: Batch in a batch group will have Batch group as the higher order dependency.
   - Lower Order Dependencies – Any task which is created under a batch and the dependency is established will be shown under this tab.

## Editing a Batch/Batch Group

Edit the batch/batch group details such as **Description** and also add new **Batch Parameters** to a batch,along with adding new **batches** to the batch group.

Seeded batches cannot be edited.

To modify a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click **Edit** corresponding to the batch/batch group you want to modify.
2. Modify the required details, in the **Edit Batch** page.
3. Click **Save** to save the edited batch/batch group.

   The edited batch will be updated in the **Scheduler Services (Define Batch)** page.

## Copying a Batch/Batch Group

Copy a batch/batch group that you want to clone to create a new batch/batch group.

To copy a batch/batch group:

1. In the **Scheduler Services (Define Batch)** page, click **Copy** corresponding to the batch that you want to copy.
2. In the **Copy Batch** page, modify the required Batch details to create a new batch/batch group.
3. Click **Save** to add the copied batch to the **Scheduler Services (Define Batch)** page.

## Deleting a Batch/Batch Group

Delete a batch/batch group that is no longer required in the system from the Define Batch page.

> **Note**
>
> You cannot delete seeded batches.

To delete a batch/batch group:

1. From the **Scheduler Services (Define Batch)** page, click **Delete** corresponding to the batch/batch group you want to delete.
2. Click **OK** to confirm deletion.

> **Note**
>
> After confirmation, any active schedules associated with the batch will also be deleted.

# Define Tasks

The Define Tasks page lists tasks associated with a specific Batch Definition. You can create new tasks, and edit or delete existing tasks.

To access the **Define Task** page:

1. Click **Define Task** from the Header panel to access the Define Task page.
2. From the left menu, click **Operations and ProcessesBatch Administration** > **Scheduler** and select **Define Task**.
3. Select Batch/Batch Group from the drop-down list and select the particular batch/batch group to access the list of tasks associated with it.

   You can view the following details related to each task:

   - **Task ID** - The unique identifier for the task.
   - **Name** - The name of the task..
   - **Parent Task** - The parent task associated with the task.
   - **Component** - The seeded/custom component associated with the task.
   - **Created Date** - The task creation date.
   - **Last Modified** - The last modification date.

   To search for a specific task, enter the keywords in the **Search** field and click **Search**. You can search based on the **Task Name**, **Code** and **Description**. You can also sort the Task list based on **Code**, **Name**, **Precedence**, **Component**, **Created Date**, and **Last Modified Date**.

Using the **Preview** option, you can view the complete task execution sequence for a specific batch/batch group.
Perform the following operations to manage a Task, from the **Scheduler Service (Define Task)** page.

- Add a task
- Modify a task
- Define a task precedence
- Delete a task

## Adding a Task

Add new tasks to a selected Batch Definition.

To add new task:

1. In the **Scheduler Service (Define Task)**, select the Batch for which you want to add a new task from the drop-down list.
2. Click **Actions** on the page and then click **Add** to access the **Add Task** page.
3. Click **Add** to access the **Add Task** page.
4. Enter the following details:
   - **Task Code** - Enter a unique alphanumeric code for the new task.
     The code must begin with letters, should not include spaces, and has a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Name** - Enter a unique name for the new task.
     The name should start with letters, not contain spaces, and have a maximum limit of 60 characters. Special characters except **underscore (_)** are not allowed.
   - **Task Description** - The description/details for the task.
     The description should begin with a letter and not exceed 250 characters. Avoid using phrases like "Select From" or "Delete From" in the description.
   - **Task Type** - Select the task type from the drop-down list.
   - **Component** - Select the custom or the seeded component associated with the task.

     > **Note**
     >
     > Refer to the respective component guide for information related to the component specific parameters.

   - **Batch Service URL** - Select the required Batch Service URL from the drop-down list. Batch Service URL is not required, if you provide the complete Task Service URL.
   - **Task Service URL** - Enter task service URL if it is different from Batch Service url.
5. By default, all Batch Level Parameters are added and enabled as task parameters in the **Task Parameters** pane.

> **Note**
>
> You can edit the parameters only for custom components.

   a. Enter the Parameter name in the **Param Name** field.
   b. Enter the Parameter value in the **Param Value** field.

   To delete a parameter, click on **Delete** next to the respective parameter.

6. Click **Save** to add the new task to task summary in the **Define Task** page.

> **Note**
>
> Sync task will remain active if execution time is more than 15 minutes at target service and till acknowledge status is generated from target API after the execution.

## Modifying a Task

Modify details such as Task Description and Task Type in existing tasks.

You can also add a new task parameter and enable or disable existing task parameters.

To modify a task:

1. From the **Define Task** page, select the Batch to modify the task details from the drop-down list.
2. Click **Edit** corresponding to the Task you want to modify.
3. Modify the required Task Details, in the **Edit Task** page.
4. Click **Save** to update the changes.

   The modified task is added to the **Define Task** page.

## Define Task Precedence

Task Precedence indicates the execution-flow of a batch. Task Precedence Value helps to determine the order in which the specific tasks of a batch are executed.

For example, consider a Batch consisting of four tasks. The first three tasks lack define precedence and hence will be executed simultaneously during batch execution. However, Task 4 has a precedence value as Task 1, indicating that Task 4 is executed only after the successful completion of Task 1.

You can set Task Precedence between Tasks or define to run a Task after a set of other tasks. While, multiple tasks can be executed simultaneously, cyclical execution is not permitted. Tasks without defined precedence execute immediately upon Batch Execution.

> **Note**
>
> The **Task Precedence** option is disabled if a batch has only one associated task.

To define task precedence:

1. Click **Add or Remove Precedence** corresponding to the task requiring precedence, to access the **Precedence Mapping** list.
   a. Select a batch to execute before the current task, from the **Available Tasks** pane and click **Move Selected**.

      To move all the batches, click **Move All**.
   b. To remove a batch from the task precedence sequence, select the task from the **Selected Tasks** pane and click **Remove**.

      To remove all the selected batches, click **Remove All**.
2. Click **Save** to update Task Precedence in the batches.
3. Click **Preview** to view the precedence information.

## Deleting a Task

Remove any tasks that that are no longer required in the system, from a Batch Definition.

To delete a task:

1. From the **Define Task** page, select the Batch from the drop-down list.
2. Click **Delete** corresponding to the Task you want to delete.
3. Click **OK** in the confirmation dialog to confirm deletion.

# Managing Batch/Batch Group Executions

**Schedule Batch** enables users to manage batch/batch group executions.

To monitor a batch/batch group, click **Monitor Batch** from the Header panel.

To access **Schedule Batch** page, from the left menu, click **Operations and ProcessesOperations and Processes** and then select **Schedule Batch**.

All the batch/batch group schedules are listed. You can sort this list based on code, name, Task Precedence, Components, and dates, to access a specific schedule.

From the **Schedule Batch** page, you can perform the following operations related to the execution and scheduling of batches/batch groups

- Execute batch/batch groups instantaneously
- Edit dynamic parameters
- Automate batch/batch group executions using the various scheduling options
- Re-run a batch/batch group execution
- Re-start a batch/batch group execution

## Execute Batch/Batch Group

Use the Execute Batch to run a batch/batch group instantaneously.

To execute a Batch/Batch Group:

1. In the **Schedule Batch** page, select **Batch** or **Batch Group** to execute from the drop-down list.
2. Select the **Batch /Batch Group** for execution.

3. Click **Execute** to access the **Execution Schedule** page.
4. Click **Exclude Tasks** to add/remove tasks from the execution list.
5. Click **Hold Tasks** to pause/release tasks during execution.
6. Click **Edit Dynamic Parameters** to modify the dynamic parameters.
7. Click **Execute**.

   The Batch is executed, and the associated unique Run ID is displayed in the format <BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>.
   You can always click preview to view the PMF process sequence used to execute the selected batch/batchgroup.

## Adding Pre-Conditions For Batch Group Execution

Pre-conditions help to execute batches associated with a batch group, on specific days, based on the set frequency and selected days.

You can set pre-conditions for a batch group, to execute specific batches on selected days based on the set frequency interval. This enables to wisely use the available resources for execution.

To set pre-conditions for batch group execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select **Batch Group** and the **Batch Group Name**.
3. Click **Pre-Conditions** to set the pre-conditions for task execution.
4. Select the **Batch** to set the pre-condition.
5. Set the execution frequency to Weekly, Monthly, or specific interval and set one of the following conditions:
   - **Weekly** - Select the weekdays to execute the batch. You can select multiple days.
   - **Monthly** - Select the days of the month to execute the batch. You can select multiple days.
   - **Interval** - Select the recurrence frequency to execute the batch.
6. Click **Add** to add another pre-condition.
7. After adding all the required pre-conditions, Click **Save**.

   The pre-conditions are saved and the batch group will be executed based on the set pre-conditions.

> **Note**
>
> The batch group is always get executed based on the pre-condition and any schedule associated with the batch group will not be considered for processing.

## Edit Dynamic Parameters

Modify the dynamic parameters set for a batch/batch group.

You can modify the batch parameters, batch header parameters, task parameters, and the task header parameters associated with a batch/batch group.

To edit the dynamic parameters from the **Schedule Batch** page:

1. Select **Batch/Batch group** and then select the specific batch/batch group.
2. Click **Edit Parameters** to access the **Edit Dynamic Params** page.

   You can also edit the dynamic parameters while configuring the scheduling options.
3. Click the batch/batch group name to access all the parameters.
4. Set the **$BatchDate$** to set the batch execution date: :
   - Set the batch date to SYSDATE (system date). The batch execution date is set to SYSDATE by default.
   - Toggle and select **MISDATE** to select a particular batch execution date.
5. Enter **$BATCHRUNID$** to set the batch run ID in the format: `<BATCH_CODE>_<MIS_DATE>_<ITERATION-COUNT>`.
6. Edit the batch header parameters and the task parameters.
7. Click **Save** to update the batch/batch group parameter values.
8. After updating the changes, execute the batch/batch group or configure the scheduling settings.

## Scheduling and Automating Batch/Batch Group Execution

Automate batch/batch group execution.

Using the various scheduling options, you can automate batch/batch group execution to run based on the specified scheduling parameters.

To automate batch/batch execution:

1. Click **Schedule** from the Header panel.
2. In the **Schedule Batch** page, select from the following options:
   - **Once** - Run only once.
   - **Daily** - Run daily.
   - **Weekly** - Run weekly on selected days and time.
   - **Monthly** - Run monthly on selected days and time.
   - **Quarter** -Run every quarter on selected days and time.
   - **Cron Expression** - A Cron Expression is a string comprising of six or seven fields separated by white space. Fields can contain any of the allowed values, along with various combinations of the allowed special characters for that field.
     To execute a batch/batch group using a Cron expression, enter the Cron Expression for your schedule. For more information about the Cron Expression, click **Information** next to the Cron Expression field.
3. Enter the following generic information and the parameters:
   - **Batch/Batch Group** - Batch/batch group for execution.
   - **Batch/Batch Group Name** - The specific batch/batch group to be executed.
   - **Schedule Name** - The unique schedule name.
4. Provide the following scheduling parameters based on the selected schedule option.

   For Cron Expression based scheduling, enter the required Cron expression.

**Table 5-2 Scheduling Options**

| Details | Once | Daily | Weekly | Monthly | Quarter |
|---|---|---|---|---|---|
| **Start Date** to begin execution. | Yes | Yes | Yes | Yes | Yes |
| **End Date** to stop the execution | No | Yes | Yes | Yes | Yes |
| **Run Time** to execute the batch/ batch group | Yes | Yes | Yes | Yes | Yes |
| **Days of the week** you want to execute the batch/batch group. You can select multiple days. | | | Yes | Yes | Yes |
| **Months of the Year** you want to execute the batch/batch group. You can select multiple months. | | | | Yes | Yes |
| **Day of the Month** to execute batch/batch group | | | | Yes | Yes |
| **First Months of the Year** to calculate the year beginning and each quarter beginning. | | | | | Yes |
| **Select Quarters** to execute batch/batch group<br>You can select multiple quarters. | | | | | Yes |
| **Days of Quarter** - Select the days to execute the batch/batch group. You can select first day, mid day, last day, First N days, or last N days | | | | | Yes |
| **No. of Days** - If you select first N days or last N days, select the number of days to execute the batch/batch group at the beginning or end of the selected quarter | | | | | Yes |

5. **Exclude Tasks** to add/remove tasks from the execution list.
6. **Hold Tasks** to pause/release tasks during execution.
7. Click **Edit Dynamic Parameters** to modify the dynamic parameters.
8. Use the following filters to dynamically export only the relevant records:
   - Additional Filter
   - Placeholder Filter

   Set the filters in the following format:

   DATA_TABLE.AS_OF_DATE = $FICMISDATE$ AND DATA_TABLE.EXECUTION_ID = $BATCHRUNID$

   Where:
   - DATA_TABLE: Data table from which to export relevant record
   - AS_OF_DATE: MIS Date
   - EXECUTION_ID: Execution ID

   Example: FSI_ALM_CASHFLOW_OUTPUT_HIST.AS_OF_DATE = $FICMISDATE$ AND FSI_ALM_CASHFLOW_OUTPUT_HIST.EXECUTION_ID = $BATCHRUNID$
9. Click **Schedule** to add the new schedule for execution.

You can set pre-conditions to process batch groups. When a batch group has an associated pre-condition, the execution schedule will not be considered for processing.

10. To manage schedules associated with a specific batch:
    a. In the **Select Batch** page, select **Batch** and select the **Batch Name** to view the associated schedules.
    b. Click **View Schedule** to access the list of all the schedules associated with the batch.

       You can perform the following tasks:
       - Click **Edit** to modify the schedule.
       - Click **Pause** and enter the **Start Date** and **End Date** to pause the schedule from execution. Click **Add** to apply the pause.
         To remove the pause, click **Delete** next to the specific pause.

## Re-run Batch/Batch Group

Re-running a batch/batch group facilitates you to run the batch/batch group irrespective of the previous execution state.

When you re-run a batch/batch group that has been previously executed, a new Run ID is generated, and the batch/batch group is executed as if it were a new run.

To re-run a batch::

1. Click **Schedule Batch** from the Header panel.
2. In the **Schedule Batch** page, select the **Re-run** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group Name** you want to re-run.
5. Select the **Batch Run ID**.
6. Click **Re-run**.

## Re-start Batch/Batch Group

Re-start a batch/batch group that has not executed successfully or has been explicitly interrupted, canceled, or put on hold during the execution process.

Restarting a batch/batch group enables you to continue execution directly from the point of interruption or failure, allowing you to complete executing the remaining tasks.

> **Note**
>
> Before restarting a batch/batch group, ensure to provide the complete cleanup URL and also to enable invoking the cleanup URL before restarting the execution.

To re-start a batch/batch group:

1. Click **Schedule Batch** from the Header panel.
2. From the **Schedule Batch** page, select the **Re-start** tab.
3. Select **Batch/Batch Group**.
4. Select the **Batch or Batch group** you want to schedule daily from the drop-down list.
5. Select the **Batch Run ID**.

6. Click **Re-start**.

# Monitor Batch/Batch Group

Using Monitor Batch/Batch Group, you can view the status of executed batches/batch groups, along with the tasks details.

Monitoring enables users to track and identify issues at regular intervals, ensuring smoother batch execution. Both a visual representation and a tabular view of the status of each task in the batch are available.

To monitor a batch/batch group:

1. Click **Monitor Batch** from the Header panel.
2. Select the **Batch/Batch Group** and the **Batch/Batch Group Name** to monitor the execution.
3. **Set Refresh Frequency Time Interval and duration** in seconds.

   By default, the refresh interval is set to **5 seconds** and duration is set to **5 minutes**. This indicates that the monitor progress will be refreshed every 5 seconds for the next 5 minutes.

   The refresh interval ranges between 5 to 60 seconds and the duration ranges between 5 to 180 seconds.
4. Select the **MISDATE** to view the list of Batch Run IDs executed on a specific date.
5. Select the **Batch Run ID** you want to monitor.
6. Click **Start Monitor** to view the results in **Visualization** and **List View** tabs.

   The **Visualization** tab displays execution status graphically, while the **List View** tab provides the details in a tabular form, including:
   - **Status**: Task execution status - **Not-Started**, **On-going**, **Aborted**, **Successful**, **Failed**, **Interrupted**, **Excluded** and **Undefined**.

     > **Note**
     >
     > When the task execution status is **Aborted**, the batch execution will still be **On-going**. The task status will be set to **Ongoing**, when it is triggered again.

   - **Start Time**: Task execution start time.
   - **End Time**: Task execution end time.
   - **Task Details**: Mouse-over the task to display its status and details.
7. At any point, select **Stop Monitor**, to stop monitoring.

   You can download the task execution summary in PDF or Excel, with or without the task logs, from the **Monitor Task** page.

   > **Note**
   >
   > You can download the task execution summary only if the **BATCH_OPER** role is mapped to the **LOGVIEW** function.

8. (Optional). To rerun, restart, or interrupt execution, click **Actions** and select the required option.

   You can also reset the search criteria using **Actions**.
9. (Optional). Click **View Execution Parameters** adjacent to a batch/batch group, to access the list of tasks and task parameters such as **Runskey ID**, **Misdate**, associated with that batch/batch group.

# Viewing Logs

This section describes the OFS CCA CS log details.

## Kubectl Commands

```
kubectl logs dataload-ofscca-czpv5 -n
    fsgbu-ofscca--ofscca-ccaqa282233-prd
```

## Kubectl Commands

To get the subnamespace:

```
kubectl get subnamespaces
```

To get the pods:

```
kubectl -n <subnamespace> get pods
```

For example:

```
kubectl -n fsgbu-ofscca--fsafnd-ccaqa313233-prd get pods
```

```
kubectl -n fsgbu-ofscca--ofscca-ccaqa313233-prd get pods
```

To get the node level details and logs:

```
kubectl logs <servicename> -n <subnamespace>
```

For example:

```
kubectl logs dataload-ofscca-czpv5 -n fsgbu-ofscca--ofscca-ccaqa282233-prd
```

To delete a pod:

```
kubectl delete pod <ppodname> -n fsgbu-ofscca--ofscca-<tenanted>
```

For example:

```
kubectl delete pod cca-loader-cfdf7b4f4-8vk4x -n fsgbu-ofscca--ofscca-
ccaqa313233-prd
```

Scaling the pods:

```
Kubectl get deployments
```

```
kubectl scale deployment jobless-ordering-service --replicas=3(Scale up)
```

```
kubectl scale deployment jobless-ordering-service --replicas=0 (Scale Down)
```

## Instrument Data Loader (File to Stage)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select **Batch** and **Run Id**.
- Click **Start Monitor**.

## Instrument Data Loader (Stage to Processing)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select **Batch** and **Run Id**.
- Click **Start Monitor**.

Additional information is available in table AAICL_MESSAGE_LOG of data schema.

## Dimension Loader (File to Stage to Dimension)

You can see the messages from User Interface. To view messages, follow these steps:

- Navigate to **Operations and Processes**, select **Scheduler**, and then select **Monitor Batch**.
- Select Batch and Run Id.
- Click **Start Monitor**.

# 6

# GHG Emissions Calculator

The GHG Emissions Calculator Engine is an integral part of the Oracle Financial Services Climate Change Analytics Cloud Service solution. This engine enables users to calculate their Greenhouse Gas (GHG) emissions across various classifications like Scope 1, 2, and 3 and emissions categories. Logic and Formulas used in this engine have been developed based on various industry-leading guidance and standards like The GHG Protocol Corporate Accounting and Reporting Standard and The Global GHG Accounting and Reporting Standard issued by Partnership for Carbon Accounting Financials (PCAF).

## GHG Emissions and Classification

Greenhouse Gases refer to a collection of seven greenhouse gases listed in the Kyoto Protocol, i.e., carbon dioxide ($CO_2$); methane ($CH_4$); nitrous oxide ($N_2O$); hydrofluorocarbons (HFCs); nitrogen trifluoride ($NF_3$); perfluorocarbons (PFCs); and sulfur hexafluoride ($SF_6$). These GHGs are released into the atmosphere as a result of emissions from various activities undertaken as part of several business operations and/or an entity's value chain.

**Classification**

GHG Emissions are broadly classified into two sources and three reporting categories which are consistently used across these standards and/or frameworks:

**Table 6-1 Classification of GHG Emissions**

| Source | Reporting Category |
| --- | --- |
| Direct Emissions | Scope 1 |
| Indirect Emissions | Scope 2 |
| Indirect Emissions | Scope 3 |

These emissions reporting categories can be distinguished based on the following definitions:

- Scope 1 – Emissions from sources that are owned or controlled by an entity
- Scope 2 – Emissions from sources that are purchased and controlled by an entity
- Scope 3 – Emissions from all other sources

These reporting categories are further sub-divided into various activities as listed below:

**Table 6-2 Reporting Categories**

| Reporting Category | Emissions Source Activity |
| --- | --- |
| Scope 1 | Fuels |
| Scope 1 | Refrigerants |
| Scope 1 | Owned Transportation |
| Scope 2 | Electricity |
| Scope 2 | Heat and Steam |
| Scope 2 | District Cooling |
| Scope 3 | Purchased goods and services |

**Table 6-2 (Cont.) Reporting Categories**

| | |
|---|---|
| Scope 3 | Capital goods |
| Scope 3 | Fuel and energy-related activities |
| Scope 3 | Upstream transportation and distribution |
| Scope 3 | Waste generated in operations |
| Scope 3 | Business travel |
| Scope 3 | Employee commuting |
| Scope 3 | Upstream leased assets |
| Scope 3 | Downstream transportation and distribution |
| Scope 3 | Processing of sold products |
| Scope 3 | Use of sold products |
| Scope 3 | End-of-life treatment of sold products |
| Scope 3 | Downstream leased assets |
| Scope 3 | Franchises |
| Scope 3 | Investments |

**Emissions Calculator – GWP-based emissions**

The application enables banks and financial institutions to calculate the GHG Emissions based on the 100-year Global Warming Potential (GWP) of the following greenhouse gases by using the various synthesis reports published by the Intergovernmental Panel on Climate Change (IPCC) - AR4, AR5 and AR6. This calculation is applicable to all emission categories of Scope 1, 2 and 3, wherever an emission factor is required.

> **Note**
>
> This has to be calculated only for those records where we do not necessarily compute the individual/disaggregated values for each of these gases (i.e. Emission Factors are not available for these gases)

1. CH4
2. N20
3. HFCs
4. PFCs
5. SF6
6. NF3

**Pre-built model/infrastructure for Emission Factor Database Sources**
The application is pre-equipped to support the usage of various emission factor database sources and/or emission factors from various vendors or data providers. As part of this functionality, the solution contains pre-seeded data elements across various database sources in form of hierarchies. The following is a list of emission factor database sources for which hierarchies are pre-seeded in the application across available emission categories:

**Table 6-3 Pre-seeded Emission Factor Database Sources**

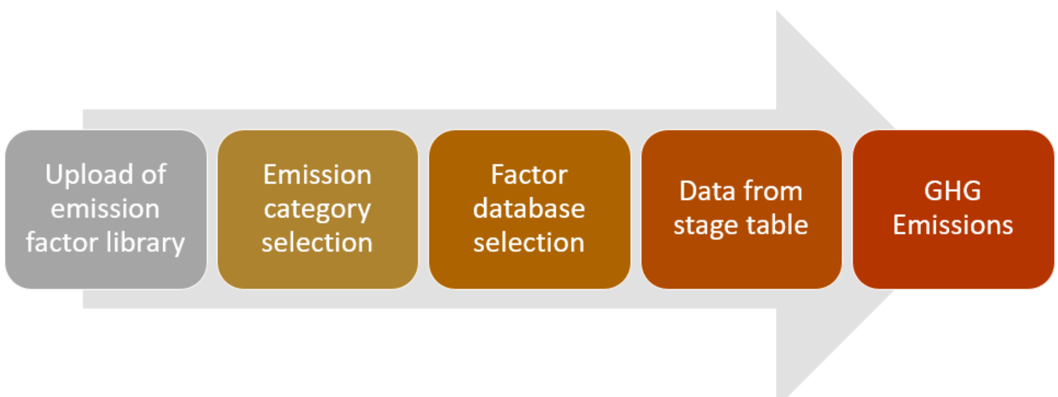
| Emission Factor Database/Source |
| --- |
| UNFCC |
| DEFRA |
| EPA |
| GHG Protocol |
| PCAF |
| IFI |

# Process Overview

The GHG emissions calculator engine is an integral part of the Oracle Financial Services Climate Change Analytics Cloud Service solution. This engine enables users to calculate their greenhouse gas (GHG) emissions across various classifications like Scope 1, 2, and 3 and emissions categories. Logics and formulas used in this engine have been developed based on various industry-leading guidance and standards like The GHG Protocol Corporate Accounting and Reporting Standard and The Global GHG Accounting and Reporting Standard issued by Partnership for Carbon Accounting Financials (PCAF).

The following diagram illustrates the steps to be performed in order to obtain the GHG Emissions at an Emissions Category level.

**Figure 6-1 The GHG Emissions Process**




- **Upload emission factor library** – Users must upload the relevant emissions factors that they want the calculation engine to use for processing purposes at a source level like PCAF, DEFRA, UNFCC, etc. For more details, refer to the MOS page.
- **Data from staging tables** – Users must provide relevant data elements required to calculate GHG emissions using the Object Store. For more details on the data format and required data elements, please refer MOS page.
- **Create user definitions** – Users must create a definition at a legal entity level using the Greenhouse Gas Emissions Calculator UI screen. For more details, please refer section on the Greenhouse Gas Emissions Calculator UI screen.

- **Calculate GHG Emissions** – In this step, users direct the service to execute a run to process data provided and defined user inputs for calculating GHG emissions.
- **Reports & Analytics** – Output of GHG emissions is then utilized for various visualizing various pre-built dashboards, reports, and metrics using the Oracle Analytics platform.

The following list of emissions categories are currently being supported by this engine:

1. Fuels
2. Refrigerants
3. Owned Transportation
4. Electricity
5. Heat and Steam
6. District Cooling
7. Purchased goods and services
8. Capital Goods
9. Fuel and energy related activities
10. Upstream transportation and distribution
11. Waste generated in operations
12. Business Travel
13. Employee commuting
14. Upstream leased assets
15. Downstream transportation and distribution
16. Downstream leased assets
17. Investments
18. Emissions Removals
19. Avoided Emissions

# Supported Individual Emissions Categories

This section provides information on the details related to the GHG Emissions categories. As a standard practice for all emissions categories, the user must provide the Emissions Factor Database in a standard format.

The following are the supported emissions categories in the OFS CCA CS Application, for more details, see the Oracle Financial Services Climate Change Analytics Reference Guide on MOS:

- **Fuels**- This category is used to report emissions resulting from the combustion of various forms of fuels from sources owned by the reporting entity. Results from this category will be reported under Scope 1 emissions.
- **Refrigerants**- This category is used to report emissions resulting from the manufacturing or processing of various forms of chemicals and materials. As these emissions are from sources owned by the reporting entity, their results will also be reported under Scope 1 emissions.
- **Owned Transportation** - This category is used to report emissions resulting from the combustion of fuels in reporting the company’s owned or controlled combustion sources

like cars, buses, airplanes, etc. Results from this category will be reported under Scope 1 emissions.

- **Electricity** - This category is used to report emissions resulting from the generation of electricity that is purchased or otherwise brought into the reporting entity. Results from this category will be reported under Scope 2 emissions.
- **Heat and Steam** - This category is used to report emissions resulting from the generation of heat and steam that is purchased or otherwise brought into the reporting entity. Heat is generally used by organizations to control interior climates, heat water, and some equipment. Steam is a valuable energy resource for various industrial processes. Results from this category will be reported under Scope 2 emissions.
- **District Cooling** - This category is used to report emissions resulting from the production of cooling from electricity or through the distribution of cooled air or water. Results from this category will be reported under Scope 2 emissions.
- **Purchased goods and services** - This category is used to report upstream emissions (cradle-to-gate) resulting from the extraction, production, and transportation of goods and services purchased or acquired by the reporting company. Results from this category will be reported under Scope 3 emissions.
- **Capital Goods** – This category is used to report all the upstream (i.e., cradle-to-gate) emissions from the production of capital goods purchased or acquired by the reporting company in the reporting year. Results from this category will be reported under Scope 3emissions.
- **Fuel and Energy related Activities** - This category is used to report emissions resulting from the extraction, production, and transportation of fuel and energy purchased or acquired by the reporting company that is not included in Scope 1 and Scope 2. This includes upstream emissions of purchased fuels, purchased electricity, transmission and distribution losses, and generation of purchased electricity which is sold to end users. Results from this category will be reported under Scope 3 emissions.
- **Upstream Transportation and Distribution** - This category is used to report emissions resulting from transportation and distribution of purchased products between a reporting company’s tier 1 suppliers and its operations in vehicles and facilities not owned or operated by the reporting company. It also includes transportation and distribution services purchased by the reporting entity, incl. both inbound and outbound logistics and transportation, and distribution between the company’s various facilities. Results from this category will be reported under Scope 3 emissions.
- **Waste Generated in Operations** - This category is used to report emissions resulting from third-party disposal and treatment of waste generated in reporting company’s operations (i.e., in facilities not owned/controlled by the reporting company). Results from this category will be reported under Scope 3 emissions.
- **Business Travel** - This category is used to report emissions resulting from transportation of a reporting company’s employees for business-related activities, in vehicles not owned or controlled by the reporting company. Results from this category will be reported under Scope 3 emissions.
- **Employee Commuting** - This category is used to report emissions resulting from transportation of a reporting company’s employees between their homes and their worksites, in vehicles not owned or controlled by the reporting company. Results from this category will be reported under Scope 3 emissions.
- **Upstream Leased Assets** - This category is used to report emissions resulting from the operation of assets that are leased by the reporting company (i.e., lessees) and not already included in Scope 1 and 2 inventories. Results from this category will be reported under Scope 3 emissions.

- **Downstream Transportation and Distribution -** This category is used to report emissions resulting from the transportation and distribution of products sold by the reporting company. This transportation and distribution is between the reporting company's operations and the end consumer in vehicles and facilities not owned by the reporting company. Results from this category will be reported under Scope 3 emissions.
- **Downstream Leased Assets -** This category is used to report emissions resulting from the operation of assets that are owned by the reporting company (i.e., lessors) and leased to lessees which are already not included in Scope 1 and 2 inventories. Results from this category will be reported under Scope 3 emissions.
- **Investments -** This category is used to report emissions associated with the reporting company's investments that are already not included in scopes 1 and 2. Results from this category will be reported under Scope 3 emissions.
- **Emissions Removals -** This category is used to report emissions removals from the atmosphere and storage through various means like trees, soil, etc. These are financed through various projects. Results from this category will be reported under the GHG Savings section.
- **Avoided Emissions -** This category is used to report emissions reductions that the financed project produces versus what would have been emitted in the absence of the project (the baseline emissions).

**Note**

Calculation of the following emissions categories and other asset classes are currently not supported by the application. In this case the GHG Emissions will not be calculated but the user must provide the required carbon dioxide equivalent (GHG Emissions) information that needs to be used for Analytics and other processes:

- Processing of Sold Products
- Use of Sold Products
- End of Life Treatment of Sold Products
- Franchises
- Purchase of Carbon Offsets

# Measurement Methodologies

The following are the measurement methodologies:

- Supplier-specific method
- Average-product method
- Average spend-based method
- Hybrid method
- Average-data method
- Waste-type-specific method
- Fuel consumption
- Primary data
- Local statistical data

- Regional statistical data
- Known vehicle type
- Average vehicle
- Verified Emissions
- Unverified Emissions
- Energy consumption estimated from energy labels
- Energy consumption estimated from statistics
- Energy consumption estimated from statistics and number of buildings
- Investee's Energy Consumption-based
- Investee's Production-based
- Investee's Revenue-based
- Sector per unit of asset-based
- Asset Turnover-based

# Emissions Calculator

This chapter provides detailed information about the Greenhouse Gas Emissions Calculator.

**Calculation of Global Warming Potential (GWP)**

The application helps banks and financial institutions calculate GHG emissions based on the 100-year Global Warming Potential (GWP) of the following greenhouse gases by using the various synthesis reports published by the Intergovernmental Panel on Climate Change (IPCC) - AR4, AR5 and AR6. This calculation is applicable to all emission categories of Scope 1, 2 and 3, wherever an emission factor is required.

**Note**

This has to be calculated only for those records where we do not necessarily do not compute individual/disaggregated values for each of these gases (i.e. emission factors not available for these).

1. CH4
2. N20
3. HFCs
4. PFCs
5. SF6
6. NF3

**Pre-built Model/Infrastructure for Emission Factor Database Sources**

The application is pre-equipped to support the usage of various emission factor database sources and/or emission factors from various vendors or data providers. As part of this functionality, the solution has pre-seeded these data elements across various database sources in form of hierarchies. Below is a list of emission factor database sources for which hierarchies are pre-seeded in the application across available emission categories.

| Emission Factor Database/Source |
| --- |
| UNFCC |
| DEFRA |
| EPA |
| GHG Protocol |
| PCAF |
| IFI |

### Asset Classes supported in the Emissions Calculator

Following is the list of asset classes that is currently supported by the emissions calculator engine to calculate Financed and Facilitated Emissions based on the PCAF Global GHG Accounting & Reporting Standard.

- Equity (Listed and Unlisted)
- Business Loans (Listed and Unlisted)
- Corporate Bonds (Listed and Unlisted)
- Project Finance
- Commercial Real Estate
- Mortgages
- Motor Vehicle Loans
- Facilitated Emissions
- Sovereign Debt

### Emission Intensity Metrics

Application supports calculation of below set of emission intensity metrics as part of the overall package within Emissions Calculator. These are based on the PCAF Global GHG Accounting & Reporting Standard.

1. **Weighted average carbon intensity (WACI)**: Objective is to understand the exposure to emission intensive companies expressed as tCO2 e/€M or $M of reporting company's investee or counterparty revenue.
2. **Economic emission Intensity**: Objective is to understand how the emission intensities of different portfolios (or parts of portfolios) compare to each other per monetary unit. It is expressed as tCO2 e/€M or tCO2 e/$M loaned or invested by the reporting company.
3. **Production emission Intensity**: Objective is to understand the efficiency of a portfolio (or parts of a portfolio) in terms of total GHG emissions per unit of a common output. It is expressed as tCO2 e/MWh, tCO2 e/tonne product produced by the reporting company's investee or counterparty.
4. **Consumption emission Intensity**: Objective is to understand the efficiency of a portfolio (or parts of a portfolio) in terms of total GHG emissions per unit of a common output. It is expressed as units of product consumed by the reporting company's investee or counterparty.
5. **Carbon Footprint**: It refers to the total carbon emissions for a portfolio normalized by the market value of the portfolio, expressed in tons CO2e / $M invested.
6. **Carbon Intensity**: It refers to the volume of carbon emissions per million dollars of revenue (carbon efficiency of a portfolio), expressed in tons CO2e / $M revenue.

7. **Exposure to Carbon-Related Assets**: It refers to the amount or percentage of carbon-related assets34 in the portfolio, expressed in $M or percentage of the current portfolio value.

For more details around the calculation methodology, please refer to the Reference Guide on MOS page.

**Financed Emissions and other metrics calculated for the Asset Management Industry as part of the EU's SFDR Regulation are listed below:**

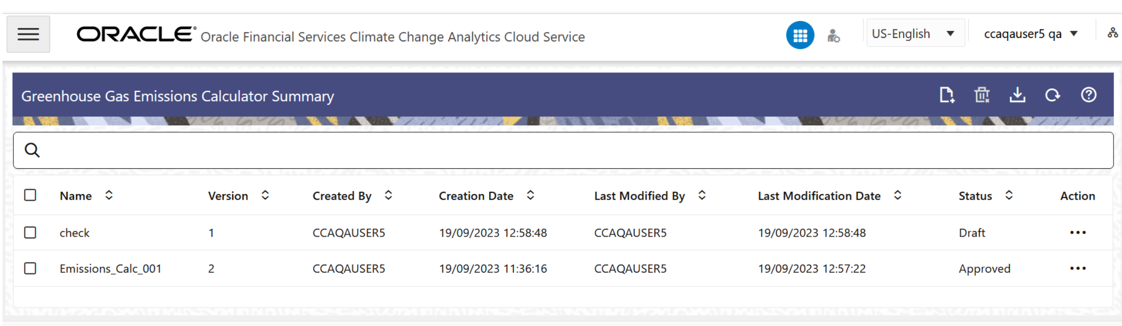
The folloing are the metrics calculations for the asset management industry:

- Scope 1 GHG Emissions
- Scope 2 GHG Emissions
- Scope 3 GHG Emissions
- Total GHG Emissions
- Carbon Footprint
- GHG Intensity
- Exposure to companies active in the fossil fuel sector
- Share of non-renewable energy consumption
- Share of non-renewable energy production
- Energy consumption intensity per high impact climate sector
- Exposure to energy-inefficient real estate assets

# Greenhouse Gas Emissions Calculator Summary Page

This page is the gateway to the Greenhouse Gas Emissions Calculator feature and related functionality. To access this page from the LHS menu, click **Processes**, then click **Emissions Calculator**.

**Figure 6-2 The Greenhouse Gas Emissions Calculator Summary screen**




Use the Greenhouse Gas Emissions Calculator Summary screen to perform the following actions:

- Create
- Delete

- Refresh
- View
- Edit
- Save As
- Approve or Reject
- View a Version

The **Greenhouse Gas Emissions Calculator Summary** page contains the following features:

**Table 6-4 Greenhouse Gas Emissions Calculator Summary page – Fields and Descriptions**

| Column | Description |
| --- | --- |
| Add | Click the **Add** icon to create a new Greenhouse Gas Emissions Calculator Definition. |
| Delete | Select a Greenhouse Gas Emissions Calculator Definition and then click the **Action** icon adjacent to the selected Greenhouse Gas Emissions Calculator Definition and select **Delete** to delete an existing Greenhouse Gas Emissions Calculator Definition.<br>This action is disabled for definitions that contain the status *Approved* or *Pending for Authorization*. |
| Refresh | Click the **Refresh** icon to refresh the Summary Page. |
| Help | Click the **Help** icon to view the Greenhouse Gas Emissions Calculator Definition Help page. |
| Search | Use this field to search for a Greenhouse Gas Emissions Calculator Definition to View, Edit, Save As, Delete, Approve or Reject, and View a Version.<br>For more information on using this feature, see the Search a Greenhouse Gas Emissions Calculator Definition section. |
| Field Search | Enter the name of the Greenhouse Gas Emissions Calculator Definition to filter the list of Greenhouse Gas Emissions Calculator Definition by values that match the search term.<br>For more information on using this feature, see the Search a Greenhouse Gas Emissions Calculator Definition section. |

The **Greenhouse Gas Emissions Calculator Summary** page displays the list of Greenhouse Gas Emissions Calculator Definitions that have been defined by the user and offers several actions that allow you to perform different tasks. This page contains the following columns:

**Table 6-5 Greenhouse Gas Emissions Calculator Columns**

| Column | Description |
| --- | --- |
| Name | Displays the Greenhouse Gas Emissions Calculator Definition's name. |
| Created By | Displays the User ID of the user who created the definition. |

**Table 6-5 (Cont.) Greenhouse Gas Emissions Calculator Columns**

| Column | Description |
| --- | --- |
| Creation Date | Displays the date and time of the creation of the definition. |
| Last Modified By | Displays the User ID of the user who last modified the definition. |
| Last Modified Date | Displays the date and time of the last modification of the definition. |
| Status | This column displays the status of the definition:<br>• **Approved** - The definition has been approved by the Approver. Definitions that are in this status can be Viewed and Copied (Saved As)<br>• **Pending for Authorization** - The definition has been submitted to the approver and is pending approval.<br>When a definition is in this status, only the View action is available.<br>• **Rejected** - The definition has been rejected by the Approver and has been sent back to the Analyst. Definitions that are in the *Rejected* status can be Viewed, Edited or Deleted by an Analyst user. Additionally, when using the View or Edit action, you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**. The Analyst user can modify a definition with this status and then resubmit it to the approver for approval.<br>• **Draft**-The definition has been saved but has not been submitted to the approver for approval. Definitions that are in the *Draft* status can be Viewed, Edited or Deleted by an Analyst user.<br>For more information on the approval process, see Approve a Greenhouse Gas Emissions Calculator Definition. |

**Table 6-5 (Cont.) Greenhouse Gas Emissions Calculator Columns**

| Column | Description |
| --- | --- |
| Action | The following tasks are available for the Greenhouse Gas Emissions Calculator Definition in the **Action** column.<br>• **View**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition Name and select **View** to view the contents of a Greenhouse Gas Emissions Calculator Definition in read format.<br>• **Edit**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition Name and select **Edit** to edit the contents of a Greenhouse Gas Emissions Calculator Definition in read/write format.<br>• **Save As**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition Name and select **Save As** to copy the Emissions Factor Database Mappings from one Legal Entity to a new Legal Entity.<br>• **Delete**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name and select **Delete** to delete an existing Greenhouse Gas Emissions Calculator Definition.<br>• **Approve/Reject**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name and select **Approve** to Approve an existing Greenhouse Gas Emissions Calculator Definition. This action can only be performed by a user with the *Approver* role.<br>• **Show Versions**- Click the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name and select **Show Versions** to view the version of the selected Greenhouse Gas Emissions Calculator Definition. |

# Create a Greenhouse Gas Emissions Calculator Definition

The application enables the creation of Greenhouse Gas Emissions Calculator definitions. Only an *Analyst* and *Admin* user can create a Greenhouse Gas Emissions Calculator Definition.

> **Note**
>
> Before creating a Greenhouse Gas Emissions Calculator Definition, execute the batch **CCA_LOAD_EMISSION_FACTOR_SOURCE_DATA**. Execution of this batch loads the data into the Emissions Factor Database - Option 1 and Option 2 drop-down list fields.

Perform the following steps to create a Greenhouse Gas Emissions Calculator definition:

1. On the **Greenhouse Gas Emissions Calculator Summary** page, click the Add icon to open the **Greenhouse Gas Emissions Calculator** window.
2. Populate the Greenhouse Gas Emissions Calculator Form as tabulated:

**Table 6-6 Green House Gas Emissions Calculator Form**

| Field | Description |
| --- | --- |
| Name (**Definition Summary** pane) | Enter a name for the definition.<br>This is a mandatory field. |
| Legal Entity (**Definition Summary** pane) | Click the **Select Legal Entity** icon to open the Legal Entity window:<br>a. In this window, click the Legal Entity field to select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.<br>**Note**<br>• A definition can only use Legal Entities that are not part of existing definitions.<br>• The application supports one definition using multiple Legal Entities that have not been used in other definitions.<br>b. Click **Apply**. The **Selection of Emission Factor Database** is automatically populated in the Emission Factor Database Grid.<br>When the Legal Entity is selected, the **GWP Version** drop-down list appears in the **Selection of Emission Factor Database** pane |
| Description | Add a description for the definition |
| Auto Approve | Select this check box to auto-approve the definition.<br>When this checkbox is selected, the definition is auto-approved when the definition is saved.<br>This check box is enabled only for users who have **Approver User** rights. |
| GWP Version | This drop-down list appears when the legal entity is selected from the **Legal Entity** field.<br>Select a version from the drop-down list. For example AR4, AR5, AR6 etc. |
| Add New Row | Select this button to add new rows to the table. After a new row is added, a selected Emission Category and Asset Class can be mapped to the emission factor database (option 1 and option2) |
| Emission Category | Select an emission category from the drop-down list. |
| Asset Class | Select an asset class from the drop-down list. |

**Table 6-6 (Cont.) Green House Gas Emissions Calculator Form**

| Field | Description |
|---|---|
| Emission Factor Database - Option 1 (**Selection of Emission Factor Database** pane) | Select an Emissions Factor Database from the drop-down list.<br>If multiple Legal Entities were selected in the Legal Entity field, then you need to select each Legal Entity from the Legal Entity drop-down list and then select an Emission Factor Database from the drop-down list. You must perform this action for each selected Legal Entity |
| Emission Factor Database - Option 2 (**Selection of Emission Factor Database** pane) | Select an Emissions Factor Database from the drop-down list.<br>If multiple Legal Entities were selected in the Legal Entity field, then you need to select each Legal Entity from the Legal Entity drop-down list and then select an Emission Factor Database from the drop-down list. You must perform this action for each selected Legal Entity |
| Copy Across | Click this button if you want to copy the Emissions Factor information from one Legal Entity to a new Legal Entity within a definition. For more information on this feature, see the Copy (Save As) a Green House Gas Emission Calculator Definition section. |
| Reset to Default | Click this button to use the latest user defined default values, values that were modified in the default Legal Entity. If the default Legal Entity is not selected, then the application uses the seeded values. |
| Audit Panel | The Audit Panel pane is a standard footer pane for every OFSAA Rule type. For more information, see Audit Pane. |

3. Click **Save**. The status changes to *Draft* and the definition is saved.
4. Click **Submit**. The status changes to *Pending for Authorization*, and is submitted to the Approver.

The new definition will appear in the list of Greenhouse Gas Emissions Calculator definitions on the **Greenhouse Gas Emissions Calculator Summary** page with the status as *Draft* or *Pending for Authorization*.

## Refresh a Greenhouse Gas Emissions Calculator Definition

You can refresh an existing Greenhouse Gas Emissions Calculator Definition from the **Greenhouse Gas Emissions Calculator Summary** page to refresh it with newly available data.  Perform the following steps to refresh one or more existing Greenhouse Gas Emissions Calculator Definition(s):

1. On the **Greenhouse Gas Emissions Calculator Summary** page, select the checkbox(s) adjacent to the Greenhouse Gas Emissions Calculator Definition(s) that you want to refresh.
2. Click **Refresh**.

The selected Greenhouse Gas Emissions Calculator Definition(s) are refreshed with newly available data.

## View a Greenhouse Gas Emissions Calculator Definition

The View feature enables you to view the details of an existing Greenhouse Gas Emissions Calculator Definition. Perform the following steps to view the definition details:

1. In the Greenhouse Gas Emissions Calculator Definition list, select the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name that you want to view.
2. Click **View** to open the **Gas Emissions Calculator Definition** window.
   If a definition has been rejected by the Approver, then you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**.
3. Click **Cancel** to return to the **Gas Emissions Calculator Definition** page.

## Edit a Green House Gas Emissions Calculator Definition

The Edit feature enables you to update the details of an existing Green House Gas Emissions Calculator Definition. Perform the following steps to edit an existing Green House Gas Emissions Calculator Definition:

> **Note**
>
> Definitions that have the status as *Approved* or *Pending for Authorization* cannot be edited.

1. In the Green House Gas Emissions Calculator Definition list, select the **Action** icon adjacent to the Green House Gas Emissions Calculator Definition name that you want to edit.
2. Click **Edit** to open the **Green House Gas Emissions Calculator Definition** window.
3. Edit the relevant fields.
4. Click **Save** and then click **Submit**.
   If a previously *Rejected* definition was modified, then when the **Submit** button is clicked, the Approval Process begins.
5. Additionally, navigate to the **Audit Panel** and then to the **Comments** tab to view any comments from the Approver in case the definition has the status as *Rejected*.

The saved Green House Gas Emissions Calculator Definition is displayed in the Green House Gas Emissions Calculator Definition list on the **Green House Gas Emissions Calculator Summary** page.

## Copy (Save As) a Green House Gas Emissions Calculator Definition

The Copy Save As feature enables you to copy the details from an existing definition to a new definition by using a new Legal Entity or Entities. Perform the following steps to copy and save a Green House Gas Emissions Calculator Definition:

1. Select the desired Green House Gas Emissions Calculator Definition.

> **Note**
>
> Only *Approved* definitions can be copied.

2. Click the **Action** icon.
3. Select **Save As** to open the **Save As** window.
4. In the **Save As** window, enter a name and description in the **Name** and **Description** fields.
5. In the **Source Legal Entities** drop-down list to select the Legal Entity that was used in the Definition that has been copied.
   By selecting the *Source* Legal Entity, you can to copy its' mappings to the *Target* Legal Entity in the **Greenhouse Gas Emissions Calculator** (Edit) screen.
6. In the **Target Legal Entities** drop-down list, select the required Legal Entity(s).
   The Legal Entities in this list are those that have not been used in other definitions.
7. Click **Save**. The Green House Gas Emissions Calculator Definition is saved under a new name.
8. Select the newly saved definition from the **Greenhouse Gas Emissions Calculator Summary** page.
9. Click the **Action** icon and then select **Edit**.
10. Populate the relevant fields.
    If a Legal Entity that has already been used in another definition is selected, then the application gives you an error message when you try to save this definition, hence ensure that a unique Legal Entity is selected.
11. It is mandatory to select a new Legal Entity(s) and then delete the old Legal Entity before clicking **Submit**. Perform the following steps depending on whether you want to copy the old definition's Emissions Factor Database Mappings the newly selected Legal Entities or not:
    a. **If you want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity**:
       i. Click the **Select Legal Entity** icon to open the Legal Entity window:
       ii. In this window, click the Legal Entity field to select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

       > **Note**
       >
       > - A definition can only use Legal Entities that are not part of existing definitions.
       > - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

       iii. Click **Apply**. The **Copy Across** button is enabled.
       iv. Click **Copy Across**. The old definition's Emissions Factor Database Mappings are copied to the newly selected Legal Entity(s)
       v. If required, modify the mappings.
       vi. Click the **Select Legal Entity** icon to open the Legal Entity window:

   vii. In this window, delete the old Legal Entity.

   b. **If you do not want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity:**

      i. Click the **Select Legal Entity** icon to open the Legal Entity window:

      ii. In this window, delete the old Legal Entity.

      iii. Select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

> **Note**
>
> - A definition can only use Legal Entities that are not part of existing definitions.
> - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

      iv. Click **Apply**.

      v. If required, modify the mappings.

12. Click **Save** and then click **Submit** to submit this definition to the Approver for approval.

## Delete a Green House Gas Emissions Calculator Definition

You can delete an existing Green House Gas Emissions Calculator Definition from the **Greenhouse Gas Emissions Calculator Summary** page. Perform the following steps in order to delete single or multiple existing Green House Gas Emissions Calculator Definitions:

> **Note**
>
> Definitions that have the status as *Approved* cannot be deleted.

1. On the **Greenhouse Gas Emissions Calculator Summary** page, select the checkbox(s) adjacent to the Greenhouse Gas Emissions Calculator Definition(s) that you want to delete.
2. Click **Delete**. A warning dialog is displayed.
3. Click **Yes**.
4. Additionally, select the checkbox(s) adjacent to the Green House Gas Emissions Calculator Definition(s) and then click the **Delete** icon on the top of the **Greenhouse Gas Emissions Calculator Summary** page.  A warning dialog is displayed.
5. Click **Yes**.

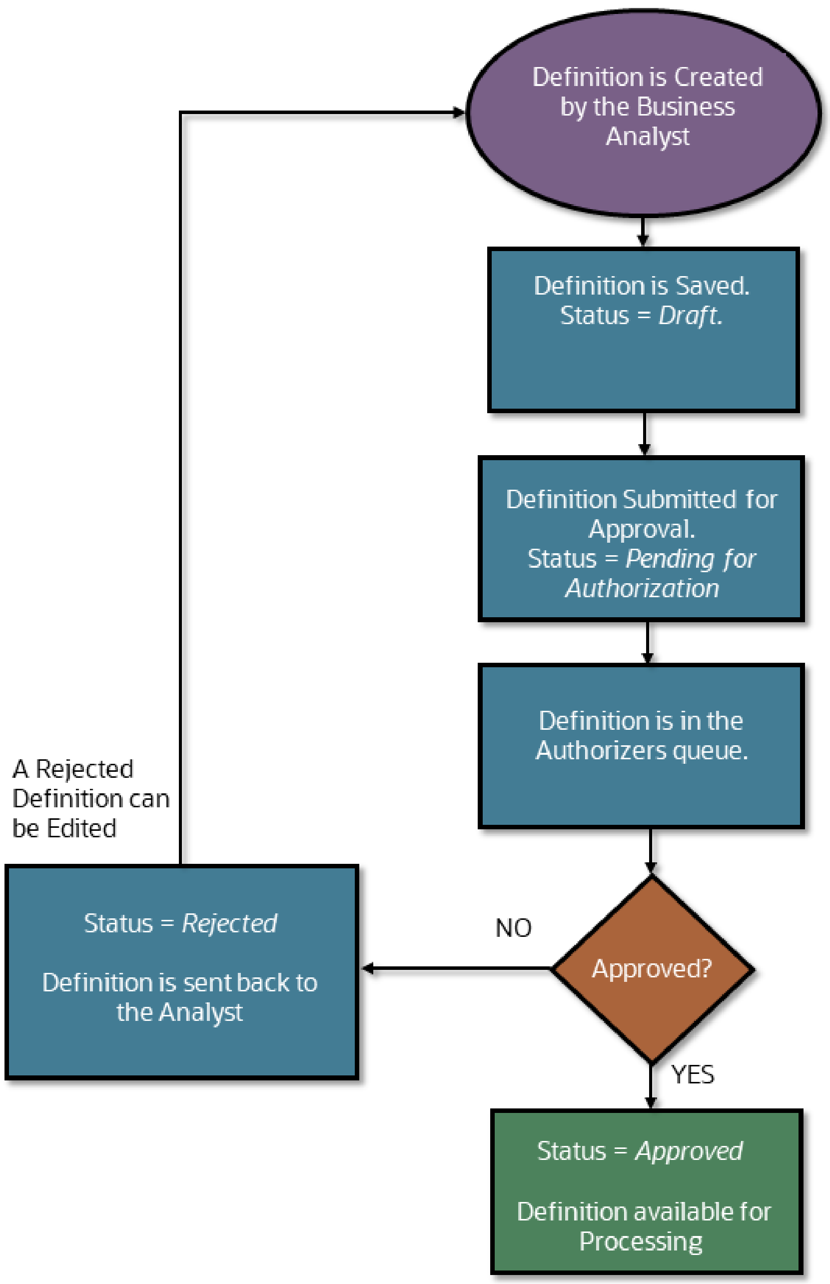
The selected definitions are removed from the **Greenhouse Gas Emissions Calculator Summary** page.

## Approve or Reject a Greenhouse Gas Emissions Calculator Definition

All definitions that have been created must be approved by the *Approver User* only. If a definition has only been *Saved* and not *Submitted* to the *Approver* for approval, will not be used for processing. Only **Approved** definitions are used for processing/runs.

The following diagram illustrates the Approval Workflow status:

**Figure 6-3 The Approval Workflow Process**



Perform the following steps to *Approve* or *Reject* a Greenhouse Gas Emissions Calculator definition:

1. Log in as an Approver and navigate to the **Green House Gas Emissions Calculator Summary** page. Only definition with the status as Pending for Authorization are available for Approval or Rejection.
2. Select the Greenhouse Gas Emissions Calculator definition that you want to approve or reject and then click the **Action** icon.

   > **Note**
   >
   > As an Approver, you can only **View** or **Approve** or **Reject** a definition from the **Action** icon.

3. Click **View** or **Approve/Reject** to open the page for the selected Greenhouse Gas Emissions Calculator definition.
4. On this page view the form and then select either **Approve** or **Reject**.
   - If you select **Approve**, then a window appears. In this window, enter your comments for the Approval, and then click **Approve**.
   - If you select **Reject**, then a window appears. In this window, enter your comments for the Rejection, and then click **Reject**.

If the definition was Approved , then the status is marked as *Approved* and can be used for processing or runs. If the definition was rejected, then the status of the definition is marked as *Rejected* and the definition is sent back to the Analyst for modification and resubmission.

## Create a New Version of an Approved Definition

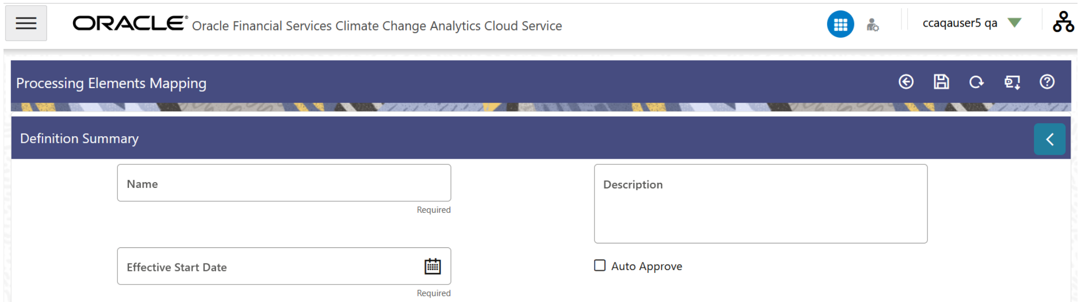
The application enables you to create a new version of an *Approved* definition. In this feature when you create a new version of an *Approved* definition, except for the Legal Entity, you can modify the relevant fields and **Save** and then **Submit** this modified definition for the Approval process. The *Approver User* will either *Approve* or *Reject* this new version of the definition:

- Rejected: If this version of the definition is Rejected, it will go back to the Analyst or Admin user for modification and these users can resubmit this version until it is *Approved*.
- **Approved:** If this version of the definition is *Approved*, then it will be available for viewing or creating a new version again if required.

Perform the following steps to create a new version of an *Approved* definition:

1. In the Greenhouse Gas Emissions Calculator Definition list, select the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name that you want to create a new version of.
2. Click **Create New Version**. The **Greenhouse Gas Emissions Calculator** window appears.

**Figure 6-4 The Greenhouse Gas Emissions Calculator Window**



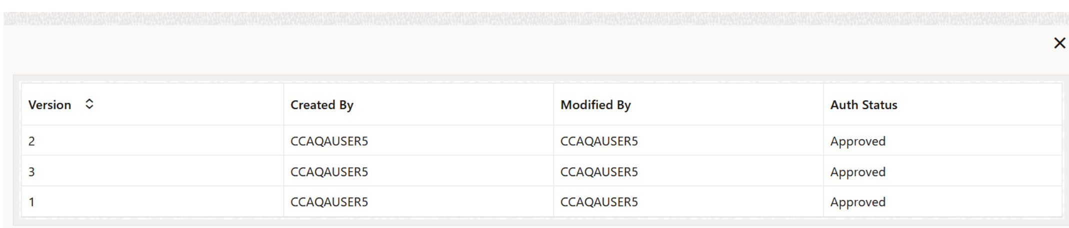

3. Edit the relevant information.
4. Click the **Close** button to return to the **Greenhouse Gas Emissions Calculator Summary** page.

# View the Version of an Approved Definition

After creating a new version of an Approved Definition, the version number changes. Perform the following steps to check the version of a definition:

1. In the Greenhouse Gas Emissions Calculator Definition list, select the **Action** icon adjacent to the Greenhouse Gas Emissions Calculator Definition name that you want to view the version of.
2. Click **Show Versions**. A window pops up displaying the version information of the definition.
   In this window, you can view the version information via the **Version**, **Created By**, **Modified By**, and **Auth Status** columns.

**Figure 6-5 View the Version Information**




3. Click the **Close** button to return to the **Greenhouse Gas Emissions Calculator Summary** page.

# Search for a Green House Gas Emissions Calculator Definition

Search for a Green House Gas Emissions Calculator Definition to perform any of the following tasks:

- View
- Edit
- Save As
- Delete
- Approve or Reject

- View a Version

**Procedure**

To search for a Green House Gas Emissions Calculator Definition, perform the following steps:

- Navigate to the **Green House Gas Emissions Calculator Summary** page.
- Click the **Search** field.
- Enter the **Name** of the Green House Gas Emissions Calculator Definition.
- In the Status field, select a value to filter the search by the status of the Green House Gas Emissions Calculator Definition. The available options are:
  - Approved
  - Pending for Authorization
  - Rejected
  - Draft
- Click **Search** or **Reset** to reset the values in the search box or **Cancel** to cancel the search. Only the Name and Status can be used for an Advanced Search.

Only Green House Gas Emissions Calculator Definition that match the Search Criteria are displayed.

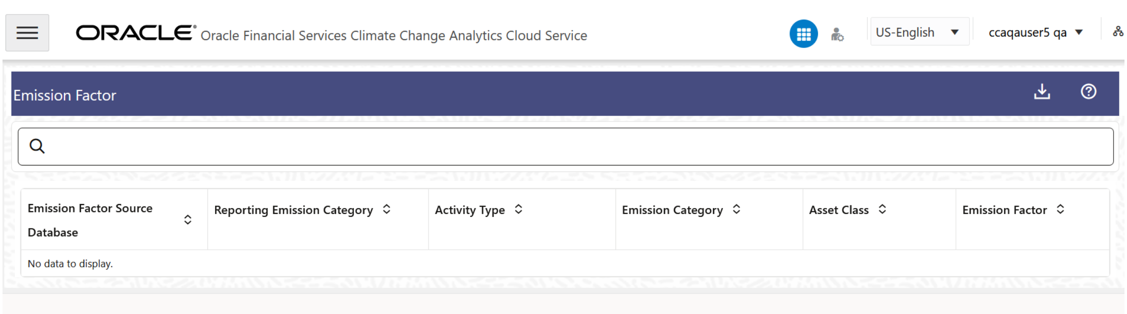
# Emission Factor

This chapter provides information on the emission factor feature.

## Emission Factor

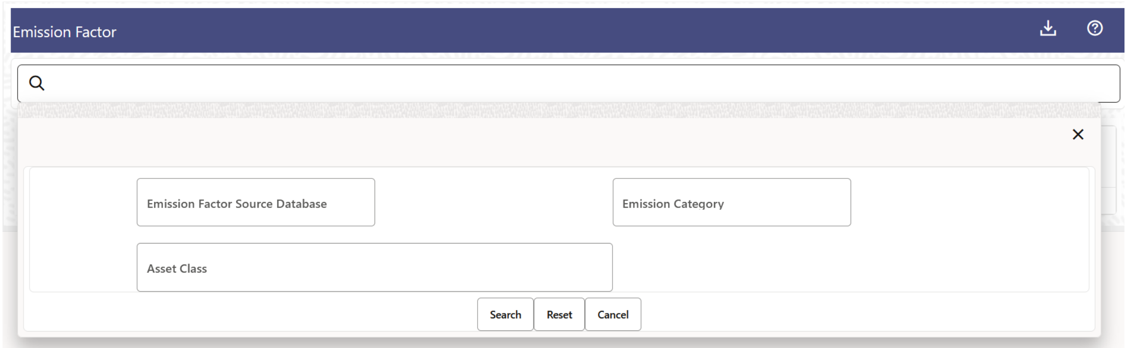
This page is the gateway to the Emission Factor feature and related functionality. To access this page from the LHS menu, click **Processes** and then click **Emission Factor** to open the **Emission Factor** summary page.

**Figure 6-6 Emission Factor Summary Page**




On this page click the search icon and enter the required details in the form:

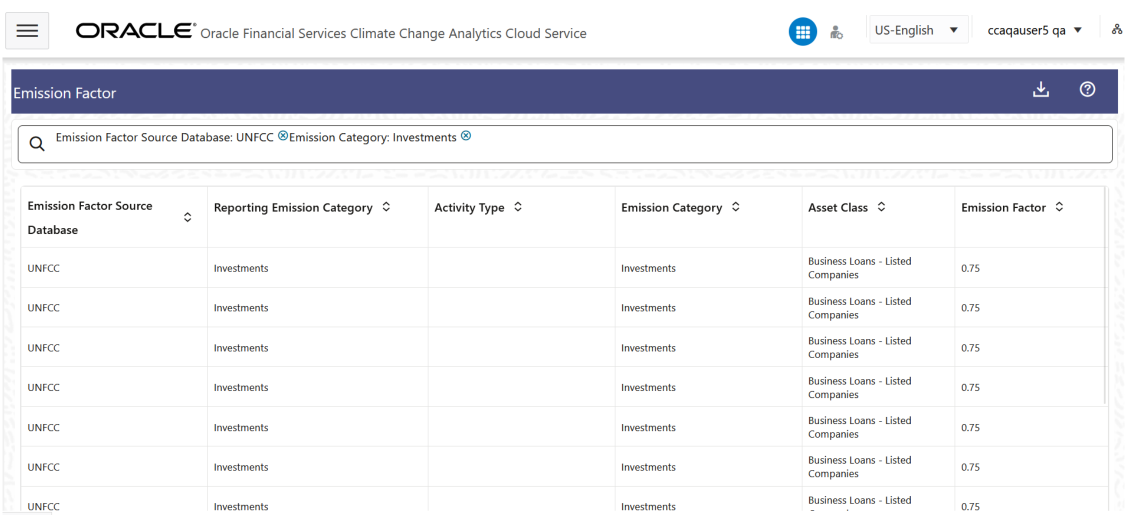
### Figure 6-7 Emission Factor Search Details




- **Emission Factor Source Database:** Select a value from the drop-down list.
- **Emission Category:** Select a value from the drop-down list. Additionally, enter the name of the emission category to filter the values in the drop-down list.
- **Asset Class:** Select an asset class from the drop-down list.

Click **Search** or click **Rest** to reset all the fields in this form.

### Figure 6-8 The Emission Factor Search Results




View the Emission Factor details that will be used for final processing as per the selected filters. The details can also be downloaded by clicking the **Download** icon in a **.csv** format.

# 7 Other Calculations

This chapter provides information on the following features:

- Physical Risk
- Peer-to-Peer Analysis

## Physical Risk

Physical risk refers to risks associated with potential negative effects due to the physical impacts of climate change on an organization. There are two types of physical risks, namely, Acute and Chronic. Acute physical risks arise from weather-related events like storms, floods, drought, or heatwaves, which are increasing in severity and frequency. Meanwhile, chronic physical risks arise from longer-term shifts in climatic patterns including changes in precipitation and temperature which could lead to sea level rise, reduced water availability, biodiversity loss, and changes in soil productivity.

Oracle Financial Services Climate Change Analytics Cloud Service offers a robust data model to capture, store, and analyze physical risk across hazard types, events, and time classifications across time horizons.

For each As-of-Date (A0D), the solution expects a user input of 'Level of Risk' across each hazard type being classified into below risk buckets:

- Extremely High
- High
- Moderate
- Low
- Very Low

Based on the user configuration of Expected Impact (%) defined in Reporting Preferences UI, this cloud service then ascertains an estimated Exposure at Risk for each combination of AOD and Account Number. This financial impact is a product of Facility Value and Expected Impact (%). The ascertained financial impact is then aggregated at an Account Number and Counterparty ID level to arrive at the Physical Risk Level, expressed in %. This output is then used for various risk assessment processes like climate scorecards, heatmaps, etc. For more details on integrating physical risk into these processes, refer to the respective sections in this guide.

Users can also view and utilize various pre-built dashboards and reports on Physical Risk, hosted on Oracle Analytics. For more details, refer to theReports document.

## Peer-to-Peer Analysis

Risk, Investment, and Portfolio Manager-alike titles engage in a peer review or some other form of benchmark analysis to identify potential risks and make relevant business decisions. Meanwhile, financial institutions also need a mechanism to evaluate prospective and new investors before accepting their business and borrowing proposals.

To cater to these requirements, Oracle Financial Services Climate Change Analytics Cloud Service offers a pre-built dashboard called ‘Peer-to-Peer Analysis’ hosted on Oracle Analytics.

This dashboard serves as a single point to view key details, identifiers, and metrics for a financial institution’s counterparty. Using pre-built reports and key metrics like WACI, Financed Emissions, Data Quality, Climate Rating, etc., this dashboard offers a peer-to-peer analysis for a counterparty against a peer group from the existing portfolio. Users can perform this peer-to-peer analysis for both existing and prospective counterparties and use it to facilitate business and investment decision-making.

This peer group is formed based on below dimensions:

- Counterparty Category *(e.g. Corporate, Retail, etc.)*
- Party Type *(e.g. Public-Large Scale, Sovereign-SME, Small-scale, etc.)*
- Sector *(e.g. Manufacturing, Construction, Information, Utilities, etc.)*
- Industry Type *(e.g. Steel, Cement, etc.)*

# 8
# Climate Scorecard

The Climate Scorecard is an integral part of the Oracle Financial Services Climate Change Analytics Cloud Service solution. With the increasing effects and impacts of climate risk, financial institutions need a mechanism to integrate climate risk into their overall Enterprise Risk Management practices. Further, the reporting/disclosure requirements from various climate change-related reporting standards and/or frameworks require reporting entities to disclose their processes for identifying, assessing, and managing climate-related risks.

To facilitate banks and financial institutions to confidently integrate climate risk into their risk management, this framework on Climate Scorecard by Oracle Financial Services enables a financial institution to measure, monitor, and assess its financial exposures. This is achieved by way of rating its customers based on various climate change-related factors like carbon emissions, governance, climate targets, and so on. CCA defines climate change factors as those factors that can materially influence the climate risk assessment of a rated customer.

OFS CCA's Climate Scorecard Framework performs an assessment based on several quantitative and qualitative parameters. Users, additionally, have the option to add custom parameters and sub-parameters to meet internal policies and/or practices. This objective evaluation is based on several publicly available information and other information obtained from the customers.

**Assessment Process**

To arrive at the overall customer Climate Rating, weights are assigned at a sectional level (quantitative vs. qualitative) and to each parameter as well. Additionally, users can configure slabs for each parameter by specifying the upper and lower limits for them. Users can either accept the pre-configured setup or configure these weights, and slabs based on their internal risk management policies and practices.

**Quantitative Parameters**

Oracle Financial Services' Climate Change Analytics' Climate Scorecard model comes along with several pre-packaged quantitative parameters to factor in climate risk in the overall risk assessment process. These parameters are important to assess a customer based on numerical values attached to climate risk metrics and disclosures. Users can utilize the Data Model Extensions module to add custom quantitative parameters per their requirements.

Examples of quantitative parameters used in this framework are:

- **GHG Emissions** – Total reported greenhouse gas (GHG) emissions of the rated customer
- **Emissions Intensity** – Popular emissions intensity metrics like economic emissions intensity of the rated customer
- **Emission Targets** – Climate targets set by the rated customer

For more details on the pre-packaged quantitative parameters, see the Reference Guide on MOS.

**Qualitative Parameters**

Similar to Quantitative Parameters, the Climate Scorecard model comes with several pre-packaged qualitative parameters to factor in climate risk in the overall risk assessment process. Users can utilize the Data Model Extensions module to add custom qualitative parameters per their requirements.

Examples of qualitative parameters used in this framework are:

- **Governance** – Metrics on the Board of Directors, Management involvement in managing climate risk
- **Level of disclosures** – Maturity level of the rated customer in the form of several climate change disclosures made
- **Sector and Industry Classification** – Categorization of the rated customer based on the sector and industry it belongs to

For more details on the pre-packaged qualitative parameters, see the Reference Guide on MOS.

**Output**

Depending upon the underlying data, a score is assigned to each parameter which is then aggregated to arrive at the final score. Based on the final score, each customer gets assigned a Climate Rating and Rating Reference. Climate Rating is an alphabetic symbol assigned to a customer, for example, AAA is the highest rating symbol, and Highly Positive is the Rating Reference attached to it.

The following table provides an example of the symbols and references used in the application:

| Rating Symbol | Rating Reference |
|---|---|
| **AAA** | Highly Positive |
| **ABB** | Moderate |
| **BBB** | Neutral |
| **CCC** | Highly Negative |

For detailed information on the symbols and ratings used in the application, see the Symbols and Ratings section in the OFS CCA CS Reference Guide on MOS.

The following table provides an example of the range of scores used in the application with the number of ratings being 4:

> **Note**
>
> The preseeded values may change depending on the user selection from the Climate Scorecard screen.

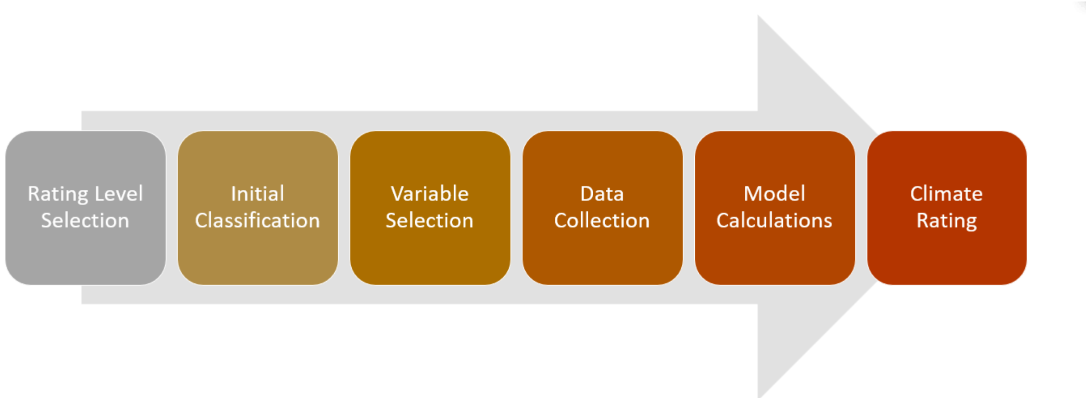
| Number of Ratings | 4 |
|---|---|
| AAA | 3.51-4 |
| ABB | 2-3.5 |
| BBB | 1.51-2 |
| CCC | 0.9-1.5 |

For detailed information on the range of scores used in the application, see the Range of Scores section in the OFS CCA CS Reference Guide on MOS.

For more details on the various rating levels, rating symbols, and rating references, see the Reference Guide on MOS.

The following diagram illustrates the Climate Scorecard Process Flow:

**Figure 8-1 Process flow of Climate Scorecard**

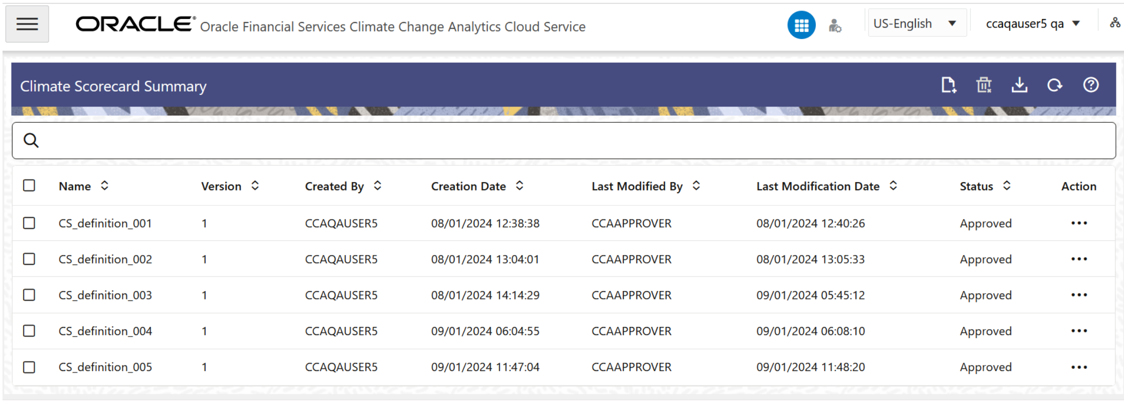



1. **Rating Level Selection**- Select the desired Rating Level from the **Climate Scorecard Definition** UI based on the available options such as 4, 5, 6, and so on. The rating symbols, rating references, and increasing or decreasing the available band of ratings are non-editable by the user. For more information on how to use this feature, see the section on Climate Scorecard UI. For information on the rating levels, symbols, and rating references, see the Reference Guide on MOS.
2. **Initial Classification** - Select relevant legal entity(s), industry classification type, customer category, customer type, and so on to proceed with various variable selections.
3. **Variable Selection**- Confirm, copy, or modify weights, and slabs across each parameter. For custom parameters generated using the Data Model Extensions module, the user must copy the score and slab type of an existing parameter.
4. **Data Selection**- The framework utilizes existing counterparty-related data from the staging and FSI tables.
5. **Model Calculations**- The framework then performs the assessment process by computing a score for each parameter, and section (quantitative and qualitative) based on the user definition in the Climate Scorecard UI screen and underlying data.
6. **Climate Rating**- Obtain the final climate rating and rating reference at each counterparty level.

# Climate Scorecard Summary Page

This page is the gateway to the Climate Scorecard feature and related functionality. To access this page from the LHS menu, click **Data Management Tools**, then click **Climate Scorecard**.

**Figure 8-2 The Climate Scorecard Summary Page**




Use the Climate Scorecard Summary screen to perform the following actions:

- Create
- Refresh
- View
- Edit
- Save As
- Delete
- Approve or Reject
- Search

The **Climate Scorecard Summary** page contains the following features:

**Table 8-1 Climate Scorecard Summary page – Fields and Descriptions**

| Column | Description |
|---|---|
| Add | Click the **Add** icon to create a new Climate Scorecard definition. |
| Delete | Select a Climate Scorecard definition and then click the **Action** icon adjacent to the selected definition and select **Delete** to delete an existing Climate Scorecard definition.<br>This action is disabled for definitions that contain the status *Approved* or *Pending for Authorization*. |
| Refresh | Click the **Refresh** icon to refresh the Summary Page. |
| Help | Click the **Help** icon to view the Climate Scorecard definition **Help** page. |
| Search | Use this field to search for a Climate Scorecard to View, Edit, Save As, Delete, and Approve or Reject.<br>For more information on using this feature, see the Search a Climate Scorecard definition section. |

**Table 8-1 (Cont.) Climate Scorecard Summary page – Fields and Descriptions**

| Column | Description |
| --- | --- |
| Field Search | Enter the name of the Climate Scorecard Definition to filter the list of Climate Scorecard Definition by values that match the search term.<br>For more information on using this feature, see the Search a Climate Scorecard definition section. |

The **Climate Scorecard Summary** page displays the list of Climate Scorecard Definitions that have been defined by the user and offers several actions that allow you to perform different tasks. This page contains the following columns:

**Table 8-2 Climate Scorecard Columns**

| Column | Description |
| --- | --- |
| Name | Displays the Climate Scorecard Definition's name. |
| Version | Displays the version of the definition. |
| Created By | Displays the User ID of the user who created the definition. |
| Creation Date | Displays the date and time of the creation of the definition. |
| Last Modified By | Displays the User ID of the user who last modified the definition. |
| Last Modified Date | Displays the date and time of the last modification of the definition. |
| Status | This column displays the status of the definition:<br>• **Approved** - The definition has been approved by the Approver. Definitions that are in this status can be Viewed and Copied (Save As)<br>• **Pending for Authorization** - The definition has been submitted to the approver and is pending approval.<br>When a definition is in this status, only the View action is available.<br>• **Rejected** - The definition has been rejected by the Approver and has been sent back to the Analyst. Definitions that are in the *Rejected* status can be Viewed, Edited or Deleted by an Analyst user. Additionally, when using the View or Edit action, you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**. The Analyst user can modify a definition with this status and then resubmit it to the approver for approval.<br>• **Draft** -The definition has been saved but has not been submitted to the Approver for approval. Definitions that are in the *Draft* status can be Viewed, Edited or Deleted by an Analyst user.<br>For more information on the approval process, see Approve or Reject a Climate Scorecard Definition. |

**Table 8-2 (Cont.) Climate Scorecard Columns**

| Column | Description |
|---|---|
| Action | The following tasks are available for the Climate Scorecard Definition in the **Action** column.<br>• **View**- Click the **Action** icon adjacent to the Climate Scorecard Definition Name and select **View** to view the contents of a Climate Scorecard Definition in read format.<br>• **Edit**- Click the **Action** icon adjacent to the Climate Scorecard Definition Name and select **Edit** to edit the contents of a Climate Scorecard Definition in read/write format.<br>• **Save As**- Click the **Action** icon adjacent to the Climate Scorecard Definition Name and select **Save As** to copy the Mappings from one Legal Entity to a new Legal Entity or from one definition to a new one..<br>• **Delete**- Click the **Action** icon adjacent to the Climate Scorecard Definition name and select **Delete** to delete an existing Climate Scorecard Definition.<br>**Note**<br>Approved definitions cannot be deleted.<br>• **Approve/Reject**- Click the **Action** icon adjacent to the Climate Scorecard Definition name and select **Approve or Reject** to Authorize or Reject an existing Climate Scorecard Definition. This action can only be performed by a user with the *Approver* role. |

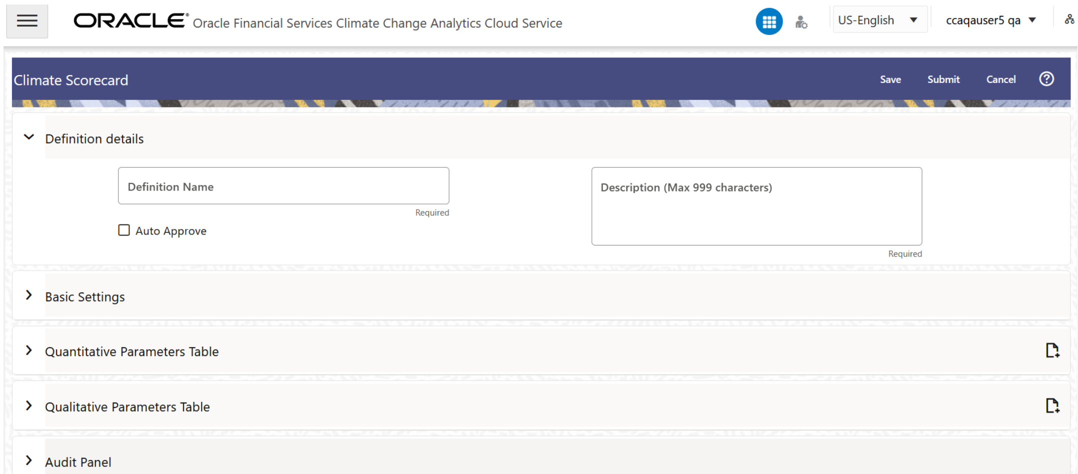
# Create a Climate Scorecard Definition

The application enables the creation of Climate Scorecard definition. Only an *Analyst* and *Admin* user can create a Climate Scorecard definition.

Perform the following steps to create a Climate Scorecard definition:

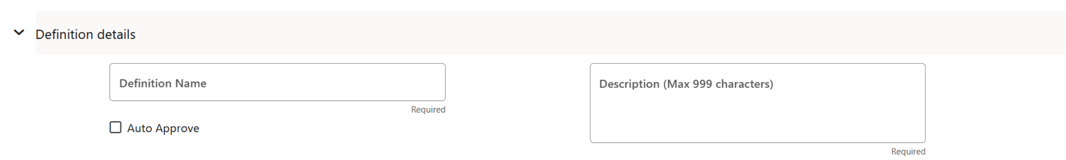
1. On the **Climate Scorecard Summary** page, click the **Add** icon to open the **Climate Scorecard** window.

### Figure 8-3 The Create Climate Scorecard page




2. Populate the **Definition Details** tab as tabulated:

### Figure 8-4 The Definition Details tab

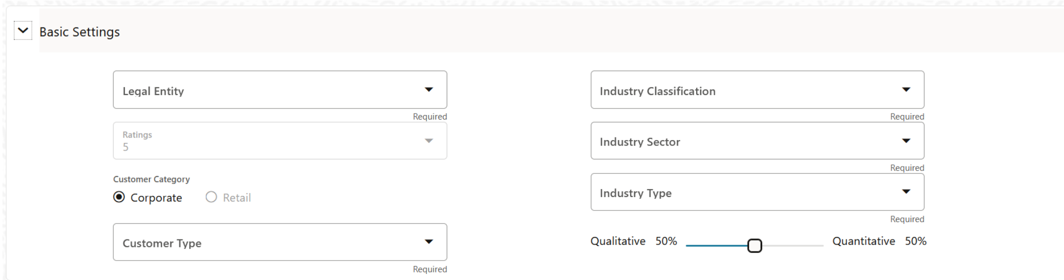



### Table 8-3 Definition Details pane

| Field | Description |
| --- | --- |
| Name (**Definition details** pane) | Enter a name for the Climate Scorecard definition.<br>This is a mandatory field. |
| Description (**Definition details** pane) | Add a description for the definition.<br>This is a mandatory field. |
| Auto Approve | Select this check box to auto-approve the definition.<br>When this checkbox is selected, the definition is auto-approved when the definition is saved.<br>This check box is enabled only for users who have **Approver User** rights. |

3. Populate the Basic Settings pane as tabulated:

### Figure 8-5 The Basic Settings pane




### Table 8-4 Basic Settings form

| Field | Description |
| --- | --- |
| Legal Entity (**Basic Settings** pane) | Select a legal entity from the drop-down list. |
| Industry Classification (**Basic Settings** pane) | Select an Industry Classification from the drop-down list. The available options are:<br>• **European Classification of Economic Activities (NACE)**<br>• **Global Industry Classification Standard (GICS)**<br>• **North American Industry Classification System (NAICS)**<br>• **Sustainable Investments and Climate Solutions (SICS)**<br>• **Standard Industrial Classification (SIC)** |
| Industry Sector | Select an option from the drop-down list. |
| Industry Type | Select an option from the drop-down list. |
| Customer Category (**Basic Settings** pane) | This field contains two customer categories; *Corporate* and *Retail*. The *Corporate* customer type is selected by default. |
| Customer Type | This field is used to define the type of customer. The customer must be defined by the user. Select a customer type from the drop-down list. An example of the customer types are; Large, Small and Medium Enterprise, Sovereign, Public, PSUs etc. |

**Table 8-4 (Cont.) Basic Settings form**

| Field | Description |
| --- | --- |
| Ratings (**Basic Settings** pane) | Select a rating from the drop-down list. The available ratings are:<br>• 4<br>• 5<br>• 6<br>• 7<br>• 8<br>When a rating is selected, the Qualitative and Quantitative slider appears. You can move this slider to adjust the Qualitative and Quantitative values. The default value for Qualitative and Quantitative is *50%* each.<br><br>**Note**<br>After a rating is selected and you try to select a new rating from the drop-down list, then a confirmation message appears asking you if you want to modify the rating value as this will affect the slab bands. |
| Qualitative/Quantitative | Use this scale to define the weightage for the Qualitative and Quantitative parameters. |

4. The **Quantitative Parameters** pane contains a list of pre-seeded parameters that can be configured for scoring. Populate the **Quantitative Parameters** pane as tabulated:

**Figure 8-6 The Quantitative Parameters pane**

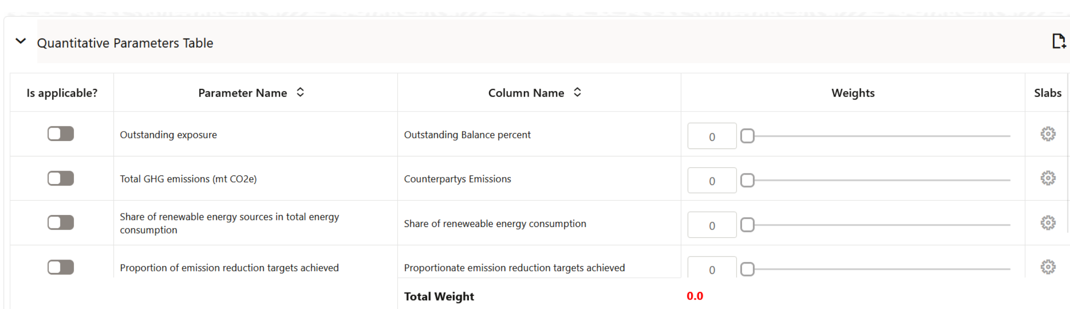



**Table 8-5 Quantitative Parameters pane**

| Field | Description |
| --- | --- |
| Is applicable? | Click the slider in this column if you want to enable or disable the parameter and column (Logical) name that is applicable in this row for scoring. Only enabled parameters are considered for processing. |

**Table 8-5 (Cont.) Quantitative Parameters pane**

| Field | Description |
|---|---|
| Parameter Name | By default, this column lists the pre-seeded parameters. |
| Column Name | By default, this column lists the pre-seeded. |
| Weights | Specify the relevant weight or move the slider to define the weightage of the impact on the overall score for a specific parameter. You can also enter a value in this field to define the weightage. The sum total of the weights in this table must always be 100 for the Weights Acceptable indicator to display 100% . If the sum total is not 100%, the lable changes to **Weights Unacceptable** and will be highlighted and you will not be able to save the definition. |
| Slabs (**Quantitative Parameters table** pane) | For each parameter, the thresholds and slabs are per-seeded. To modify this threshold and slab, click the **Settings** icon within the **Slabs** column to modify each slab and to open the parameter configuration window:<br>a. Define the lower and upper limit slab in % in the **Lower Limit** and **Upper Limit** fields. The Lower Limit can only be defined for the first score.<br>When the Upper Limit is defined for the first score, for example, Score 4, the Lower Limit of the next score, in this case Score 3, is automatically defined with the same value. After the first score, only the **Upper Limits** fields can be modified.<br>b. To reset the fields to its default values, click the **Reset** icon.<br>c. Click **Apply** to apply the changes. |

**Table 8-5 (Cont.) Quantitative Parameters pane**

| Field | Description |
| --- | --- |
| Quantitative Mirror Parameters table | This feature enables you to create a custom parameter. Click this icon to open the **Quantitative Mirror Parameters Table** window. In this window:<br>a. To add a new parameter, click the **Add** icon to open the **Quantitative Parameter Placeholder** window. In this window, populate the following fields:<br>i. **Parameter Name** - Enter a name for the parameter(s).<br>ii. **Column Name** - Select a defined column name from the drop-down list to map the parameter to a column.<br>**Note** For using custom columns, first register them by using the Data Model Extensions feature.<br>iii. Select an existing parameter from the drop-down list to mirror the structure, logic and function of the selected parameter.<br>iv. Click **Add**. The newly created parameter is added to the list of Quantitative Parameter Placeholders.<br>v. Select one or more parameters from the list that need to be used in the definition and then click **Apply**.<br>The custom parameter is added to the list of quantitative parameters<br>**Note** If the custom parameter is not applied, then it will remain in the list of Quantitative Mirror Parameters. |

5. The **Qualitative Parameters** pane contains a list of preseeded parameters that can be configured for scoring. In this table, sub-parameters are also available . The sub-parameters can be configured to define the overall score at the parameter level. Populate the **Qualitative Parameters** pane as tabulated:

**Figure 8-7    The Qualitative Parameters pane**

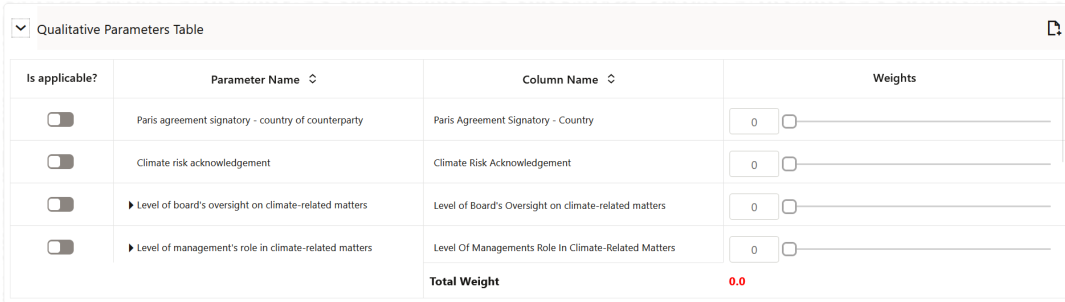



**Table 8-6    Qualitative Parameters pane**

| Field | Description |
|---|---|
| Is applicable? | Click the slider in this column if you want to enable or disable the parameter and column (Logical) name that is applicable in this row for scoring. |
| Parameter Name | By default, this column lists the pre-seeded parameters. |
| Column Name | By default, this column lists the pre-seeded column is listing>. |
| Weights | Move the slider to define the weightage of the impact on the overall score for a specific parameter. You can also enter a value in this field to define the weightage.<br>The sum total of the weights in this table must always be 100 for the Weights Acceptable indicator to display 100% . If the sum total is not 100%, the lable changes to **Weights Unacceptable** and will be highlighted in red and you will not be able to save the definition. |
| Slabs | For each parameter, the thresholds and slabs are per-seeded. To modify this threshold and slab, click the **Settings** icon within the **Slabs** column to modify each slab and to open the parameter configuration window:<br>a. Define the lower and upper limit slab in % in the **Lower Limit** and **Upper Limit** fields. The Lower Limit can only be defined for the first score.<br>When the Upper Limit is defined for the first score, for example, Score 4, the Lower Limit of the next score, in this case Score 3, is automatically defined with the same value. After the first score, only the **Upper Limits** fields can be modified.<br>b. To reset the fields to its default values, click the **Reset** icon.<br>c. Click **Apply** to apply the changes. |

**Table 8-6 (Cont.) Qualitative Parameters pane**

| Field | Description |
|---|---|
| Qualitative Mirror Parameters table | This feature enables you to create a custom parameter. Click this icon to open the **Qualitative Mirror Parameters Table** window. In this window:<br>**a.** To add a new parameter, click the **Add** icon to open the **Qualitative Parameter Placeholder** window. In this window, populate the following fields:<br>**i.** **Parameter Name** - Enter a name for the parameter(s).<br>**ii.** **Column Name** - Select a defined column name from the drop-down list to map the parameter to a column.<br>**Note**<br>For using custom columns, first register them by using the Data Model Extensions feature.<br>**iii.** Select an existing parameter from the drop-down list to mirror the structure, logic and function of the selected parameter.<br>**iv.** Click **Add**. The newly created parameter is added to the list of Qualitative Parameter Placeholders.<br>**v.** Select one or more parameters from the list that need to be used in the definition and then click **Apply**.<br>The custom parameter is added to the list of Qualitative parameters<br>**Note**<br>If the custom parameter is not applied, then it will remain in the list of Qualitative Mirror Parameters. |

6. Click **Save**. The status changes to *Draft* and the definition is saved.
7. Click **Submit**. The status changes to *Pending for Authorization*, and is submitted to the Approver.

The new definition will appear in the list of Climate Scorecard definition on the **Climate Scorecard Summary** page with the status as *Draft* or *Pending for Authorization*.

# Refresh a Climate Scorecard Definition

You can refresh an existing Climate Scorecard definition from the **Climate Scorecard Summary** page to refresh it with newly available data.  Perform the following steps to refresh one or more existing Climate Scorecard definition(s):

1. On the **Climate Scorecard Summary** page click **Refresh**.

The selected Climate Scorecard definition(s) are refreshed with newly available data.

# View a Climate Scorecard Definition

The View feature enables you to view the details of an existing Climate Scorecard definition. Perform the following steps to view the definition details:

1. In the Climate Scorecard definition list, select the **Action** icon adjacent to the Climate Scorecard definition name that you want to view.
2. Click **View** to open the **Climate Scorecard** window.
   If a definition has been rejected by the Approver, then you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**.
3. Click **Cancel** to return to the **Climate Scorecard** page.

# Edit a Climate Scorecard Definition

The Edit feature enables you to update the details of an existing Climate Scorecard definition. Perform the following steps to edit an existing Climate Scorecard definition:

> **Note**
>
> Definitions that have the status as *Approved* or *Pending for Authorization* cannot be edited.

1. In the Climate Scorecard definition list, select the **Action** icon adjacent to the Climate Scorecard definition name that you want to edit.
2. Click **Edit** to open the **Climate Scorecard** window.
3. Edit the relevant fields.
4. Click **Save** and then click **Submit**.
   If a previously *Rejected* definition was modified, then when the **Submit** button is clicked, the Approval Process begins.
5. Additionally, navigate to the **Audit Panel** and then to the **Comments** tab to view any comments from the Approver in case the definition has the status as *Rejected*.

The saved Climate Scorecard definition is displayed in the Climate Scorecard definition list on the **Climate Scorecard Summary** page.

# Copy (Save As) a Climate Scorecard Definition

The Copy Save As feature enables you to copy the details from an existing definition to a new definition by using a new Legal Entity or Entities. Perform the following steps to copy and save a Climate Scorecard definition:

1. Select the desired Climate Scorecard definition.

   > **Note**
   >
   > Only *Approved* definitions can be copied.

2. Click the **Action** icon.
3. Select **Save As** to open the **Save As** window.
4. In the **Save As** window, enter a name and description in the **Name** and **Description** fields.
5. In the **Source Legal Entities** drop-down list to select the Legal Entity that was used in the Definition that has been copied.
   By selecting the *Source* Legal Entity, you can to copy its' mappings to the *Target* Legal Entity in the **Climate Scorecard** (Edit) screen.
6. In the **Target Legal Entities** drop-down list, select the required Legal Entity(s).
   The Legal Entities in this list are those that have not been used in other definitions.
7. Click **Save**. The Climate Scorecard definition is saved under a new name.
8. Select the newly saved definition from the **Climate Scorecard Summary** page.
9. Click the **Action** icon and then select **Edit**.
10. Populate the relevant fields.
    If a Legal Entity that has already been used in another definition is selected, then the application gives you an error message when you try to save this definition, therefore, ensure that a unique Legal Entity is selected.
11. It is mandatory to select a new Legal Entity(s) and then delete the old Legal Entity before clicking **Submit**. Perform the following steps depending on whether you want to copy the old definition's Emissions Factor Database Mappings the newly selected Legal Entities or not:
    a. **If you want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity**:
       i. Click the **Select Legal Entity** icon to open the Legal Entity window:
       ii. In this window, click the Legal Entity field to select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

       > **Note**
       >
       > - A definition can only use Legal Entities that are not part of existing definitions.
       > - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

       iii. Click **Apply**. The **Copy Across** button is enabled.
       iv. Click **Copy Across**. The old definition's Emissions Factor Database Mappings are copied to the newly selected Legal Entity(s).
       v. If required, modify the mappings.
       vi. Click the **Select Legal Entity** icon to open the Legal Entity window:

vii. In this window, delete the old Legal Entity.

b. **If you do not want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity:**

i. Click the **Select Legal Entity** icon to open the Legal Entity window:

ii. In this window, delete the old Legal Entity.

iii. Select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

> **Note**
>
> - A definition can only use Legal Entities that are not part of existing definitions.
> - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

iv. Click **Apply**.

v. If required, modify the mappings.

12. Click **Save** and then click **Submit** to submit this definition to the Approver for approval.

## Delete a Climate Scorecard Definition

You can delete an existing Climate Scorecard definition from the **Climate Scorecard Summary** page. Perform the following steps in order to delete single or multiple existing Climate Scorecard definitions:

> **Note**
>
> Definitions that have the status as *Approved* cannot be deleted.

1. On the **Climate Scorecard Summary** page, select the check box(s) adjacent to the Climate Scorecard definition(s) that you want to delete.
2. Click **Delete**. A warning dialog is displayed.
3. Click **Yes**.
4. Additionally, select the check box(s) adjacent to the Climate Scorecard definition(s) and then click the **Delete** icon on the top of the **Climate Scorecard Summary** page. A warning dialog is displayed.
5. Click **Yes**.

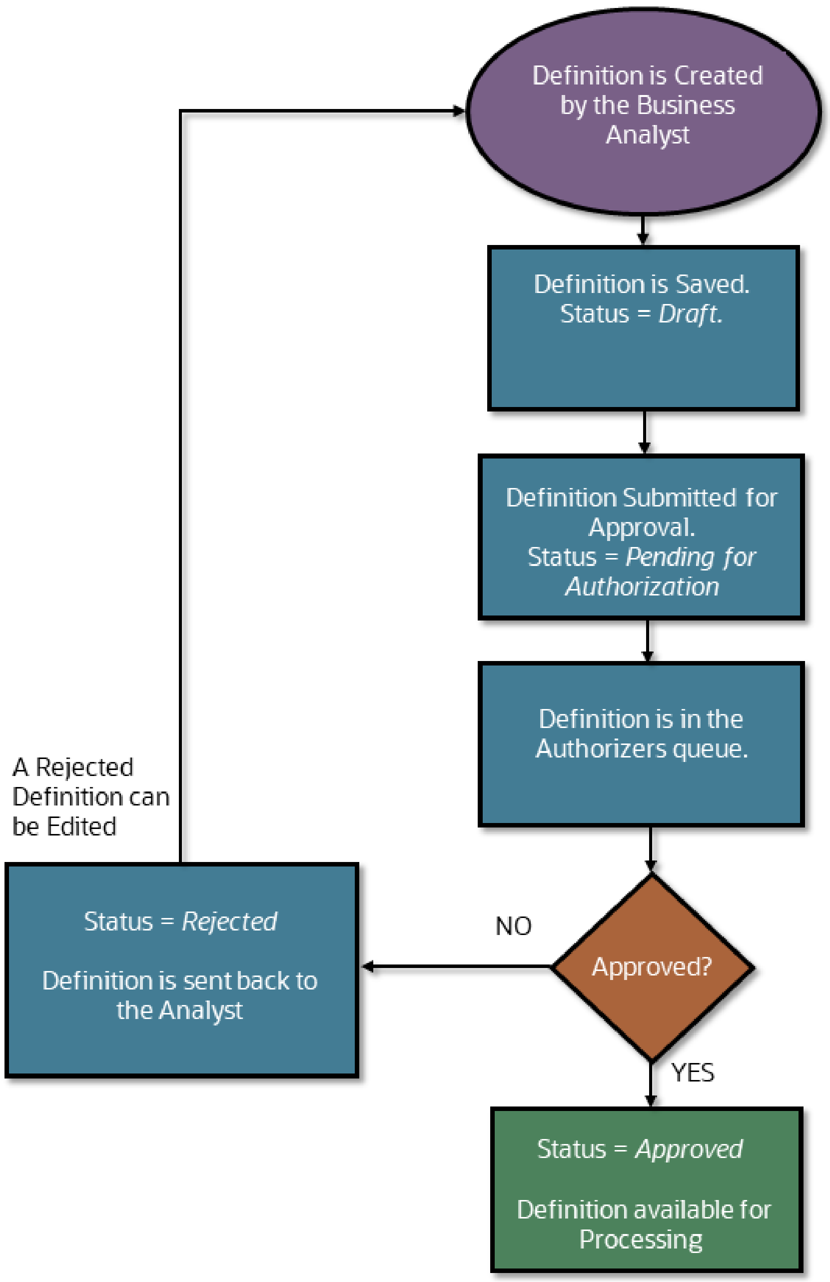
The selected definitions are removed from the **Climate Scorecard Summary** page.

## Approve or Reject a Climate Scorecard Definition

All definitions that have been created must be approved by the *Approver User* only. If a definition has only been *Saved* and not *Submitted* to the *Approver* for approval, will not be used for processing. Only **Approved** definitions are used for processing/runs.

The following diagram illustrates the Approval Work flow status:

**Figure 8-8 The Approval Work flow Process**



Perform the following steps to *Approve* or *Reject* a Climate Scorecard Definition:

1. Log in as an Approver and navigate to the **Climate Scorecard Definition Summary** page. Only definitions with the status as *Pending for Authorization* are available for *Approval* or *Rejection*.
2. Select the Climate Scorecard definition that you want to approve or reject and then click the **Action** icon.

   > **Note**
   >
   > As an Approver, you can only **View** or **Approve** or **Reject** a definition from the **Action** icon.

3. Click **View** or **Approve/Reject** to open the page for the selected Climate Scorecard definition.
4. On this page view the form and then select either **Approve** or **Reject**.
   - If you select **Approve**, then a window appears. In this window, enter your comments for the Approval, and then click **Approve**.
   - If you select **Reject**, then a window appears. In this window, enter your comments for the Rejection, and then click **Reject**.

If the definition was Approved, then the status is marked as *Approved* and can be used for processing or runs. If the definition was rejected, then the status of the definition is marked as *Rejected* and the definition is sent back to the Analyst for modification and resubmission.

## Create a New Version of an Approved Expression

The application enables you to create a new version of an *Approved* Expression . In this feature when you create a new version of an *Approved* Expression , except for the Legal Entity, you can modify the relevant fields and **Save** and then **Submit** this modified Expression for the Approval process. The *Approver User* will either *Approve* or *Reject* this new version of the Expression :

- **Rejected**: If this version of the Expression is Rejected, it will go back to the Analyst or Admin user for modification and these users can resubmit this version until it is *Approved*.
- **Approved:** If this version of the Expression is *Approved*, then it will be available for viewing or creating a new version again if required.

Perform the following steps to create a new version of an *Approved* Expression :

1. In the Climate Scorecard Expression list, select the **Action** icon adjacent to the Climate Scorecard Expression name that you want to create a new version of.
2. Edit the relevant information.
3. Click the **Close** button to return to the **Climate Scorecard Summary** page.

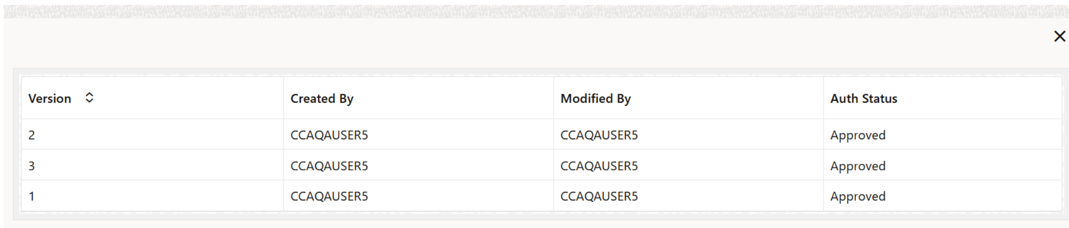
## View the Version of an Approved Expression

After creating a new version of an Approved Expression , the version number changes. Perform the following steps to check the version of a Expression :

1. In the Expression list, select the **Action** icon adjacent to the Expression name that you want to view the version of.

2. Click **Show Versions**. A window pops up displaying the version information of the Expression .
   In this window, you can view the version information via the **Version**, **Created By**, **Modified By**, and **Auth Status** columns.

**Figure 8-9 View the Version Information**



| Version | Created By | Modified By | Auth Status |
|---|---|---|---|
| 2 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 3 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 1 | CCAQAUSER5 | CCAQAUSER5 | Approved |

3. Click the **Close** button to return to the **Climate Scorecard Summary** page.

# Search for a Climate Scorecard Definition

Search for a Climate Scorecard Definition to perform any of the following tasks:

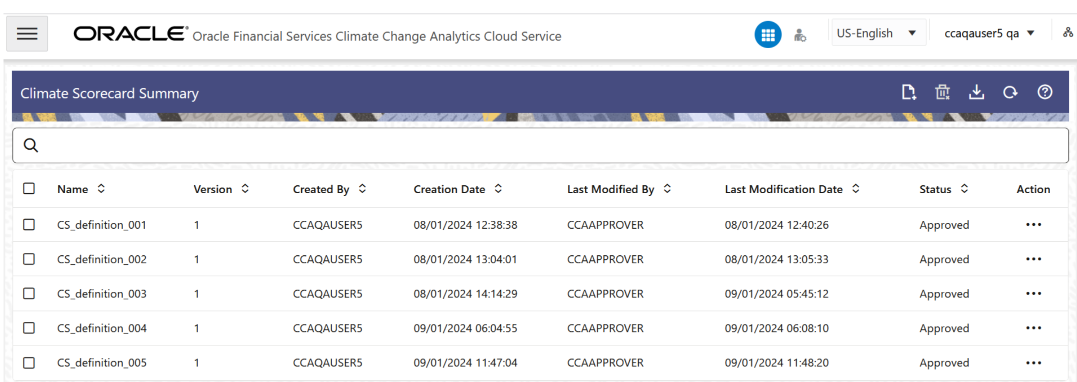
- View
- Edit
- Save As
- Delete
- Approve or Reject

**Procedure**

To search for a Climate Scorecard Definition, perform the following steps:

- Navigate to the **Climate Scorecard Summary** page.

**Figure 8-10 The Climate Scorecard Summary page**




| Name | Version | Created By | Creation Date | Last Modified By | Last Modification Date | Status | Action |
|---|---|---|---|---|---|---|---|
| CS_definition_001 | 1 | CCAQAUSER5 | 08/01/2024 12:38:38 | CCAAPPROVER | 08/01/2024 12:40:26 | Approved | ... |
| CS_definition_002 | 1 | CCAQAUSER5 | 08/01/2024 13:04:01 | CCAAPPROVER | 08/01/2024 13:05:33 | Approved | ... |
| CS_definition_003 | 1 | CCAQAUSER5 | 08/01/2024 14:14:29 | CCAAPPROVER | 09/01/2024 05:45:12 | Approved | ... |
| CS_definition_004 | 1 | CCAQAUSER5 | 09/01/2024 06:04:55 | CCAAPPROVER | 09/01/2024 06:08:10 | Approved | ... |
| CS_definition_005 | 1 | CCAQAUSER5 | 09/01/2024 11:47:04 | CCAAPPROVER | 09/01/2024 11:48:20 | Approved | ... |

- Click the **Search** field.
- Enter the **Name** of the Climate Scorecard Definition.
- In the Status field, select a value to filter the search by the status of the Climate Scorecard Definition. The available options are:

  - Approved
  - Pending for Authorization
  - Rejected
  - Draft
- Click **Search** or **Reset** to reset the values in the search box or **Cancel** to cancel the search. Only the Name and Status can be used for an Advanced Search.

Only Climate Scorecard Definitions that match the Search Criteria are displayed.

# 9 Heatmaps

Heatmaps is an integral part of the Oracle Financial Services Climate Change Analytics Cloud Service solution. Risk managers, portfolio managers, and alike within the financial institutions need a mechanism to identify the concentration risk associated with climate change within their overall portfolio. This is one of the mechanisms to help financial institutions integrate climate risk into their overall Enterprise Risk Management practices.

To facilitate banks and financial institutions to confidently identify and mitigate climate risk, this framework on Heatmaps by Oracle Financial Services enables a financial institution to measure, monitor, and assess its financial exposures based on climate risk factors and metrics. This is achieved by way of assessing its portfolio across sectors, and industries based on several pre-configured and user-defined risk factors, metrics like counterparty emissions, emissions intensity, climate targets, data quality score, and so on. OFS CCACS defines these factors as those factors that can materially influence the climate risk assessment of a counterparty and the overall portfolio, they form part of. This objective evaluation is based on several publicly available information and other information obtained from the customers.

**Assessment Process**

To identify the concentration risks, counterparties are assigned a Vulnerability Score based on several risk factors and metrics. For each risk factor and/or metric, users can configure the thresholds for each level based on their internal risk management policies and practices. Subsequently, these scores are then aggregated to arrive at a Vulnerability Score at various counterparty dimensions:

- Counterparty
- Customer Type (Large, SME, Small, etc.)
- Customer Category (Corporate, Retail)
- Industry (Steel, Cement, Electronics, Automotive, Textiles etc.)
- Sector (Manufacturing, Construction, Agriculture, Mining, etc.)

Vulnerability scoring in Heatmaps is based on the following two sections and risk factors:

**Climate Risk Impact**

Oracle Financial Services' Climate Change Analytics' Heatmaps model comes along with several pre-packaged risk factors to perform the risk assessment process. These parameters are important to assess a customer based on numerical and qualitative values attached to climate risk metrics and disclosures. Users can utilize the Data Model Extensions module to add custom risk factors per their requirements.

Examples of risk factors used in this section are:

- **Counterparty Emissions** – Total greenhouse gas (GHG) emissions of the customer
- **Emissions Intensity** – Popular emissions intensity metrics like WACI, economicemissions intensity of the customer
- **Climate Rating** – Climate rating assigned to the customer.

For more details on the pre-packaged risk factors, see the Reference Guide on MOS.

### Asset Class Concentration

Similar to Climate Risk Impact, the Heatmaps model comes with several pre-packaged risk factors to identify concentration risk at an asset class level.

# Heatmaps Summary Page

This page is the gateway to the Heatmap feature and related functionality. To access this page from the LHS menu, click **Processes**, then click **Heatmaps**.

Use the Heatmaps Summary screen to perform the following actions:

- Create
- Refresh
- View
- Edit
- Save As
- Delete
- Approve or Reject
- Search

The **Heatmaps Summary** page contains the following features:

**Figure 9-1 Heatmaps Summary**

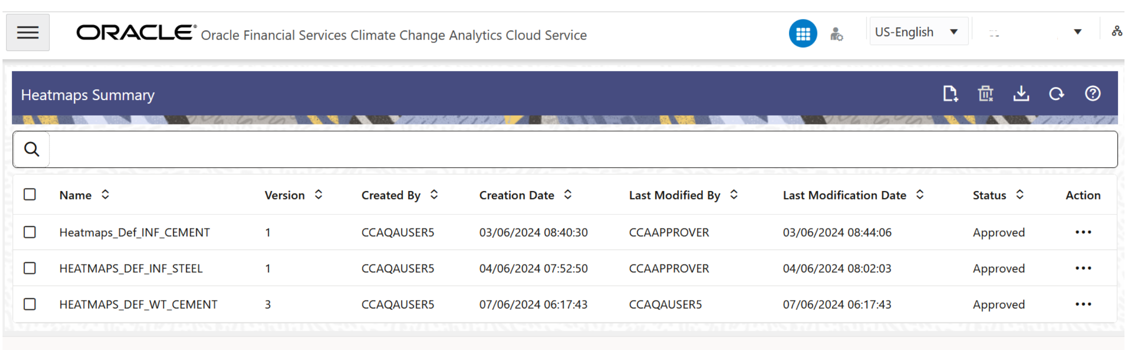



**Table 9-1 Heatmaps Summary page – Fields and Descriptions**

| Column | Description |
|---|---|
| Add | Click the **Add** icon to create a new Heatmap definition. |
| Delete | Select a Heatmap definition and then click the **Action** icon adjacent to the selected definition and select **Delete** to delete an existing Heatmap definition.<br>This action is disabled for definitions that contain the status *Approved* or *Pending for Authorization*. |
| Refresh | Click the **Refresh** icon to refresh the Summary Page. |

**Table 9-1 (Cont.) Heatmaps Summary page – Fields and Descriptions**

| Column | Description |
| --- | --- |
| Help | Click the **Help** icon to view the Heatmap definition **Help** page. |
| Search | Use this field to search for a Heatmap to View, Edit, Save As, Delete, and Approve or Reject.<br>For more information on using this feature, see the Search a Heatmap definition section. |
| Field Search | Enter the name of the Heatmap Definition to filter the list of Heatmap Definition by values that match the search term.<br>For more information on using this feature, see the Search a Heatmap definition section. |

The **Heatmaps Summary** page displays the list of Heatmaps Definitions that have been defined by the user and offers several actions that allow you to perform different tasks. This page contains the following columns:

**Table 9-2 Heatmaps Columns**

| Column | Description |
| --- | --- |
| Name | Displays the Heatmap Definition's name. |
| Version | Displays the version of the definition. |
| Created By | Displays the User ID of the user who created the definition. |
| Creation Date | Displays the date and time of the creation of the definition. |
| Last Modified By | Displays the User ID of the user who last modified the definition. |
| Last Modified Date | Displays the date and time of the last modification of the definition. |

**Table 9-2 (Cont.) Heatmaps Columns**

| Column | Description |
| --- | --- |
| Status | This column displays the status of the definition:<br>• **Approved** - The definition has been approved by the Approver. Definitions that are in this status can be Viewed and Save As<br>• **Pending for Authorization** - The definition has been submitted to the approver and is pending approval.<br>When a definition is in this status, only the View action is available.<br>• **Rejected** - The definition has been rejected by the Approver and has been sent back to the Analyst. Definitions that are in the *Rejected* status can be Viewed, Edited or Deleted by an Analyst user. Additionally, when using the View or Edit action, you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**. The Analyst user can modify a definition with this status and then resubmit it to the approver for approval.<br>• **Draft** -The definition has been saved but has not been submitted to the Approver for approval. Definitions that are in the *Draft* status can be Viewed, Edited or Deleted by an Analyst user.<br>For more information on the approval process, see Approve or Reject a Heatmap Definition. |

**Table 9-2 (Cont.) Heatmaps Columns**

<table>
<tr><th>Column</th><th>Description</th></tr>
<tr><td>Action</td><td>The following tasks are available for the Heatmap Definition in the Action column.
<ul>
<li>View- Click the Action icon adjacent to the Heatmap Definition Name and select View to view the contents of a Heatmap Definition in read format.</li>
<li>Edit- Click the Action icon adjacent to the Heatmap Definition Name and select Edit to edit the contents of a Heatmap Definition in read/write format.</li>
<li>Save As- Click the Action icon adjacent to the Heatmap Definition Name and select Save As to copy the Mappings from one Legal Entity to a new Legal Entity or from one definition to a new one..</li>
<li>Delete- Click the Action icon adjacent to the Heatmap Definition name and select Delete to delete an existing Heatmap Definition.<br><br>Note<br>Approved definitions cannot be deleted.</li>
<li>Approve/Reject- Click the Action icon adjacent to the Heatmap Definition name and select Approve or Reject to Authorize or Reject an existing Heatmap Definition. This action can only be performed by a user with the Approver role.</li>
</ul></td></tr>
</table>

# Create a Heatmap Definition

The application enables the creation of Heatmap definition. Only an *Analyst* and *Admin* user can create a Heatmap definition.

Perform the following steps to create a Heatmap definition:

1. On the **Heatmaps Summary** page, click the **Add** icon to open the **Heatmap** window.
2. Populate the **Definition Details** tab as tabulated:

**Figure 9-2 Definition Details pane**

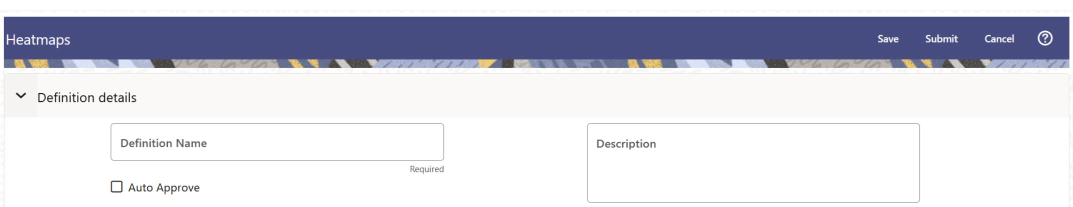


**Table 9-3 Definition Details pane**

| Field | Description |
| --- | --- |
| Name (**Definition details** pane) | Enter a name for the Heatmap definition.<br>This is a mandatory field. |
| Description (**Definition details** pane) | Add a description for the definition.<br>This is a mandatory field. |
| Auto Approve | Select this check box to auto-approve the definition.<br>When this checkbox is selected, the definition is auto-approved when the definition is saved.<br>This check box is enabled only for users who have **Approver User** rights. |

3. Populate the **Basic Settings** pane as tabulated:

**Figure 9-3 Basic Settings pane**

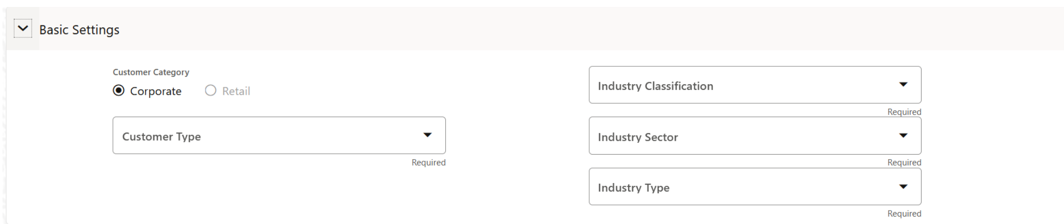
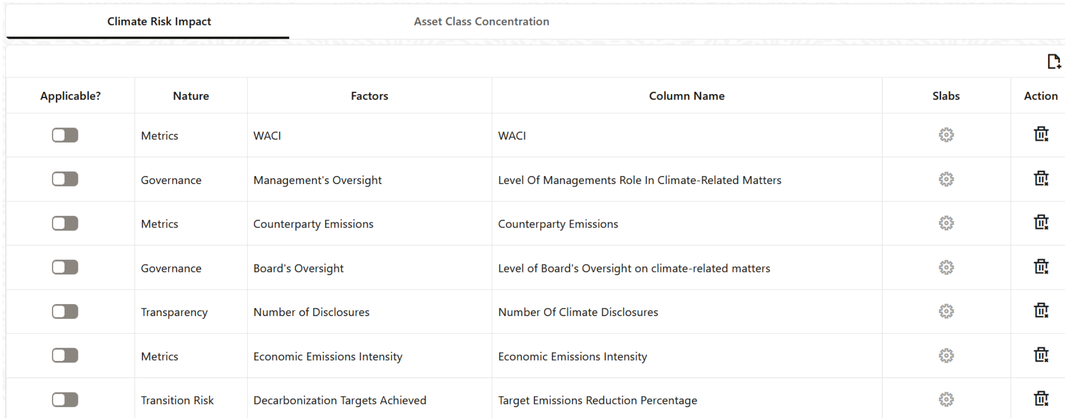



**Table 9-4 Basic Settings pane**

| Field | Description |
| --- | --- |
| Customer Category | This field contains two customer categories; *Corporate* and *Retail*. The Corporate customer type is selected by default. |
| Customer Type | This field is used to define the type of customer. The customer must be defined by the user. Select a customer type from the drop-down list. An example of the customer types are; Large-Scale, Small-Scale, SME etc. |
| Industry Classification | Select an Industry Classification from the drop-down list. The available options are:<br>• European Classification of Economic Activities (NACE)<br>• Global Industry Classification Standard (GICS)<br>• North American Industry Classification System (NAICS)<br>• Sustianable Investments and Climate Solutions (SICS)<br>• Standard Industrial Classification (SIC) |
| Industry Sector | Select an option from the drop-down list. |
| Industry Type | Select an option from the drop-down list. |

4. Populate the **Climate Risk Impact** tab as tabulated:

### Figure 9-4 Climate Risk Impact tab




### Table 9-5 Climate Risk Impact

| Field | Description |
|---|---|
| Add | Click this icon to Add or modify a slab:<br>• **Modify**<br>a. Select a slab and then click the **Modify** icon to open the **Factor List** window.<br>b. Select a nature from the **Nature of Factor** drop-down list.<br>c. Select a factor type from the **Factor Type** drop-down list.<br>d. Click **Add**.<br>The selected slab is modified.<br>• **Add**<br>a. Click the **Add** icon to open the **Factor List** window.<br>b. Enter a name in the **Factor Name** field.<br>c. Select a nature from the **Nature of Factor** drop-down list.<br>d. Select a nature from the **Column Name** drop-down list.<br>e. Select a factor type from the **Factor Type** drop-down list.<br>f. Click **Add**.<br>The selected slab is available in the factor list. |
| Applicable? | Click the slider to enable a slab.<br>When a <row> is enabled, the settings icon for the slab is enabled. |

**Table 9-5 (Cont.) Climate Risk Impact**

| Field | Description |
|---|---|
| Slab | Enter values in the **Lower Limit** and **Upper Limit** fields for each vulnerability score.<br><br>**Note**<br>If the values for each limit are not entered correctly, then when the **Apply** button is clicked in this window, the application displays an error message informing that the slab limits are not valid. |
| Delete | In the **Action** column, click the delete icon to delete a slab. |

5. Populate the **Asset Class Concentration** tab as tabulated:

**Figure 9-5 Asset Class Concentration**

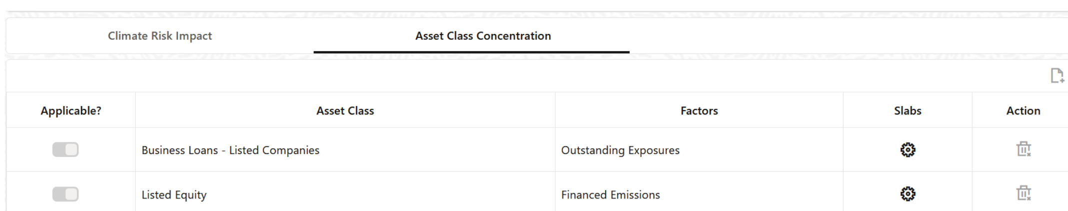



**Table 9-6 Asset Class Concentration**

| Field | Description |
|---|---|
| Add | Click this icon to Add a slab:<br>a. Click the **Add** icon to open the **Asset Class Concentration** window.<br>b. Enter a name in the **Asset Class** field.<br>c. Enter a name in the **Factors** field.<br>d. Click **Apply**.<br>The slab is added in the Asset Class Concentration List. |
| Applicable? | Click the slider to enable a slab.<br>When a <row> is enabled, the settings icon for the slab is enabled. |

**Table 9-6 (Cont.) Asset Class Concentration**

| Field | Description |
| --- | --- |
| Slab | Enter values in the **Lower Limit** and **Upper Limit** fields for each vulnerability score. Additionally, click the refresh icon to rest the values to its' default state.<br><br>**Note**<br><br>If the values for each limit are not entered correctly, then when the **Apply** button is clicked in this window, the application displays an error message informing that the slab limits are not valid. |
| Delete | In the **Action** column, click the delete icon to delete a slab. |

6. Click **Save**. The status changes to *Draft* and the definition is saved.
7. Click **Submit**. The status changes to *Pending for Authorization*, and is submitted to the Approver.

The new definition will appear in the list of Heatmap definition on the **Heatmaps Summary** page with the status as *Draft* or *Pending for Authorization*.

# Refresh a Heatmap Definition

You can refresh an existing Heatmap definition from the **Heatmaps Summary** page to refresh it with newly available data. Perform the following steps to refresh one or more existing Heatmap definition(s):

1. On the **Heatmaps Summary** page click **Refresh**.

The selected Heatmap definition(s) are refreshed with newly available data.

# View a Heatmap Definition

The View feature enables you to view the details of an existing Heatmap definition. Perform the following steps to view the definition details:

1. In the Heatmap definition list, select the **Action** icon adjacent to the Heatmap definition name that you want to view.
2. Click **View** to open the **Heatmap** window.
   If a definition has been rejected by the Approver, then you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**.
3. Click **Cancel** to return to the **Heatmap** page.

# Edit a Heatmap Definition

The Edit feature enables you to update the details of an existing Heatmap definition. Perform the following steps to edit an existing Heatmap definition:

> **Note**
>
> Definitions that have the status as *Approved* or *Pending for Authorization* cannot be edited.

1. In the Heatmap definition list, select the **Action** icon adjacent to the Heatmap definition name that you want to edit.
2. Click **Edit** to open the **Heatmap** window.
3. Edit the relevant fields.
4. Click **Save** and then click **Submit**.
   If a previously *Rejected* definition was modified, then when the **Submit** button is clicked, the Approval Process begins.
5. Additionally, navigate to the **Audit Panel** and then to the **Comments** tab to view any comments from the Approver in case the definition has the status as *Rejected*.

The saved Heatmap definition is displayed in the Heatmap definition list on the **Heatmaps Summary** page.

# Copy (Save As) a Heatmap Definition

The Copy Save As feature enables you to copy the details from an existing definition to a new definition by using a new Legal Entity or Entities. Perform the following steps to copy and save a Heatmap definition:

1. Select the desired Heatmap definition.

   > **Note**
   >
   > Only *Approved* definitions can be copied.

2. Click the **Action** icon.
3. Select **Save As** to open the **Save As** window.
4. In the **Save As** window, enter a name and description in the **Name** and **Description** fields.
5. In the **Source Legal Entities** drop-down list to select the Legal Entity that was used in the Definition that has been copied.
   By selecting the *Source* Legal Entity, you can to copy its' mappings to the *Target* Legal Entity in the **Heatmap** (Edit) screen.
6. In the **Target Legal Entities** drop-down list, select the required Legal Entity(s).
   The Legal Entities in this list are those that have not been used in other definitions.
7. Click **Save**. The Heatmap definition is saved under a new name.
8. Select the newly saved definition from the **Heatmaps Summary** page.
9. Click the **Action** icon and then select **Edit**.
10. Populate the relevant fields.
    If a Legal Entity that has already been used in another definition is selected, then the application gives you an error message when you try to save this definition, therefore, ensure that a unique Legal Entity is selected.

11. It is mandatory to select a new Legal Entity(s) and then delete the old Legal Entity before clicking **Submit**. Perform the following steps depending on whether you want to copy the old definition's Emissions Factor Database Mappings the newly selected Legal Entities or not:
    a. **If you want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity**:
        i. Click the **Select Legal Entity** icon to open the Legal Entity window:
        ii. In this window, click the Legal Entity field to select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

        > **Note**
        >
        > - A definition can only use Legal Entities that are not part of existing definitions.
        > - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

        iii. Click **Apply**. The **Copy Across** button is enabled.
        iv. Click **Copy Across**. The old definition's Emissions Factor Database Mappings are copied to the newly selected Legal Entity(s).
        v. If required, modify the mappings.
        vi. Click the **Select Legal Entity** icon to open the Legal Entity window:
        vii. In this window, delete the old Legal Entity.
    b. **If you do not want to copy the old definition's Emissions Factor Database Mappings to the new Legal Entity:**
        i. Click the **Select Legal Entity** icon to open the Legal Entity window:
        ii. In this window, delete the old Legal Entity.
        iii. Select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Definition Summary** pane.

        > **Note**
        >
        > - A definition can only use Legal Entities that are not part of existing definitions.
        > - The application supports one definition using multiple Legal Entities that have not been used in other definitions.

        iv. Click **Apply**.
        v. If required, modify the mappings.
12. Click **Save** and then click **Submit** to submit this definition to the Approver for approval.

# Delete a Heatmap Definition

You can delete an existing Heatmap definition from the **Heatmaps Summary** page. Perform the following steps in order to delete single or multiple existing Heatmap definitions:

> **Note**
>
> Definitions that have the status as *Approved* cannot be deleted.

1. On the **Heatmaps Summary** page, select the check box(s) adjacent to the Heatmap definition(s) that you want to delete.
2. Click **Delete**. A warning dialog is displayed.
3. Click **Yes**.
4. Additionally, select the check box(s) adjacent to the Heatmap definition(s) and then click the **Delete** icon on the top of the **Heatmap Summary** page. A warning dialog is displayed.
5. Click **Yes**.

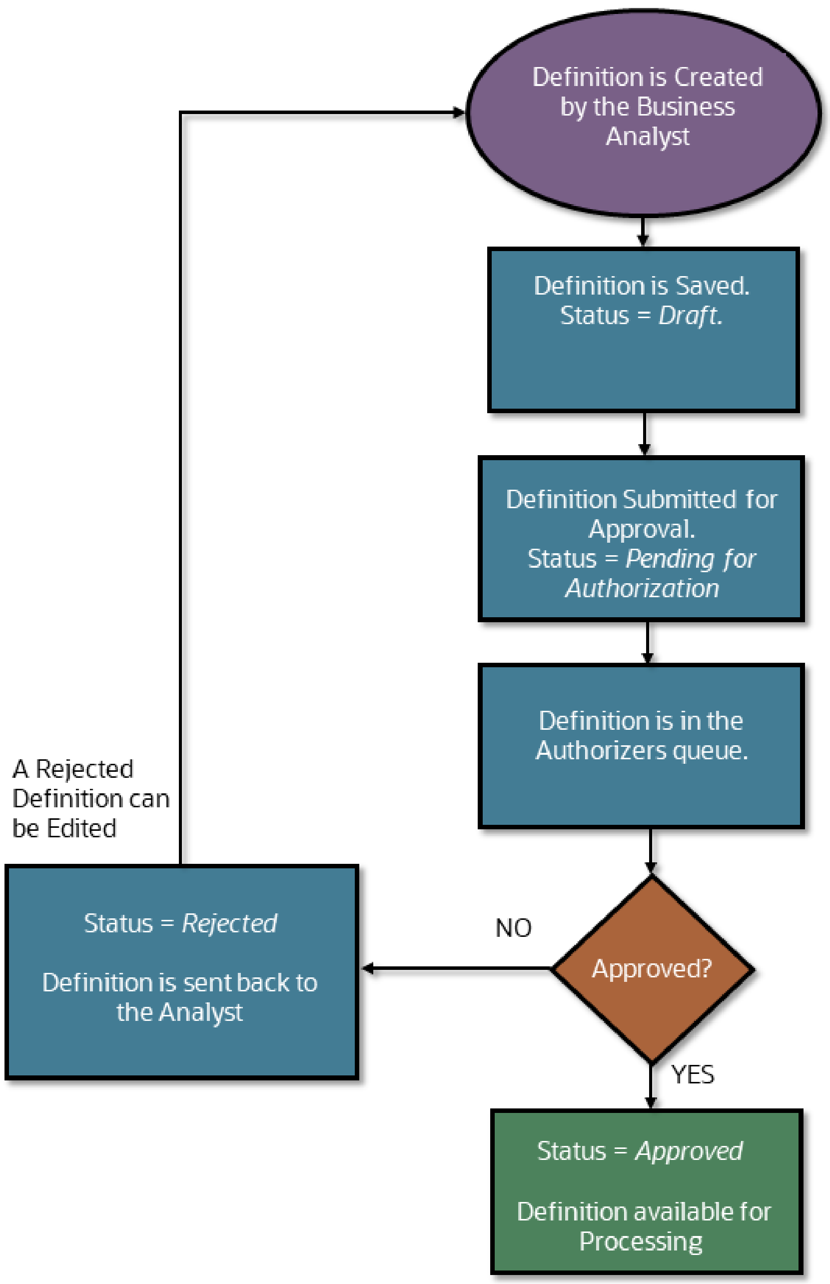
The selected definitions are removed from the **Heatmaps Summary** page.

# Approve or Reject a Heatmap Definition

All definitions that have been created must be approved by the *Approver User* only. If a definition has only been *Saved* and not *Submitted* to the *Approver* for approval, will not be used for processing. Only **Approved** definitions are used for processing/runs.

The following diagram illustrates the Approval Work flow status:

**Figure 9-6 The Approval Work flow Process**




Perform the following steps to *Approve* or *Reject* a Heatmap Definition:

1. Log in as an Approver and navigate to the **Heatmaps Summary** page. Only definitions with the status as *Pending for Authorization* are available for *Approval* or *Rejection*.
2. Select the Heatmap definition that you want to approve or reject and then click the **Action** icon.

> **Note**
>
> As an Approver, you can only **View** or **Approve** or **Reject** a definition from the **Action** icon.

3. Click **View** or **Approve/Reject** to open the page for the selected Heatmap definition.
4. On this page view the form and then select either **Approve** or **Reject**.
   - If you select **Approve**, then a window appears. In this window, enter your comments for the Approval, and then click **Approve**.
   - If you select **Reject**, then a window appears. In this window, enter your comments for the Rejection, and then click **Reject**.

If the definition was Approved, then the status is marked as *Approved* and can be used for processing or runs. If the definition was rejected, then the status of the definition is marked as *Rejected* and the definition is sent back to the Analyst for modification and resubmission.

## Create a New Version of an Approved Heatmap

The application enables you to create a new version of an *Approved* Heatmap. In this feature when you create a new version of an *Approved* Heatmap , except for the Legal Entity, you can modify the relevant fields and **Save** and then **Submit** this modified Heatmap for the Approval process. The *Approver User* will either *Approve* or *Reject* this new version of the Heatmap:

- **Rejected**: If this version of the Heatmap is Rejected, it will go back to the Analyst or Admin user for modification and these users can resubmit this version until it is *Approved*.
- **Approved:** If this version of the Heatmap is *Approved*, then it will be available for viewing or creating a new version again if required.

Perform the following steps to create a new version of an *Approved* Heatmap:

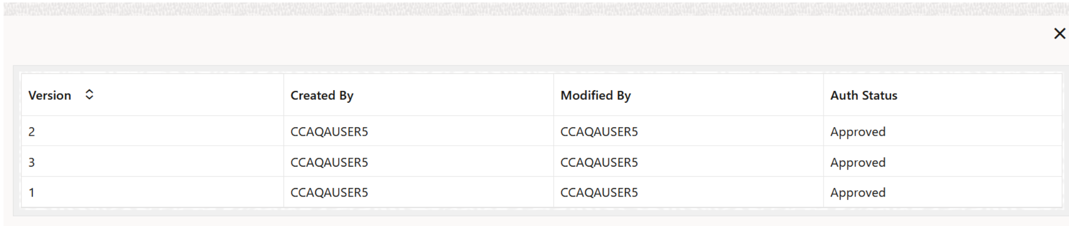
1. In the Heatmap list, select the **Action** icon adjacent to the Heatmap name that you want to create a new version of.
2. Edit the relevant information.
3. Click the **Close** button to return to the **Heatmaps Summary** page.

## View the Version of an Approved Heatmap

After creating a new version of an Approved Heatmap, the version number changes. Perform the following steps to check the version of a Heatmap:

1. In the Heatmap list, select the **Action** icon adjacent to the Heatmap name that you want to view the version of.
2. Click **Show Versions**. A window pops up displaying the version information of the Heatmap.
   In this window, you can view the version information via the **Version**, **Created By**, **Modified By**, and **Auth Status** columns.

**Figure 9-7 View the Version Information**



| Version | Created By | Modified By | Auth Status |
|---|---|---|---|
| 2 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 3 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 1 | CCAQAUSER5 | CCAQAUSER5 | Approved |

3. Click the **Close** button to return to the **Heatmaps Summary** page.

# Search for a Heatmap Definition

Search for a heatmap definition to perform any of the following tasks:

- View
- Edit
- Save As
- Delete
- Approve or Reject

**Procedure**

To search for a Heatmap definition, perform the following steps:

- Navigate to the **Heatmaps Summary** page.
- Click the **Search** field.
- Enter the **Name** of the heatmap definition.
- In the **Status** field, select a value to filter the search by the status of the heatmap definition. The available options are:
  - Approved
  - Pending for Authorization
  - Rejected
  - Draft
- Click **Search** or **Reset** to reset the values in the search box or **Cancel** to cancel the search. Only the name and status can be used for an advanced search.

Only heatmaps definitions that match the search criteria are displayed.

# 10
# Processing

This chapter provides the processing information of the OFS CCA CS Application.

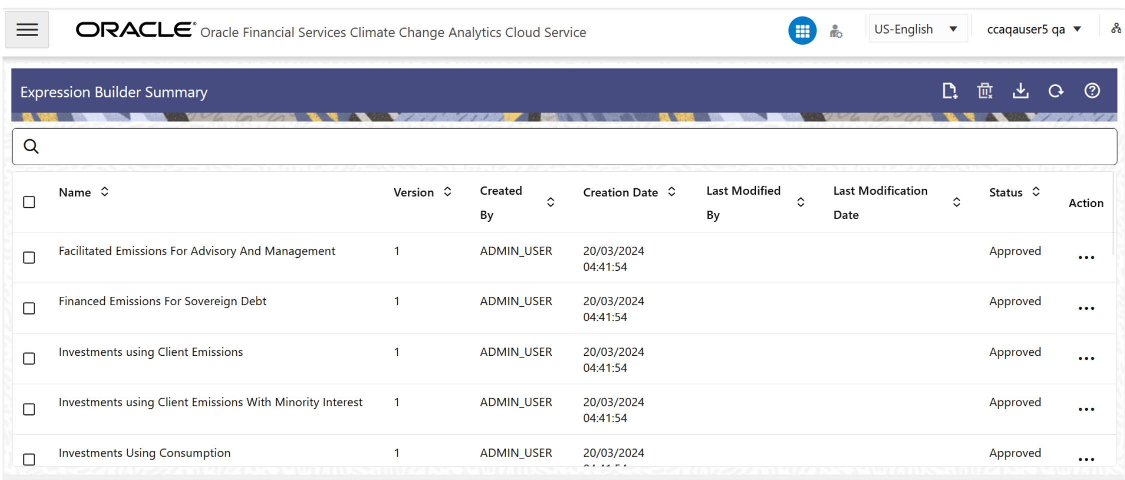
## Expression Builder

This chapter provides information about the Expression Builder feature feature.

### Expression Builder Summary Page

This page is the gateway to the Expression Builder feature and related functionality. To access this page from the LHS menu, click **Process**, then click **Expression Builder**.

**Figure 10-1 The Expression Builder Summary Page**




Use the Expression Builder Summary screen to perform the following actions:

- Create
- Refresh
- View
- Edit
- Save As
- Delete
- Download
- Approve or Reject
- Create a new Version

- View the Version of an Approved Expression
- Search

The **Expression Builder Summary** page contains the following features:

**Table 10-1 Expression Builder Summary page – Fields and Descriptions**

| Column | Description |
|---|---|
| Add | Click the **Add** icon to create a new expression. |
| Delete | Select the desired expression(s) and then click the **Delete** icon<br>Or select the desired expression(s) and then click the **Action** icon adjacent to the selected expression and select **Delete** to delete an existing expression.<br>This action is disabled for expressions that contain the status *Approved* or *Pending for Authorization*. |
| Refresh | Click the **Refresh** icon to refresh the summary page. |
| Help | Click the **Help** icon to view the expression **Help** page. |
| Search | Use this field to search for an expression to View, Edit, Save As, Delete, and Approve or Reject.<br>For more information on using this feature, see the Search an Expression section. |
| Field Search | Enter the name of the expression to filter the list of expressions by values that match the search term.<br>For more information on using this feature, see the Search an Expression section. |

The **Expression Builder Summary** page displays the list of expressions that have been defined by the user and offers several actions that allow you to perform different tasks. This page contains the following columns:

**Table 10-2 Expression Builder Columns**

| Column | Description |
|---|---|
| Name | Displays the expression's name. |
| Version | Displays the version of the expression. |
| Created By | Displays the User ID of the user who created the expression. |
| Creation Date | Displays the date and time of the creation of the expression. |
| Last Modified By | Displays the User ID of the user who last modified the expression. |
| Last Modification Date | Displays the date and time of the last modification of the expression. |

**Table 10-2 (Cont.) Expression Builder Columns**

| Column | Description |
| --- | --- |
| Status | This column displays the status of the expression:<br>• **Approved** - The expression has been approved by the Approver. Expressions that are in this status can be Viewed and Copied (Save As)<br>• **Pending for Authorization** - The Expression has been submitted to the approver and is pending approval.<br>When an expression is in this status, only the View action is available.<br>• **Rejected** - The expression has been rejected by the Approver and has been sent back to the Analyst. Expressions that are in the *Rejected* status can be View, Edited or Deleted by an Analyst user. Additionally, when using the View or Edit action, you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**. The Analyst user can modify an expression with this status and then resubmit it to the approver for approval.<br>• **Draft** -The expression has been saved but has not been submitted to the Approver for approval. Expressions that are in the *Draft* status can be Viewed, Edited or Deleted by an Analyst user.<br>For more information on the approval process, see Approve or Reject an Expression. |
| Action | The following tasks are available for the Expression in the **Action** column.<br>• **View**- Click the **Action** icon adjacent to the Expression Name and select **View** to view the contents of an Expression in read format.<br>• **Edit**- Click the **Action** icon adjacent to the Expression Name and select **Edit** to edit the contents of an Expression in read/write format.<br>• **Save As**- Click the **Action** icon adjacent to the Expression Name and select **Save As** to copy the Mappings from one Legal Entity to a new Legal Entity or from one expression to a new one..<br>• **Delete**- Click the **Action** icon adjacent to the Expression name and select **Delete** to delete an existing Expression.<br>**Note**<br>Approved expressions cannot be deleted.<br>• **Approve/Reject**- Click the **Action** icon adjacent to the expression name and select **Approve or Reject** to Authorize or Reject an existing Expression. This action can only be performed by a user with the *Approver* role. |

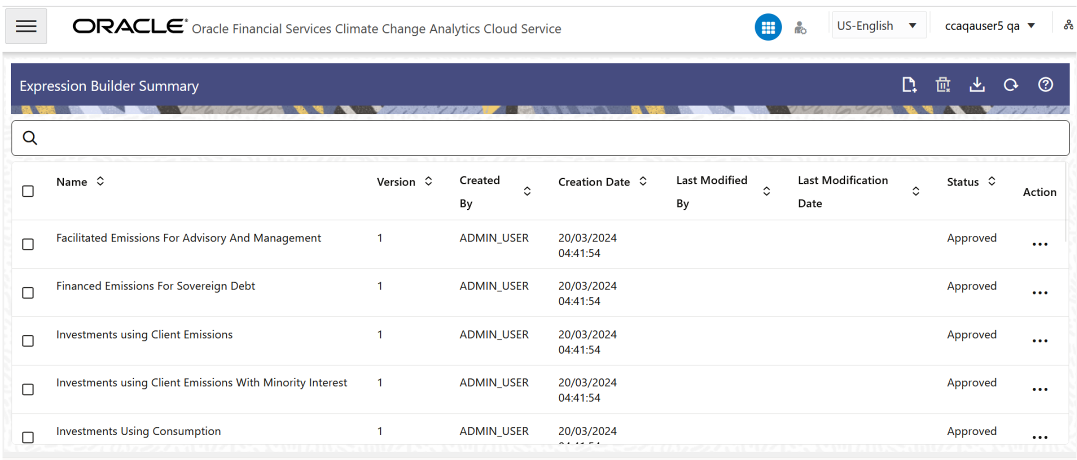
# Create an Expression

The application enables the creation of expressions via the Expression Builder window. Only an *Analyst* and *Admin* user can create an expression.

Perform the following steps to create an expression:

1. On the **Expression Builder Summary** page, click the **Add** icon to open the **Expression Builder** window.

**Figure 10-2 The Expression Builder Summary Page**




2. Populate the **BasicDetails** tab as tabulated:

**Figure 10-3 The Basic Details Pane**

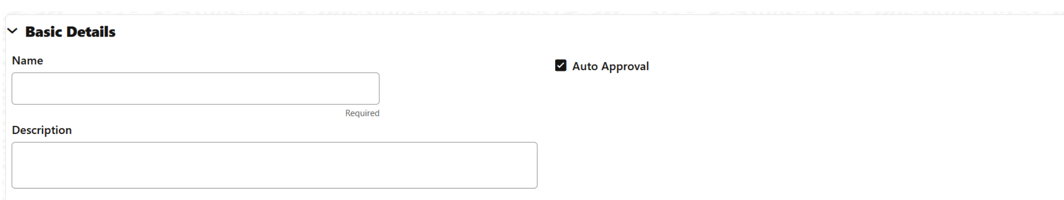



**Table 10-3 Basic Details pane**

| Field | Description |
|---|---|
| Name (**Basic details** pane) | Enter a name for the Expression.<br>This is a mandatory field. |
| Description (**Basic details** pane) | Add a description for the Expression.<br>This is a mandatory field. |

**Table 10-3 (Cont.) Basic Details pane**

| Field | Description |
|---|---|
| Auto Approval | Select this check box to auto-approve the definition. When this checkbox is selected, the definition is auto-approved when the definition is saved.<br>This check box is enabled only for users who have Approver User rights. |

3. Populate the Expression Details pane as tabulated:

**Figure 10-4 The Expression Details Pane**

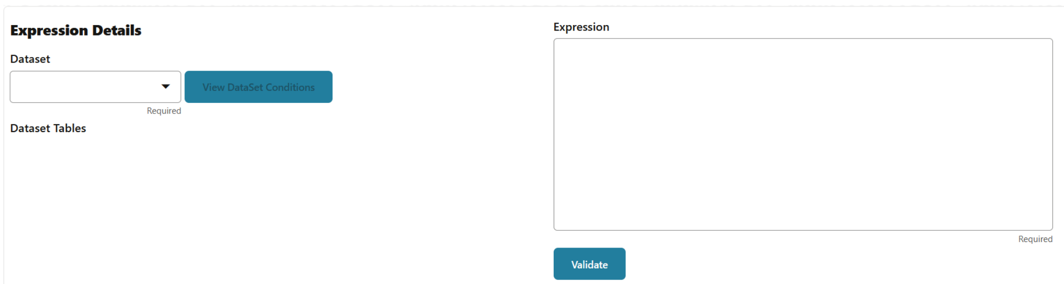



**Table 10-4 Expression Details form**

| Field | Description |
|---|---|
| Dataset (**Expression Details** pane) | Select a dataset from the drop-down list.<br>When a dataset is selected, the **View Dataset Conditions** button is enabled and the list of dataset tables are displayed.<br>• **View Dataset Conditions** - Click the **View Dataset Conditions** button to view the join conditions and where clauses in the **Join Condition** and **Where Clause** panes.<br>• **Dataset Tables -** In this list, expand the folder to add the tables to the **Expression** box. Click the **Validate** button to validate an expression.<br>When the stage and instrument tables are selected, they are automatically populated in the **Expression** box. |
| Validate | After selecting the desired stage and instrument tables, click this button to validate the expression for errors.<br>If the data in the **Expression** box is incorrect, after clicking the **Validate** button, a pop-up message appears indicating that there are errors in the Expression. You must correct the Expression and validate it until no more error messages pop-up. You can only save the expression when there are no more errors. |

4. Click **Save**. The status changes to *Draft* and the expression is saved.

5. Click **Submit**. The status changes to *Pending for Authorization*, and is submitted to the [Approver](#).
6. Additionally, click the **Refresh** button to refresh the page.
7. You can also click the **Back** button to navigate to the **Expression Builder Summary** page.

The new Expression will appear in the list of Expressions on the **Expression Builder Summary** page with the status as *Draft* or *Pending for Authorization*.

## Refresh an Expression

You can refresh an existing an Expression from the **Expression Builder Summary** page to refresh it with newly available data.  Perform the following steps to refresh one or more existing an Expression (s):

1. On the **Expression Builder Summary** page click **Refresh**.

The selected an Expression (s) are refreshed with newly available data.

## View an Expression

The View feature enables you to view the details of an Expression. Perform the following steps to view the Expression details:

1. In the Expression list, select the **Action** icon adjacent to the Expression name that you want to view.
2. Click **View** to open the **Expression Builder** window.
   If an Expression has been rejected by the Approver, then you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**.
3. Click **Cancel** to return to the **Expression Builder Summary** page.

## Edit an Expression

The Edit feature enables you to update the details of an existing expression. Perform the following steps to edit an existing expression:

> **Note**
>
> Expression s that have the status as *Approved* or *Pending for Authorization* cannot be edited.

1. In the expression list, select the **Action** icon adjacent to the expression name that you want to edit.
2. Click **Edit** to open the **Expression Builder** window.
3. Edit the relevant fields.
4. Click **Save** and then click **Submit**.
   If a previously *Rejected* Expression was modified, then when the **Submit** button is clicked, the [Approval Process](#) begins.
5. Additionally, navigate to the **Audit Panel** and then to the **Comments** tab to view any comments from the Approver in case the expression has the status as *Rejected*.

The saved expression is displayed in the expression list on the **Expression Builder Summary** page.

## Copy (Save As) an Expression

The Copy Save As feature enables you to copy the details from an existing expression to a new expression by using a new Legal Entity or Entities. Perform the following steps to copy and save an expression:

1. Select the desired Expression.

   > **Note**
   >
   > Only *Approved* expressions can be copied.

2. Click the **Action** icon.
3. Select **Save As** to open the **Save As** window.
4. In the **Save As** window, enter a name and description in the **Name** and **Description** fields.
5. In the **Source Legal Entities** drop-down list to select the Legal Entity that was used in the expression that has been copied.
   By selecting the *Source* Legal Entity, you can to copy its' mappings to the *Target* Legal Entity in the **Expression Builder** (Edit) screen.
6. In the **Target Legal Entities** drop-down list, select the required Legal Entity(s).
   The Legal Entities in this list are those that have not been used in other expression.
7. Click **Save**. The expression is saved under a new name.
8. Select the newly saved expression from the **Expression Builder Summary** page.
9. Click the **Action** icon and then select **Edit**.
10. Populate the relevant fields.
    If a Legal Entity that has already been used in another expression is selected, then the application gives you an error message when you try to save this expression, therefore, ensure that a unique Legal Entity is selected.
11. It is mandatory to select a new Legal Entity(s) and then delete the old Legal Entity before clicking **Submit**. Perform the following steps depending on whether you want to copy the old Expression 's Expression Mapping's to the newly selected Legal Entities or not:
    a. **If you want to copy the old Expression 's Expression Mapping's Mappings to the new Legal Entity**:
       i. Click the **Select Legal Entity** icon to open the Legal Entity window:
       ii. In this window, click the Legal Entity field to select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Expression Summary** pane.

> **Note**
>
> - An expression can only use Legal Entities that are not part of existing expression.
> - The application supports one expression using multiple Legal Entities that have not been used in other expressions.

iii. Click **Apply**. The **Copy Across** button is enabled.

iv. Click **Copy Across**. The old expression's Emissions Factor Database Mappings are copied to the newly selected Legal Entity(s).

v. If required, modify the mappings.

vi. Click the **Select Legal Entity** icon to open the Legal Entity window:

vii. In this window, delete the old Legal Entity.

b. **If you do not want to copy the old Expression 's Emissions Factor Database Mappings to the new Legal Entity:**

i. Click the **Select Legal Entity** icon to open the Legal Entity window:

ii. In this window, delete the old Legal Entity.

iii. Select a Legal Entity from the drop-down list. Multiple Legal Entities can be selected in this window. When multiple Legal Entities are selected, they will appear in the Legal Entity drop-down list in the **Expression Summary** pane.

> **Note**
>
> - A Expression can only use Legal Entities that are not part of existing Expression s.
> - The application supports one Expression using multiple Legal Entities that have not been used in other Expression s.

iv. Click **Apply**.

v. If required, modify the mappings.

12. Click **Save** and then click **Submit** to submit this Expression to the Approver for approval.

## Delete an Expression

You can delete an existing expression from the **Expression Builder Summary** page. Perform the following steps in order to delete single or multiple existing expressions:

> **Note**
>
> Expressions that have the status as *Approved* cannot be deleted.

1. On the **Expression Builder Summary** page, select the check box(s) adjacent to the expression(s) that you want to delete.
2. Click **Delete**. A warning dialog is displayed.

3. Click **Yes**.
4. Additionally, select the check box(s) adjacent to the expression(s) and then click the **Delete** icon on the top of the **Expression Builder Summary** page. A warning dialog is displayed.
5. Click **Yes**.

The selected expression are removed from the **Expression Builder Summary** page.

## Download an Expression

To download an expression:

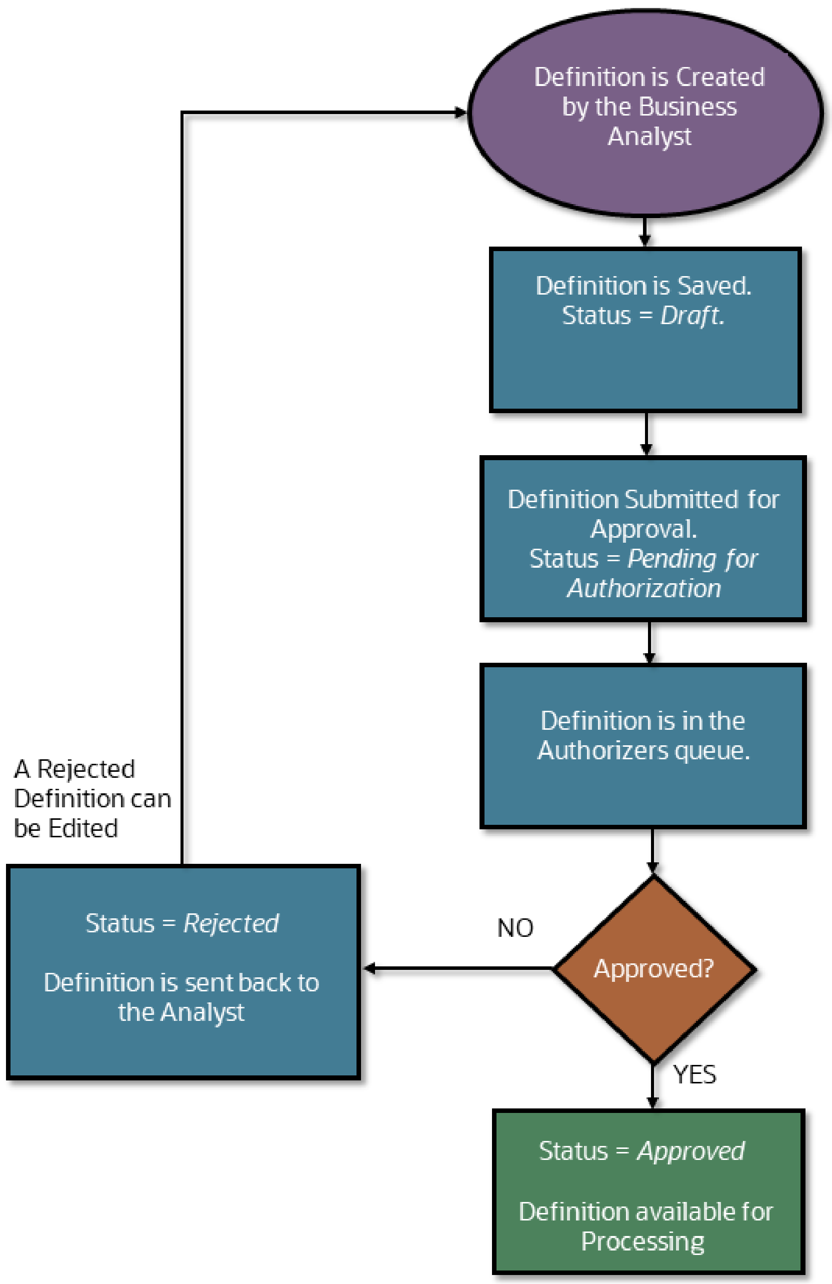
1. On the **Expression Builder Summary** page, click the **Download** icon to download the expressions on the summary page in a **.csv** format.
   The expressions are downloaded to the local system.

## Approve or Reject an Expression

All expressions that have been created must be approved by the *Approver User* only. If an expression has only been *Saved* and not *Submitted* to the *Approver* for approval, will not be used for processing. Only **Approved** expression are used for processing/runs.

The following diagram illustrates the Approval Work flow status:

**Figure 10-5 The Approval Work flow Process**




Perform the following steps to *Approve* or *Reject* an expression:

1. Log in as an Approver and navigate to the **Expression Builder Summary** page. Only expressions with the status as *Pending for Authorization* are available for *Approval* or *Rejection*.
2. Select the expression that you want to approve or reject and then click the **Action** icon.

   > **Note**
   >
   > As an Approver, you can only **View** or **Approve** or **Reject** an expression from the **Action** icon.

3. Click **View** or **Approve/Reject** to open the page for the selected expression.
4. On this page view the form and then select either **Approve** or **Reject**.
   - If you select **Approve**, then a window appears. In this window, enter your comments for the Approval, and then click **Approve**.
   - If you select **Reject**, then a window appears. In this window, enter your comments for the Rejection, and then click **Reject**.

If the expression was Approved, then the status is marked as *Approved* and can be used for processing or runs. If the expression was rejected, then the status of the expression is marked as *Rejected* and the Expression is sent back to the Analyst for modification and resubmission.

## Create a New Version of an Approved Expression

The application enables you to create a new version of an *Approved* Expression . In this feature when you create a new version of an *Approved* Expression , except for the Legal Entity, you can modify the relevant fields and **Save** and then **Submit** this modified Expression for the Approval process. The *Approver User* will either *Approve* or *Reject* this new version of the Expression :

- **Rejected**: If this version of the Expression is Rejected, it will go back to the Analyst or Admin user for modification and these users can resubmit this version until it is *Approved*.
- **Approved:** If this version of the Expression is *Approved*, then it will be available for viewing or creating a new version again if required.

Perform the following steps to create a new version of an *Approved* Expression :

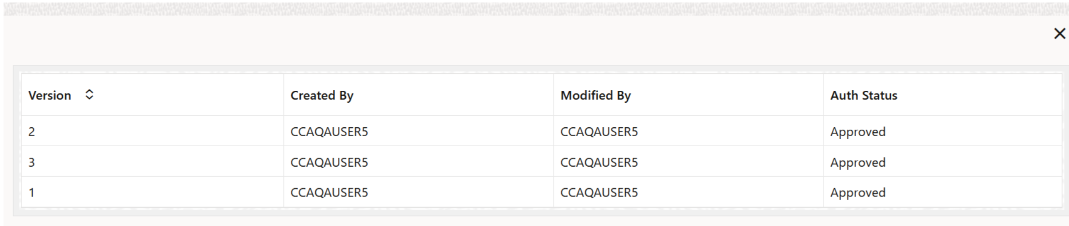
1. In the Climate Scorecard Expression list, select the **Action** icon adjacent to the Climate Scorecard Expression name that you want to create a new version of.
2. Edit the relevant information.
3. Click the **Close** button to return to the **Climate Scorecard Summary** page.

## View the Version of an Approved Expression

After creating a new version of an Approved Expression , the version number changes. Perform the following steps to check the version of a Expression :

1. In the Expression list, select the **Action** icon adjacent to the Expression name that you want to view the version of.
2. Click **Show Versions**. A window pops up displaying the version information of the Expression .
   In this window, you can view the version information via the **Version**, **Created By**, **Modified By**, and **Auth Status** columns.

**Figure 10-6    View the Version Information**



| Version | Created By | Modified By | Auth Status |
|---|---|---|---|
| 2 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 3 | CCAQAUSER5 | CCAQAUSER5 | Approved |
| 1 | CCAQAUSER5 | CCAQAUSER5 | Approved |

3. Click the **Close** button to return to the **Climate Scorecard Summary** page.

## Search for an Expression

Search for a Expression to perform any of the following tasks:

- View
- Edit
- Save As
- Delete
- Approve or Reject
- Create a new Version

**Procedure**

To search for a Expression, perform the following steps:

- Navigate to the **Expression Builder Summary** page.
- Click the **Search** field.
- Enter the **Name** of the Expression.
- In the Status field, select a value to filter the search by the status of the Expression Definition. The available options are:
  - Approved
  - Pending for Authorization
  - Rejected
  - Draft
- Click **Search** or **Reset** to reset the values in the search box or **Cancel** to cancel the search. Only the Name and Status can be used for an Advanced Search.

Only Expression that match the Search Criteria are displayed.

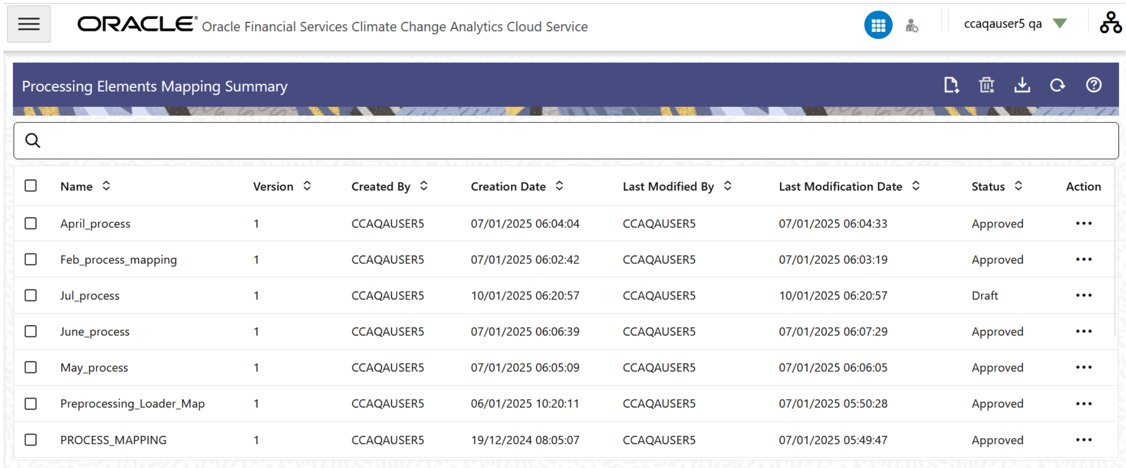
# Processing Elements Mapping

This section provides information on the processing elements mapping.

## Processing Elements Mapping Summary

This page is the gateway to the Processing Elements Mapping feature and related functionality. To access this page from the LHS menu, click **Processes**, then click **Process Elements Mapping Summary**. The **Process Elements Mapping Summary** page enables you to map an Process Elements Mapping to emission factor categories, asset class, activity type, and reporting emission category by using the Process Elements Mapping feature.

**Figure 10-7 The Processing Elements Mapping Summary Page**




Use the **Process Elements Mapping Summary** page to perform the following actions:

- Create
- Refresh
- View
- Edit
- Save As
- Delete
- Download
- Approve or Reject
- Create a new Version
- View the Version of an Approved Process Mapping Element
- Search

The **Process Elements Mapping Summary** page contains the following features:

**Table 10-5 Process Elements Mapping Summary page – Fields and Descriptions**

| Column | Description |
|---|---|
| Add | Click the **Add** icon to create a new Process Elements Mapping. |

**Table 10-5 (Cont.) Process Elements Mapping Summary page – Fields and Descriptions**

| Column | Description |
|---|---|
| Delete | Select the desired Process Elements Mapping(s) and then click the **Delete** icon<br>Or select the desired Process Elements Mapping(s) and then click the **Action** icon adjacent to the selected Process Elements Mapping and select **Delete** to delete an existing Process Elements Mapping.<br>This action is disabled for Process Elements Mappings that contain the status *Approved* or *Pending for Authorization*. |
| Refresh | Click the **Refresh** icon to refresh the summary page. |
| Help | Click the **Help** icon to view the Process Elements Mapping **Help** page. |
| Search | Use this field to search for an Process Elements Mapping to View, Edit, Save As, Delete, and Approve or Reject.<br>For more information on using this feature, see the Search a Process Elements Mapping section. |
| Field Search | Enter the name of the Process Elements Mapping to filter the list of Process Elements Mappings by values that match the search term.<br>For more information on using this feature, see the Search a Process Elements Mapping section. |

The **Process Elements Mapping Summary** page displays the list of Process Elements Mappings that have been defined by the user and offers several actions that allow you to perform different tasks. This page contains the following columns:

**Table 10-6 Process Elements Mapping Columns**

| Column | Description |
|---|---|
| Name | Displays the Process Elements Mapping's name. |
| Version | Displays the version of the Process Elements Mapping. |
| Created By | Displays the User ID of the user who created the Process Elements Mapping. |
| Creation Date | Displays the date and time of the creation of the Process Elements Mapping. |
| Last Modified By | Displays the User ID of the user who last modified the Process Elements Mapping. |
| Last Modification Date | Displays the date and time of the last modification of the Process Elements Mapping. |

**Table 10-6 (Cont.) Process Elements Mapping Columns**

| Column | Description |
| --- | --- |
| Status | This column displays the status of the Process Elements Mapping:<br>• **Approved** - The Process Elements Mapping has been approved by the Approver. Process Elements Mappings that are in this status can be Viewed and Copied (Save As)<br>• **Pending for Authorization** - The Process Elements Mapping has been submitted to the approver and is pending approval.<br>When an Process Elements Mapping is in this status, only the View action is available.<br>• **Rejected** - The Process Elements Mapping has been rejected by the Approver and has been sent back to the Analyst. Process Elements Mappings that are in the *Rejected* status can be View, Edited or Deleted by an Analyst user. Additionally, when using the View or Edit action, you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**. The Analyst user can modify an Process Elements Mapping with this status and then resubmit it to the approver for approval.<br>• **Draft** -The Process Elements Mapping has been saved but has not been submitted to the Approver for approval. Process Elements Mappings that are in the *Draft* status can be Viewed, Edited or Deleted by an Analyst user.<br>For more information on the approval process, see Approve or Reject a Process Elements Mapping. |

**Table 10-6 (Cont.) Process Elements Mapping Columns**

| Column | Description |
|---|---|
| Action | The following tasks are available for the Process Elements Mapping in the **Action** column.<br>• **View**- Click the **Action** icon adjacent to the Process Elements Mapping Name and select **View** to view the contents of an Process Elements Mapping in read format.<br>• **Edit**- Click the **Action** icon adjacent to the Process Elements Mapping Name and select **Edit** to edit the contents of an Process Elements Mapping in read/write format.<br>• **Save As**- Click the **Action** icon adjacent to the Process Elements Mapping Name and select **Save As** to copy the Mappings from one Legal Entity to a new Legal Entity or from one Process Elements Mapping to a new one..<br>• **Delete**- Click the **Action** icon adjacent to the Process Elements Mapping name and select **Delete** to delete an existing Process Elements Mapping.<br>**Note**<br>Approved Process Elements Mappings cannot be deleted.<br>• **Approve/Reject**- Click the **Action** icon adjacent to the Process Elements Mapping name and select **Approve or Reject** to Authorize or Reject an existing Process Elements Mapping. This action can only be performed by a user with the *Approver* role. |

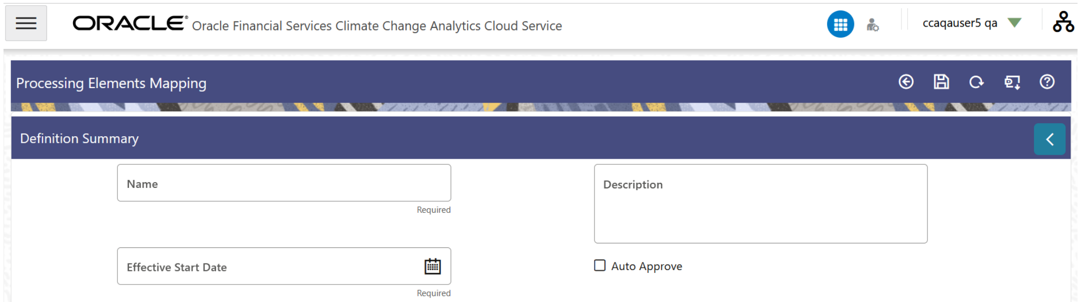
## Create an Process Elements Mapping

The application enables the creation of Process Elements Mappings via the **Process Elements Mapping Summary** page. Only an *Analyst* and *Admin* user can create a Process Elements Mapping.

Perform the following steps to create a Process Elements Mapping:

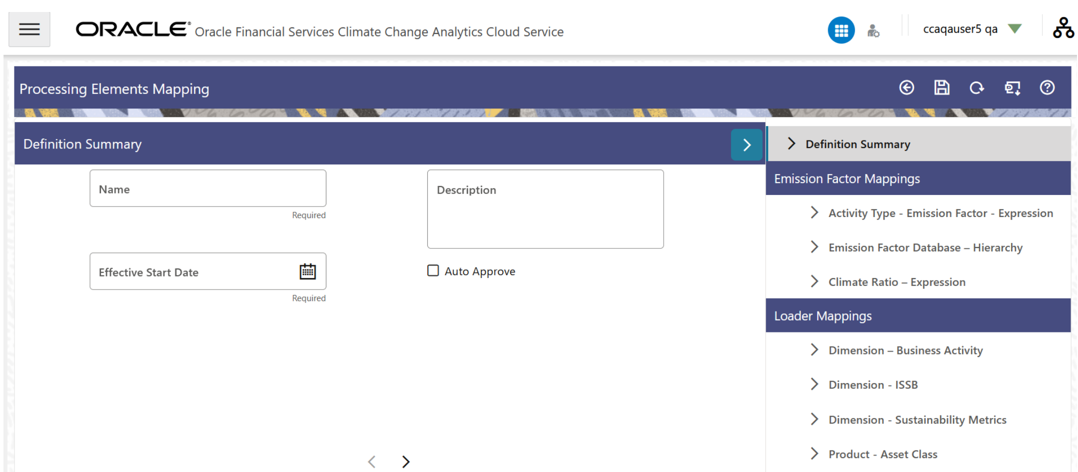
1. On the **Process Elements Mapping Summary** page, click the **Add** icon to open the **Process Elements Mapping** window.

**Figure 10-8 The Process Elements Mapping Summary Page**



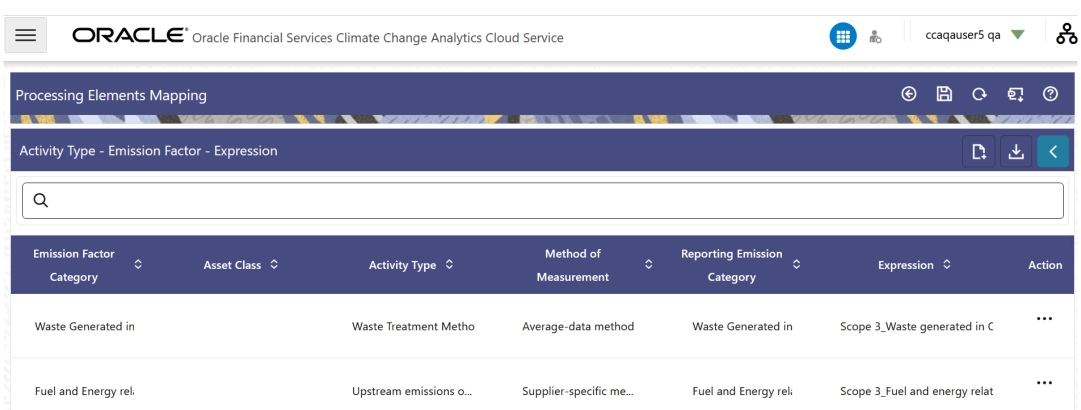

2. Enter a name and description in the **Name** and **Description** fields.
3. Click the Select Date icon to select a date in the **Effective Date** field.
4. Click the **Auto Approve** check box if you want to enable auto approval.
5. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane.

**Figure 10-9 Definition Summary Pane**



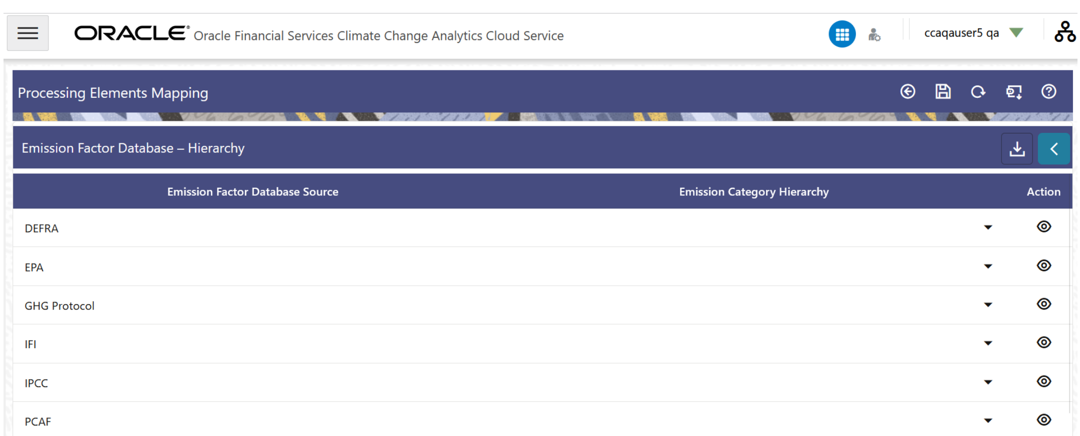

6. Select **Activity Type- Emission Factor- Expression**.

**Figure 10-10 The Activity Type- Emission Factor- Expression page**



7. This section allows the user to map a desired expression to the relevant emission category, asset class and activity type for processing purposes. This section contains the following details:
   - **Emission Factor Category**- This column contains the group level emission factor categories. This value is set in the instrument table.
   - **Asset Class**- This column contains the pre-seeded asset classes.
   - **Activity Type**- This column contains two pre-seeded activity types; *Distance Travelled* and *Fuel Consumed*
   - **Method of Measurement**- This column contains the pre-seeded method of measurements
   - **Reporting Emission Category**- This column contains pre-seeded emission categories.
   - **Expression**- This column contains the pre-seeded defined expressions.
   - **Add New Row**- Click this button to add a new row to the table in order to map a new expression to an emission category, asset class, activity type, emission factor category. The same Emission Category can be mapped to a different Asset Class, Activity Type and Expression.
   - **Download**- Use this button to download the expression in a .csv format.
   - Action - Click the Action icon to perform the following tasks:
     - **View Expression**- Click this option to view the details of the expression in the **Expression Builder** window.
     - **View**- Click this icon to view the expression in *View* mode.
     - **Edit**- Click this icon to edit the details of the expression.
     - **Delete**- Click this icon adjacent to a row to delete it.
8. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Emission Factor Database – Hierarchy**.

**Figure 10-11 Emission Factor Database – Hierarchy Page**

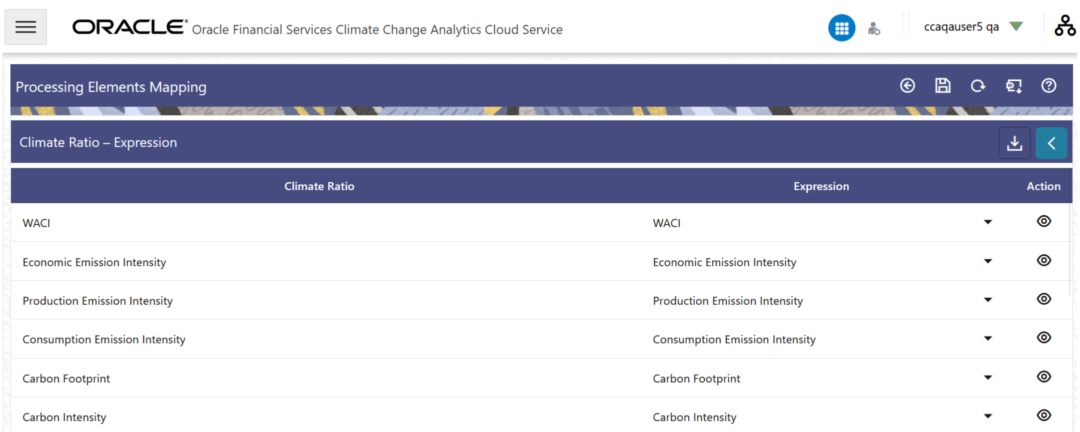



9. This section contains the following details:
   - **Emission Factor Database Source**- This field contains the source database for a particular hierarchy.

- **Emission Category Hierarchy**- This drop-down list contains a list of hierarchies that need to be used for a particular emission factor database. Out-of-the-box hierarchies defined by the user are supported.
- **View**- Click this icon to view the hierarchy information of the emission category.:
  - If a hierarchy was selected in the **Emission Category Hierarchy** field, then the **Dimension**, **Folder**, and **Hierarchy** fields are disabled and this window will be in *View* mode.
  - If no hierarchy was selected in the **Emission Category Hierarchy** field, then the **Dimension**, **Folder**, and **Hierarchy** fields are enabled and the hierarchy details can be configured and viewed.

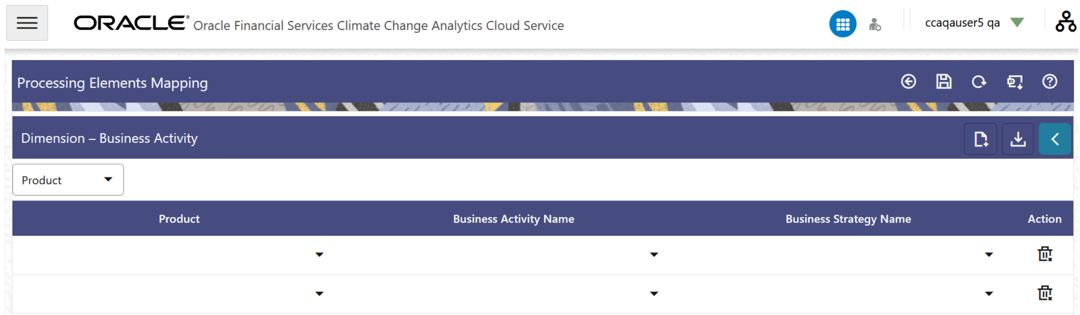
10. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Climate Ratio – Expression**.

**Figure 10-12 Climate Ratio – Expression Page**



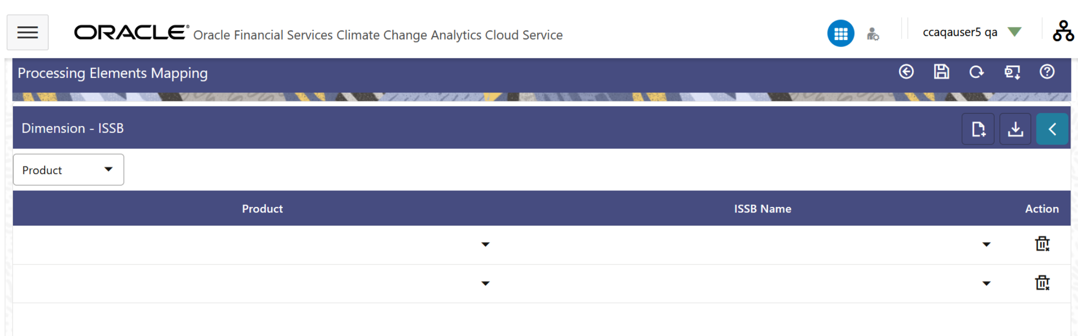

11. This section contains the following details:
    - **Climate Ratio**- This column contains the newly added matrix name.
    - **Expression**- This drop-down list contains a list of expressions that can be mapped to repective matrix/attribute
    - **View**- Click this icon to view the hierarchy information of the emission category.
    - **Save** - Click this icon to save the mappings.
    - **Refresh**- Click this page to refresh the data on this page to their default values.
    - **Download**- Click this icon to download the expression mappings in a **.csv** format.
12. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Dimension – Business Activity**.

**Figure 10-13 Dimension – Business Activity Page**




13. This tab is used to create a mapping between the key dimension to the relevant business activity and strategy. For example, users can create a mapping based on a Business Unit for a Business Activity like Equity, Fixed Income and Business Strategy like Active or Passive. This section contains the following details:
    - **<Product>**- The name of this column is depends on the user selected dimensions. This drop-down list contains the pre-seeded PCAF values.
    - **Business Activity Name**- This drop-down list contains the business activities.
    - **Business Strategy Name**- This drop-down list contains two pre-seeded business strategies:
      – *Active*
      – *Passive*
    - **Add New Row-** Click this button to add a new row to the table in order to map a new emission factor database to a business activity name and business strategy name.
    - **Download**- Click this icon to download the expression mappings in a **.csv** format.
    - **Delete**- Click this icon adjacent to a row to delete it.
14. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Dimension – ISSB**.

**Figure 10-14 Dimension – ISSB Page**

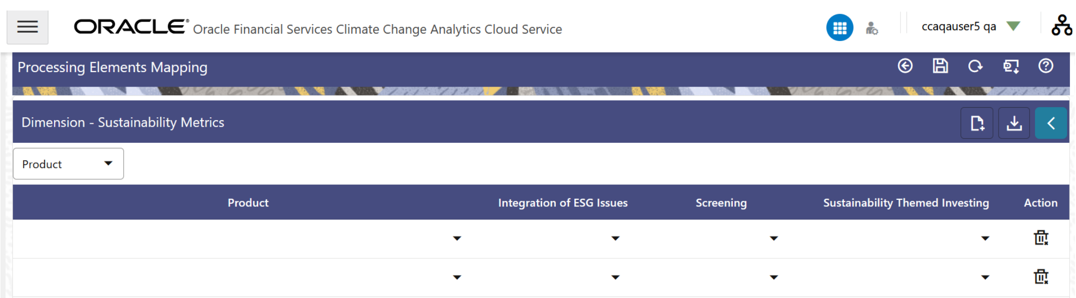



15. This tab is to be used for the user to create a mapping between a key dimension to the ISSB-standard specific industries for the Financial Sector. For example, users can create a mapping based on Business Unit for activities relating to Commercial Banking, Asset Management etc. This section contains the following details:
    - **<Product>**- This field contains the legal entity.

- **ISSB Name**- The name of this column depends on the user-selection of dimensions. This drop-down list contains a list of ISSB elements-specified list of industries which are to be used for Cross-Industry metrics and disclosures.
- **Add New Row**- Click this button to add a new row to the table in order to map a new legal entity database to an ISSB name.
- **Download**- Click this icon to download the expression mappings in a **.csv** format.
- **Delete**- Click this icon adjacent to a row to delete it.

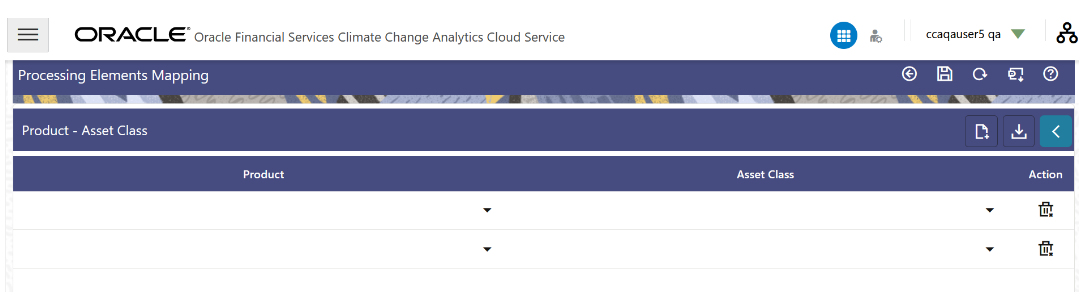
16. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Dimension - Sustainability Metrics**.

**Figure 10-15 Dimension - Sustainability Metrics**




17. This tab is to be used for the user to create a mapping between a key dimension and available ESG integration strategy. For example, users can create a mapping based on Business Unit to ESG integration strategy like screening, integration etc. This section contains the following details:
    - **<Product>**- The name of this column is based on the user selection of relevant dimensions.
    - **Integration of ESG Issues**- Select either *Yes* or *No*.
    - **Screening**- Select either *Yes* or *No*.
    - **Sustainability Themed Investing**- Select either *Yes* or *No*.
    - **Add New Row**- Click this button to add a new row to the table in order to map a new emission category.
    - **Download**- Click this icon to download the expression mappings in a **.csv** format.
    - **Delete**- Click this icon adjacent to a row to delete it.
18. Click the **Open** arrow on the upper-right corner of this page to open the **Definition Summary** pane and then select **Product - Asset Class**.

**Figure 10-16 Product - Asset Class**



19. This tab is to be used for the user to create a mapping between a product and an asset class. This section contains the following details:
    - **Product**- The name of this column is based on the user selection of relevant dimensions.
    - **Asset Class**- Select an asset class from the drop down list.
    - **Add New Row**- Click this button to add a new row to the table in order to map a new emission category.
    - **Download**- Click this icon to download the expression mappings in a **.csv** format.
    - **Delete**- Click this icon adjacent to a row to delete it.
20. Click **Save**. The status changes to *Draft* and the Process Elements Mapping is saved.
21. Click **Submit**. The status changes to *Pending for Authorization*, and is submitted to the Approver.
22. Additionally, click the **Refresh** button to refresh the page.
23. You can also click the **Back** button to navigate to the **Process Elements Mapping Summary** page.

The new Process Elements Mapping will appear in the list of Process Elements Mappings on the **Process Elements Mapping Summary** page with the status as *Draft* or *Pending for Authorization*.

## Refresh an Process Elements Mapping

You can refresh an existing an Process Elements Mapping from the **Process Elements Mapping Summary** page to refresh it with newly available data. Perform the following steps to refresh one or more existing an Process Elements Mapping(s):

1. On the **Process Elements Mapping Summary** page click **Refresh**.

The selected an Process Elements Mapping(s) are refreshed with newly available data.

## View an Process Elements Mapping

The View feature enables you to view the details of an Process Elements Mapping. Perform the following steps to view the Process Elements Mapping details:

1. In the Process Elements Mapping list, select the **Action** icon adjacent to the Process Elements Mapping name that you want to view.
2. Click **View** to open the **Process Elements Mapping** window.
   If an Process Elements Mapping has been rejected by the Approver, then you can view the comments from the Approver in the **Comments** tab of the **Audit Panel**.
3. Click **Cancel** to return to the **Process Elements Mapping Summary** page.

## Edit a Process Elements Mapping

The Edit feature enables you to update the details of an existing Process Elements Mapping. Perform the following steps to edit an existing Process Elements Mapping:

> **Note**
>
> Process Elements Mappings that have the status as *Approved* or *Pending for Authorization* cannot be edited.

1. In the Process Elements Mapping list, select the **Action** icon adjacent to the Process Elements Mapping name that you want to edit.
2. Click **Edit** to open the **Process Elements Mapping** window.
3. Edit the relevant fields.
4. Click **Save** and then click **Submit**.
   If a previously *Rejected* Process Elements Mapping was modified, then when the **Submit** button is clicked, the Approval Process begins.
5. Additionally, navigate to the **Audit Panel** and then to the **Comments** tab to view any comments from the Approver in case the Process Elements Mapping has the status as *Rejected*.

The saved Process Elements Mapping is displayed in the Process Elements Mapping list on the **Process Elements Mapping Summary** page.

## Copy (Save As) a Process Elements Mapping

The Copy Save As feature enables you to copy the details from an existing Process Elements Mapping to a new Process Elements Mapping by using a new Legal Entity or Entities. Perform the following steps to copy and save a Process Elements Mapping:

1. Select the desired Process Elements Mapping.
2. Click the **Action** icon.
3. Select **Save As** to open the **Save As** window.
4. In the **Save As** window, enter a name and description in the **Name** and **Description** fields.
5. Click the **Select Date** icon in the **Effective Start Date** field to select a date.
6. Click **Save**. The Process Elements Mapping is saved under a new name.
7. Select the newly saved Process Elements Mapping from the **Process Elements Mapping Summary** page.
8. Click the **Action** icon and then select **Edit**.
9. Populate the relevant fields.
10. Click **Save** and then click **Submit** to submit this Process Elements Mapping to the Approver for approval.

## Delete an Process Elements Mapping

You can delete an existing Process Elements Mapping from the **Process Elements Mapping Summary** page. Perform the following steps in order to delete single or multiple existing Process Elements Mappings:

> **Note**
>
> Process Elements Mappings that have the status as *Approved* cannot be deleted.

1. On the **Process Elements Mapping Summary** page, select the check box(s) adjacent to the Process Elements Mapping(s) that you want to delete.
2. Click **Delete**. A warning dialog is displayed.
3. Click **Yes**.
4. Additionally, select the check box(s) adjacent to the Process Elements Mapping(s) and then click the **Delete** icon on the top of the **Process Elements Mapping Summary** page. A warning dialog is displayed.
5. Click **Yes**.

The selected Process Elements Mappings are removed from the **Process Elements Mapping Summary** page.

## Download an Process Elements Mapping

To download a Process Elements Mapping:

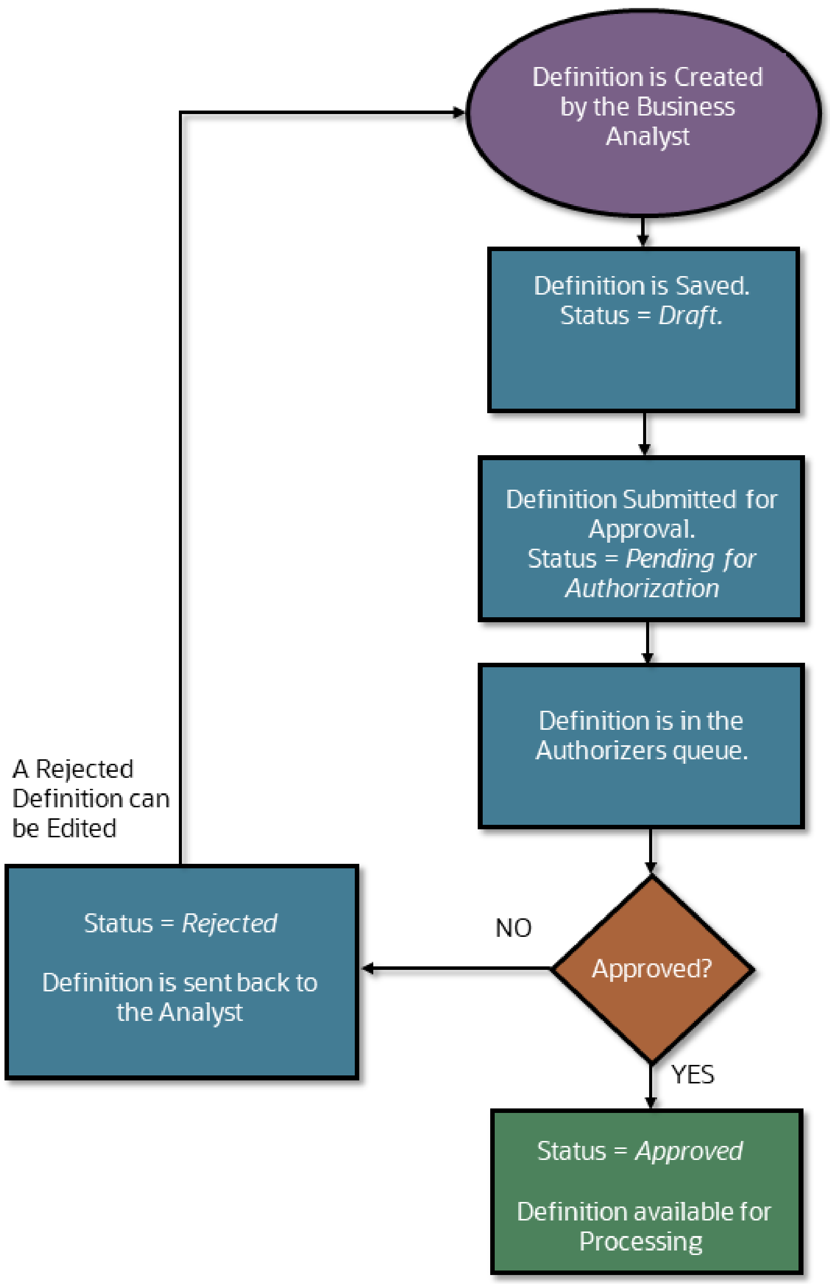
1. On the **Process Elements Mapping Summary** page, click the **Download** icon to download the Process Elements Mappings on the summary page in a **.csv** format. The Process Elements Mappings are downloaded to the local system.

## Approve or Reject an Process Elements Mapping

All Process Elements Mappings that have been created must be approved by the *Approver User* only. If an Process Elements Mapping has only been *Saved* and not *Submitted* to the *Approver* for approval, will not be used for processing. Only **Approved** Process Elements Mappings are used for processing/runs.

The following diagram illustrates the Approval Work flow status:

**Figure 10-17    The Approval Work flow Process**




Perform the following steps to *Approve* or *Reject* an Process Elements Mapping:

1. Log in as an Approver and navigate to the **Process Elements Mapping Summary** page. Only Process Elements Mappings with the status as *Pending for Authorization* are available for *Approval* or *Rejection*.
2. Select the Process Elements Mapping that you want to approve or reject and then click the **Action** icon.

> **Note**
>
> As an Approver, you can only **View** or **Approve** or **Reject** an Process Elements Mapping from the **Action** icon.

3. Click **View** or **Approve/Reject** to open the page for the selected Process Elements Mapping.
4. On this page view the form and then select either **Approve** or **Reject**.
   - If you select **Approve**, then a window appears. In this window, enter your comments for the Approval, and then click **Approve**.
   - If you select **Reject**, then a window appears. In this window, enter your comments for the Rejection, and then click **Reject**.

If the Process Elements Mapping was Approved, then the status is marked as *Approved* and can be used for processing or runs. If the Process Elements Mapping was rejected, then the status of the Process Elements Mapping is marked as *Rejected* and the Process Elements Mapping is sent back to the Analyst for modification and resubmission.

## Create a New Version of an Approved Process Elements Mapping

The application enables you to create a new version of an *Approved* Process Elements Mapping. In this feature when you create a new version of an *Approved* Process Elements Mapping, except for the Legal Entity, you can modify the relevant fields and **Save** and then **Submit** this modified Process Elements Mapping for the Approval process. The *Approver User* will either *Approve* or *Reject* this new version of the Process Elements Mapping:

> **Note**
>
> Only process element mappings that have the status as *Success* can have a new version created of.

- **Rejected**: If this version of the Process Elements Mapping is Rejected, it will go back to the Analyst or Admin user for modification and these users can resubmit this version until it is *Approved*.
- **Approved:** If this version of the Process Elements Mapping is *Approved*, then it will be available for viewing or creating a new version again if required.

Perform the following steps to create a new version of an *Approved* Process Elements Mapping:

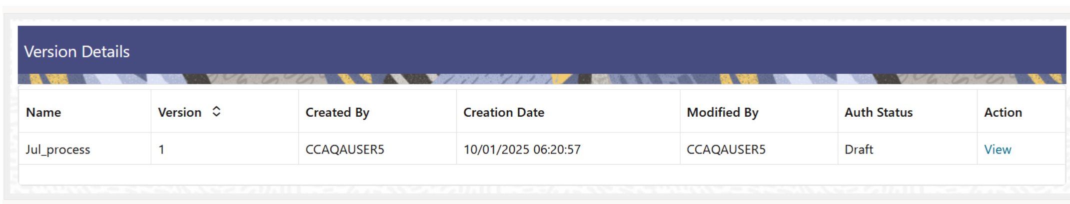
1. In the Process Elements Mapping list, select the **Action** icon adjacent to the Climate Scorecard Process Elements Mapping name that you want to create a new version of.
2. Edit the relevant information.
3. Click the **Close** button to return to the **Process Elements Mapping** page.

## View the Version of a Process Elements Mapping

After creating a new version of a Process Elements Mapping, the version number changes. Perform the following steps to check the version of a Process Elements Mapping:

1. In the Process Elements Mapping list, select the **Action** icon adjacent to the Process Elements Mapping name that you want to view the version of.
2. Click **Show Versions**. A window pops up displaying the version information of the Process Elements Mapping .

**Figure 10-18 Version Details Window**




In this window, you can view the version information via the **Name**, **Version**, **Created By**, **Creation Date**, **Modified By**, **Auth Status**, and **Action**columns.

3. Click the **View** link in the **Action** column to view the Process Elements Mapping details.
4. Click the **Close** button to return to the **Process Elements Mapping Summary** page.

## Search for a Process Elements Mapping

Search for a Process Elements Mapping to perform any of the following tasks:

- View
- Edit
- Save As
- Delete
- Approve or Reject
- Create a new Version

**Procedure**

To search for a Process Elements Mapping, perform the following steps:

- Navigate to the **Process Elements Mapping Summary** page.
- Click the **Search** field.
- Enter the **Name** of the Process Elements Mapping.
- In the **Status** field, select a value to filter the search by the status of the Process Elements Mapping definition. The available options are:
  - Approved
  - Pending for Authorization
  - Rejected

– Draft

- Click **Search** or **Reset** to reset the values in the search box or **Cancel** to cancel the search. Only the Name and Status can be used for an Advanced Search.

Only Process Elements Mapping that match the Search Criteria are displayed.

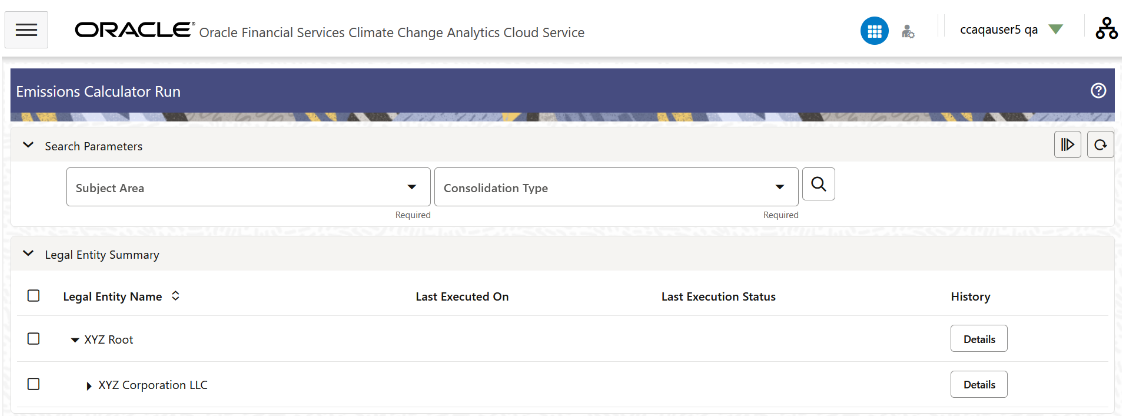
# Emissions Calculator Run

This chapter provides information about the Emissions Calculator Run feature.

## Emissions Calculator Run Page

This page is the gateway to the Emissions Calculator Run feature and related functionality. To access this page from the LHS menu, click **Run Management** and then click **Emissions Calculator Run** to open the **Emissions Calculator Run** page. This page enables you to view the execution details of a Legal Entity as well as allows you to run a Legal Entity.

**Figure 10-19 The Emissions Calculator Run page**




The **Emissions Calculator Run** page contains the following features:

**Table 10-7 Emissions Calculator Run page – Fields and Descriptions**

| Field | Description |
|---|---|
| Execute | Follow the step mentioned in the **Procedure to Execute a Legal Entity** section to execute a Legal Entity for a selected FIC MIS Date. |
| Refresh | Click this button to refresh the **Emissions Calculator Run** Data Grid completely irrespective of the Subject Area and Consolidation Type. |

**Table 10-7 (Cont.) Emissions Calculator Run page – Fields and Descriptions**

| Field | Description |
| --- | --- |
| Subject Area | Select a Subject Area from the drop-down field. This drop-down field contains the available Datasets in the application. Select any one available Subject Area:<br>• Green House Gases<br>• U.S Securities & Exchange Commission<br>• International Sustainability Standards Board<br>• European Sustainability Reporting Standards<br>• Targets<br><br>**Note**<br>This is a **Required** field. If no Subject Area is selected, the **Last Executed On** and **Last Execution Status** columns will not display any status for the Legal Entities. |
| Consolidate Type | Select a Consolidated Type from the drop-down field. This drop-down field contains the available consolidated types in the application. Select any one available consolidated type:<br>• Consolidated<br>• Standalone<br>• Both<br><br>**Note**<br>This is a **Required** field. If no Consolidated Type is selected, the **Last Executed On** and **Last Execution Status** columns will not display any status for the Legal Entities. |

**Table 10-7 (Cont.) Emissions Calculator Run page – Fields and Descriptions**

| Field | Description |
|---|---|
| Search | Click **Search** after selecting the **Subject Area** and **Consolidated Type** to refresh the **Emissions Calculator Run** pane with the latest execution status:<br>• The **Last Executed On** and **Last Execution Status** columns display the latest status.<br>• Only Legal Entities with the selected combination of the Subject Area and Consolidation Type appear in the **Emissions Calculator Run** pane.<br>This grid displays the default structure of the seeded hierarchy and shows all the Legal Entities irrespective of whether the last execution was run or not |
| Details | Click the **Details** button adjacent to a Legal Entity in the **History** column to view the following details:<br>• **Subject Area**-This displays the Subject Area that was selected at the time of execution.<br>• **Consolidation Type**-This displays the Consolidation Type that was selected at the time of execution.<br>• **Execution Date**-The selected FIC MIS date for the run.<br>• **Executed By**-The name of the user who executed the run.<br>• **Execution Status**-This provides information for the status of the run, if it was successful or not. When the link of the status is clicked, the **Log Viewer** page is displayed. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The **Copy to Clipboard** icon in the **Actions** column enables you to copy the batch details to the clipboard.<br>Additionally you can filter the search results based on the keywords added to the **Search** field. |

# Execute a Legal Entity

On the **Emissions Calculator Run** page, perform the following actions to execute a Legal Entity for a selected **Subject Area** and **Consolidation Type**:

> **Note**
>
> It is mandatory to select a Subject Area and Consolidation Type from the **Subject Area** and **Consolidation Type** drop-down fields.

1. In the **Legal Entity Summary** pane, select the check box(s) adjacent to the Legal Entities that you want to execute. You can either select the Child Legal Entities individually or

select the Parent Legal Entity to include all the Children that are a part of it. This can be done for multiple Parent and Children within them.

2. Click **Execute** to open the **Run Parameters** window. Enter the details:
   a. **Subject Area**-Select a Subject Area from the drop-down list. The available options are:
      - Green House Gases
      - U.S Securities & Exchange Commission
      - International Sustainability Standards Board
      - European Sustainability Reporting Standards
      - Targets
   b. **Consolidation Type**- Select a Consolidation Type from the drop-down field. This drop-down field contains the available consolidation types in the application. Select any one available consolidation type:
      - Consolidated
      - Standalone
      - Both
   c. **MIS Date**- Click the calendar icon to select a **FIC_MIS** date for the execution.
3. Click **Apply**.
   The execution uses the seeded batch and can be monitored via the **Batch Monitor** screen.

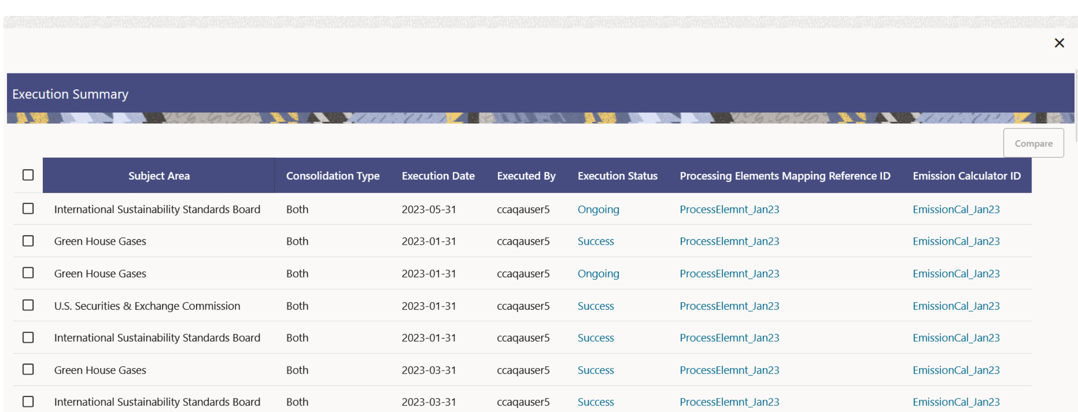
   .
4. Additionally, in the **History** column, click the **Details** button to view the execution history. This provides information for the status of the run, if it was successful or not. When the link of the status is clicked, the **Log Viewer** page is displayed. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The **Copy to Clipboard** icon in the **Actions** column enables you to copy the batch details to the clipboard.

## View the Audit Report

Perform the following steps to view the audit report of an emissions calculator run:

1. In the **Legal Entity Summary** pane, select the **Details** icon adjacent to the Legal Entity that you want to view the audit report of.

**Figure 10-20 Execution Summary Window**



This window provides the status of the run:

- **Subject Area** - This displays the subject area of the execution.
- **Consolidation Type** - This displays the consolidation type of the execution.
- **Execution Date** - This displays the execution date of the execution.
- **Executed By** - This displays the executed by date of the execution.
- **Execution Status** - Click this link to view the **Log Viewer** page. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The Copy to Clipboard icon in the Actions column enables you to copy the batch details to the clipboard.
- **Processing Elements Mapping Reference ID** - Click the link in this column to view the preference/definition and configurations provided in the Processing Elements Mapping UI such as the expression, emission category, loaders etc. for a selected run in view mode.
- **Emission Calculator ID** - Click the link in this column to view the preference and configurations provided in the Emissions Calculator UI such as the GWP version, emission category, emission factor source etc. in a view mode.

,When the link of the status is clicked, the Log Viewer page is displayed. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The Copy to Clipboard icon in the Actions column enables you to copy the batch details to the clipboard.

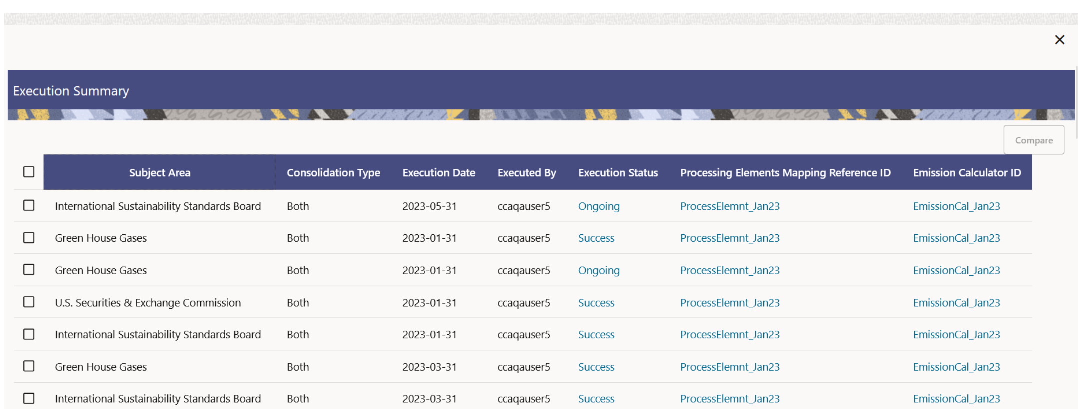
## View the Comparative Report

On the **Execution Summary** page, perform the following actions to view the comparative report between runs:

> **Note**
>
> Only runs with the *Success* status can be used for comparison.

1. In the **Legal Entity Summary** pane, select the **Details** icon adjacent to the Legal Entity that you want to view the report of.

**Figure 10-21 Execution Summary Window**

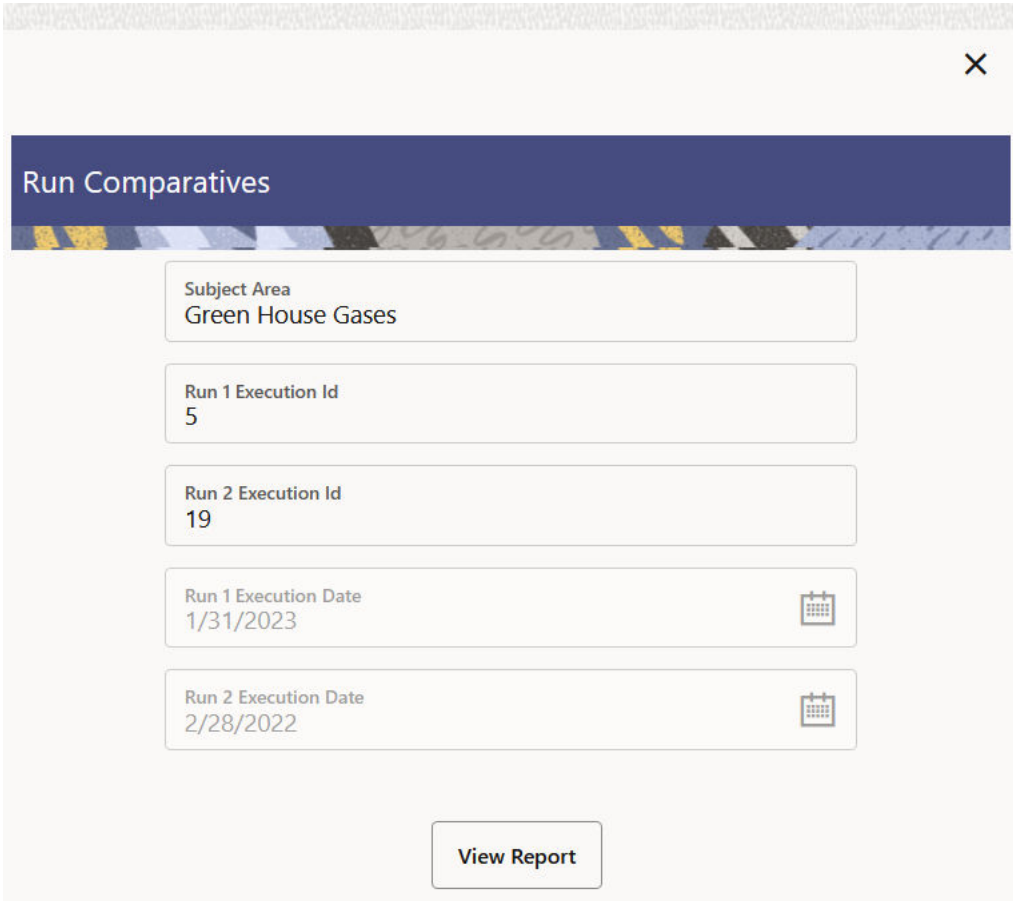



2. Select any two runs. When two runs are selected, the **Compare** button is enabled.

> **Note**
>
> If more than two runs are selected, then the **Compare** button is disabled.

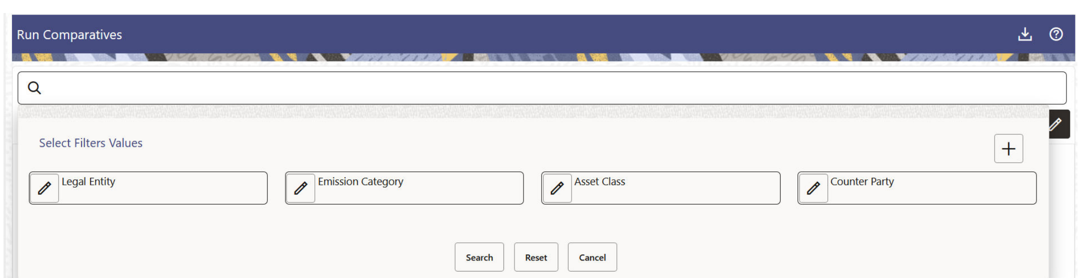
3. Click the Compare button to open the **Run Comparatives** window.

**Figure 10-22 Run Comparatives Window**



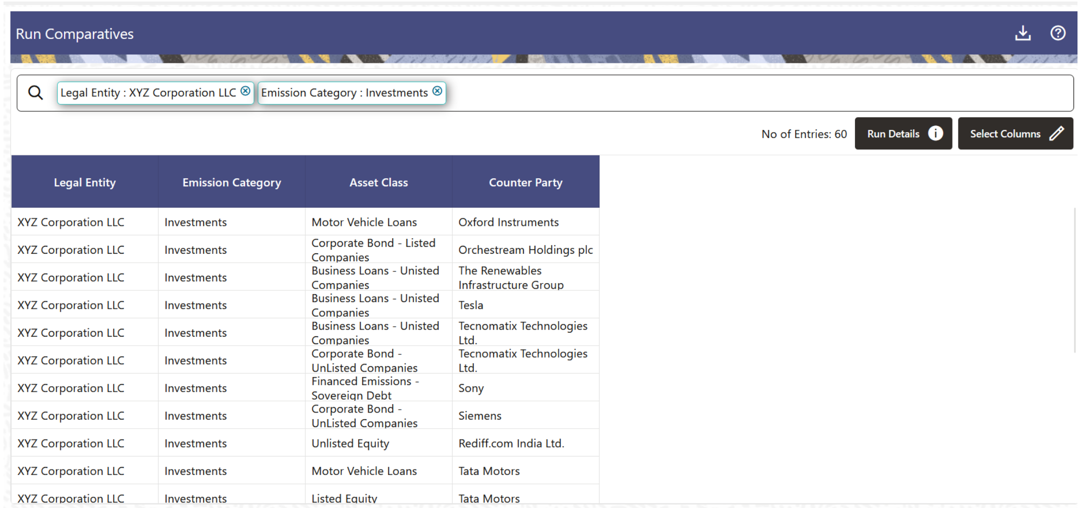

4. Click **View Report** to view the **Run Comparatives** window.

**Figure 10-23 Run Comparatives Window**




5. Select the legal entity, emission category, asset class, counter party, and account number and then click Search. Additionally, click **Reset** to reset the values to it's default values or click **Cancel** to cancel the action.

**Figure 10-24 Run Comparatives Window**



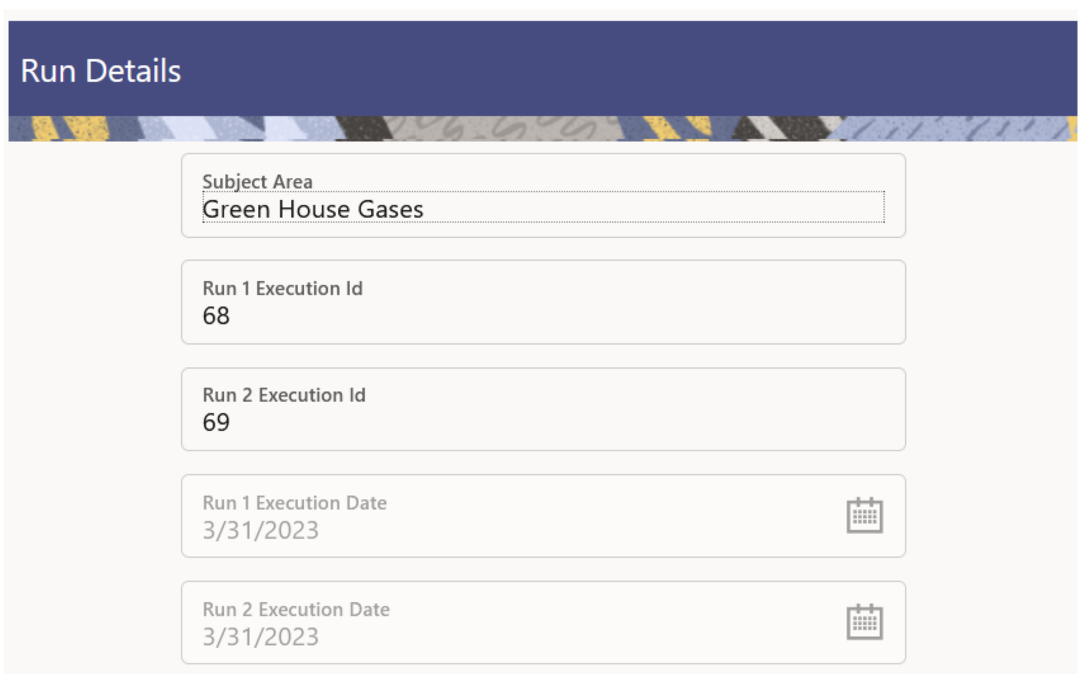

| Legal Entity | Emission Category | Asset Class | Counter Party |
|---|---|---|---|
| XYZ Corporation LLC | Investments | Motor Vehicle Loans | Oxford Instruments |
| XYZ Corporation LLC | Investments | Corporate Bond - Listed Companies | Orchestream Holdings plc |
| XYZ Corporation LLC | Investments | Business Loans - Unlisted Companies | The Renewables Infrastructure Group |
| XYZ Corporation LLC | Investments | Business Loans - Unlisted Companies | Tesla |
| XYZ Corporation LLC | Investments | Business Loans - Unlisted Companies | Tecnomatix Technologies Ltd. |
| XYZ Corporation LLC | Investments | Corporate Bond - UnListed Companies | Tecnomatix Technologies Ltd. |
| XYZ Corporation LLC | Investments | Financed Emissions - Sovereign Debt | Sony |
| XYZ Corporation LLC | Investments | Corporate Bond - UnListed Companies | Siemens |
| XYZ Corporation LLC | Investments | Unlisted Equity | Rediff.com India Ltd. |
| XYZ Corporation LLC | Investments | Motor Vehicle Loans | Tata Motors |
| XYZ Corporation LLC | Investments | Listed Equity | Tata Motors |

### Note

It is mandatory to select the **Legal Entity** and **Emission Category**.

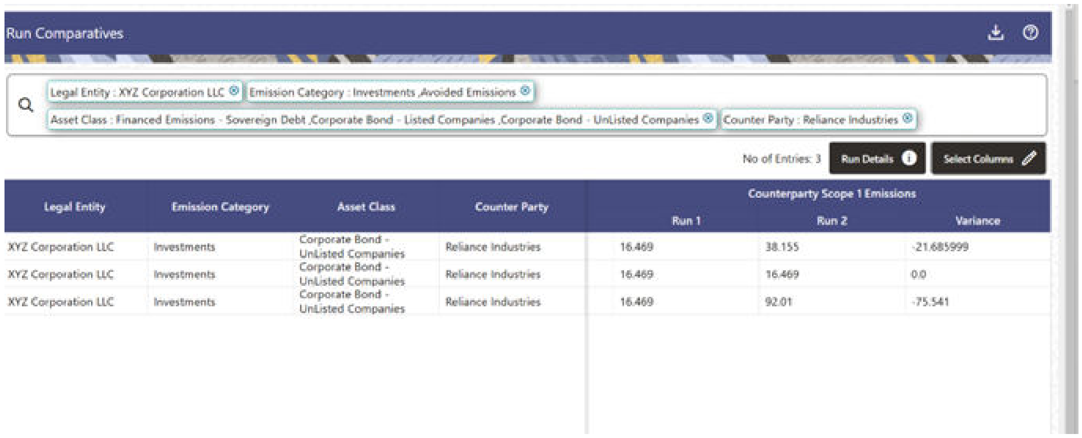
6. Select **Run Details** button if you want to view the run details of the report.

**Figure 10-25 Run Details Window**




7. Click the **Select Columns** button, to select the column(s).

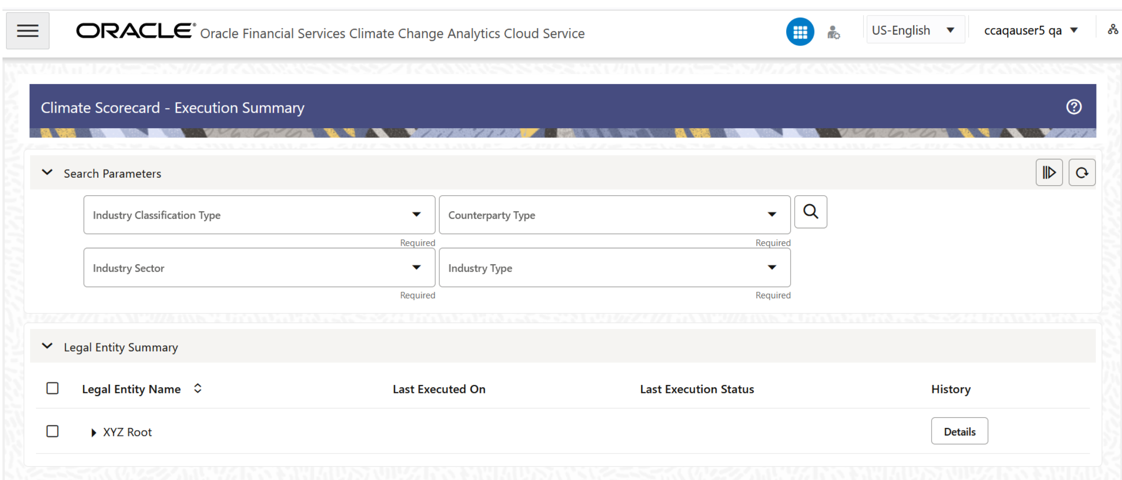
**Figure 10-26 Run Comparatives Window**




# Climate Scorecard- Execution Summary Page

This page is the gateway to the Execution Summary feature and related functionality. To access this page from the LHS menu, click **Run Management** and then click **Climate Scorecard Run** to open the **Climate Scorecard- Execution Summary** page. This page enables you to view the execution details of a Climate Scorecard as well as run it.

**Figure 10-27 The Climate Scorecard - Execution Summary page**




The **Climate Scorecard- Execution Summary** page contains the following features:

**Table 10-8 Climate Scorecard- Execution Summary page – Fields and Descriptions**

| Field | Description |
| --- | --- |
| Execute | Follow the step mentioned in the **Procedure to Execute a Legal Entity** section to execute a Legal Entity for a selected FIC MIS Date. |

**Table 10-8 (Cont.) Climate Scorecard- Execution Summary page – Fields and Descriptions**

| Field | Description |
|---|---|
| Refresh | Click this button to refresh the **Climate Scorecard - Execution Summary** Data Grid completely irrespective of the Industry Classification Type and Counterparty Type. |
| Industry Classification Type | Select a Industry Classification Type from the drop-down field. This drop-down field contains the available Datasets in the application. Select any one available Subject Area:<br>• North American Industry Classification System (NAICS)<br>• European Classification of Economic Activities (NACE)<br>• SASB Sustainable Industry Classification System (SICS)<br>• Global Industry Classification Standard (GICS)<br>• Standard Industry Classification (SIC)<br><br>**Note**<br>This is a **Required** field. If no Industry Classification Type is selected, the **Last Executed On** and **Last Execution Status** columns will not display any status for the Legal Entities. |
| Counterparty Type | Select a Counterparty Type from the drop-down field. This drop-down field contains the available counterparty types in the application. Select any one available counterparty type:<br>• Individual<br>• Small and Medium Enterprise<br>• Bank<br><br>**Note**<br>This is a **Required** field. If no Counterparty Type is selected, the **Last Executed On** and **Last Execution Status** columns will not display any status for the Legal Entities. |

**Table 10-8 (Cont.) Climate Scorecard- Execution Summary page – Fields and Descriptions**

| Field | Description |
|---|---|
| Industry Sector | Select an industry sector from the drop-down list. This drop-down field contains the available industry sectors in the application. Select any one available industry sector:<br>• Construction<br>• Electricity, Gas, Steam And Air Conditioning Supply<br>• Health Care and Social Assistance<br>• Information<br>• Manufacturing<br>• Mining, Quarrying, and Oil and Gas Extraction<br>• Others<br>• Real Estate and Rental and Leasing<br>• Retail Trade<br>• Transportation and Warehousing<br>• Utilities<br>• Wholesale Trade |
| Industry Type | Select an industry type from the drop-down list. This drop-down field contains the available industry types in the application. Select any one available industry type:<br>• Cement<br>• Steel |
| Search | Click **Search** after selecting the **Industry Classification Type** and **Counterparty Type** to refresh the **Climate Scorecard - Execution Summary** pane with the latest execution status:<br>• The **Last Executed On** and **Last Execution Status** columns display the latest status.<br>• Only Legal Entities with the selected combination of the Industry Classification Type and Counterparty Type appear in the **Climate Scorecard - Execution Summary** pane.<br>This grid displays the default structure of the seeded hierarchy and shows all the Legal Entities irrespective of whether the last execution was run or not |

**Table 10-8 (Cont.) Climate Scorecard- Execution Summary page – Fields and Descriptions**

| Field | Description |
| --- | --- |
| Details | Click the **Details** button adjacent to a Legal Entity in the **History** column to view the following details:<br>• **Industry Classification Type**-This displays the Industry Classification Type that was selected at the time of execution.<br>• **Industry Type** - This displays the Industry Type that was selected at the time of execution.<br>• **Industry Sector Type** - This displays the Industry Sector Type that was selected at the time of execution.<br>• **Counterparty Type**-This displays the Counterparty Type that was selected at the time of execution.<br>• **Execution Date**-The selected FIC MIS date for the run.<br>• **Executed By**-The name of the user who executed the run.<br>• **Execution Status**-This provides information for the status of the run, if it was successful or not. When the link of the status is clicked, the **Log Viewer** page is displayed. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The **Copy to Clipboard** icon in the **Actions** column enables you to copy the batch details to the clipboard.<br>Additionally you can filter the search results based on the keywords added to the **Search** field. |

### Procedure to Execute a Climate Scorecard

On the **Execution Summary** page, perform the following actions to execute a Climate Scorecard for a selected **Industry Classification Type** and **Counterparty Type**:

> **Note**
>
> It is mandatory to select a Industry Classification Type and Counterparty Type from the **Industry Classification Type** and **Counterparty Type** drop-down fields.

1. In the **Legal Entity Summary** pane, select the check box(s) adjacent to the Legal Entities that you want to execute. You can either select the Child Legal Entities individually or select the Parent Legal Entity to include all the Children that are a part of it. This can be done for multiple Parent and Children within them.
2. Click **Execute** to open the **Run Parameters** window. Enter the details:
   a. **Industry Classification Type**-Select an Industry Classification Type from the drop-down list. The available options are:
      - North American Industry Classification System (NAICS)

- European Classification of Economic Activities (NACE)
- SASB Sustainable Industry Classification System (SICS)
- Global Industry Classification Standard (GICS)
- Standard Industry Classification (SIC)

b. **Counterparty Type**- Select a Counterparty Type from the drop-down field. This drop-down field contains the available Counterparty Type in the application. Select any one available Counterparty Type:
   - Individual
   - Small and Medium Enterprise
   - Bank

c. **MIS Date**- Click the calendar icon to select a **FIC_MIS** date for the execution.

3. Click **Apply**.
   The execution uses the seeded batch and can be monitored via the **Batch Monitor** screen.

   .

4. Additionally, in the **History** column, click the **Details** button to view the execution history. This provides information for the status of the run, if it was successful or not. When the link of the status is clicked, the **Log Viewer** page is displayed. This page displays the Batch Run Id, Process ID, Timestamp, Severity, and Message. The **Copy to Clipboard** icon in the **Actions** column enables you to copy the batch details to the clipboard.

# Processing Data for Prospective Counterparties

Oracle Financial Services Climate Change Analytics Cloud Service solution handles and processes data for existing as well as prospective counterparties of a reporting entity. This enables processing, reporting and analytics of prospective counterparties' data for the below processes:

- GHG Emissions Calculator
- Climate Scorecard
- Heatmaps
- Other OAS reports and dashboards

# Intercompany Elimination and Consolidation

**Introduction**

Oracle Financial Services Climate Change Analytics Cloud Service enables users to perform elimination and consolidation of intercompany balances in accordance with widely accepted accounting frameworks and standards.

For the elimination and consolidation to perform effectively, users need to ensure that legal entity hierarchy is properly set up within the database. Essentially, there needs to be a proper mapping of holding or parent and subsidiary or child companies.

The application will eliminate all intercompany balances for subsidiary/child entities falling with the hierarchy of holding/parent entity and aggregate all other third-party balances to present a consolidated result.

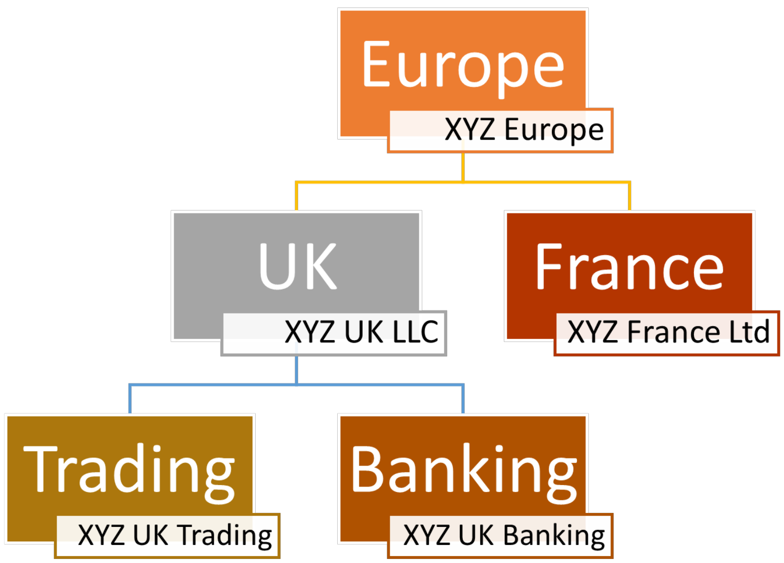
The following illustration depicts the legal entity hierarchy and displays the consolidation logic:

**Example**

In this section, we will look at how intercompany balances will be eliminated and third-party balances will be aggregated to produce a consolidated result.

In the below legal entity hierarchy, we can see that there is a regional holding/parent company called XYZ Europe. It has two subsidiaries namely XYZ UK LLC and XYZ France Ltd. Further down, UK LLC has two subsidiaries called XYZ UK Trading and XYZ UK Banking.

**Figure 10-28    Example of Elimination of Inter Company Balances**




The following table displays the standalone entity balances as of 1st January 2023. *Since this application only stores the receivables leg of a transaction (i.e., Investments), only they are considered here:*

**Table 10-9    The Standalone Entity Balances as of 1st January 2023**

| Legal Entity | Balance | Intercompany (IC) Balance | Receivable from | Third-party Balance |
|---|---|---|---|---|
| XYZ Europe | 200 | 75 | XYZ UK LLC | 125 |
| XYZ UK LLC | 200 | 50 | XYZ UK Trading | 150 |
| XYZ France Ltd | 100 | 0 | N/A | 100 |
| XYZ UK Trading | 50 | 0 | N/A | 50 |
| XYZ UK Banking | 75 | 0 | N/A | 75 |
| **Total** | **625** | **125** | | **500** |

For a consolidation that is performed at XYZ Europe level, the following set of intercompany balances will be eliminated and consequently, only third-party balances will be aggregated to arrive at a total consolidated value of 500, made up of 125, 150, 100, 50 and 75 from the five legal entities within the hierarchy of XYZ Europe.

**Table 10-10 Intercompany Balances that will be Eliminated**

| Legal Entity | Intercompany (IC) Balance eliminated |
|---|---|
| XYZ Europe | 75 |
| XYZ UK LLC | 50 |

### Legal Entity values after Inter-Company Elimination (excluding Asian Companies)

The date used is 31 January, 2023.

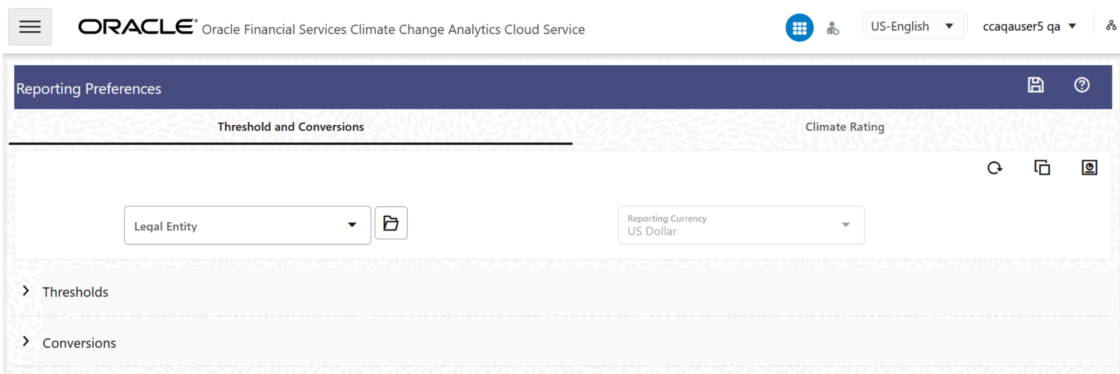
**Table 10-11 Legal Entity values after Inter-Company Elimination**

| Legal Entity (LE) | Standalone LE Value |
|---|---|
| XYZ LLC | 200 |
| XYZ Europe | 180 |
| XYZ France | 200 |
| XYZ UK | 90 |

# 11 Reporting Preferences

The Reporting Preferences page enables you to configure the reporting preferences that are then used in the elements mapping feature.

**Figure 11-1 The Reporting Preferences Page**

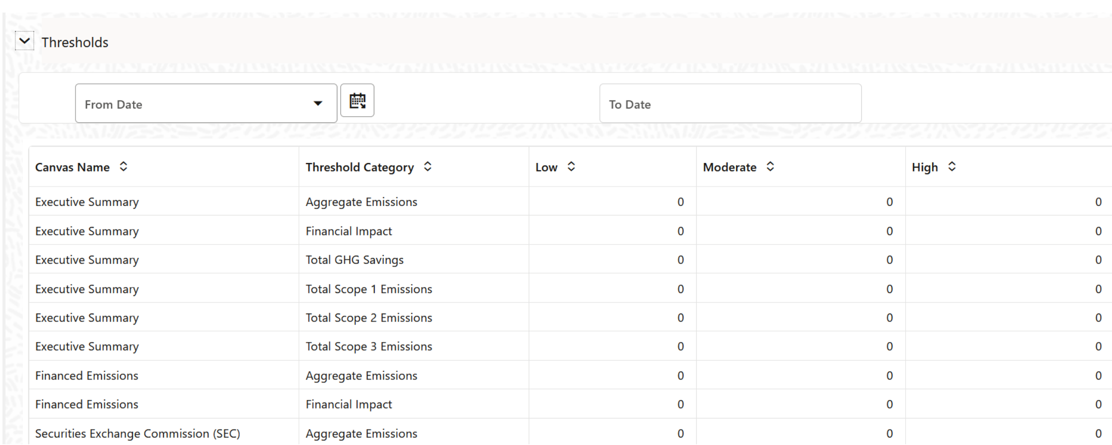



### Configure the Reporting Preferences

- **Legal Entity -** Click the folder icon adjacent to the **Legal Entity** field to select a legal entity:
  1. Click the blank field to view the list of available legal entities. Multiple legal entities can be added or removed in this field.
  2. Click **Apply** to add the selected legal entities to the **Legal Entity** field.
  3. In the **Legal Entity** field, select a legal entity from the drop-down list.
- **Reporting Currency -** The *US Dollar* is selected and this field is disabled by default.

### Thresholds Tab

**Figure 11-2 The Thresholds Tab**

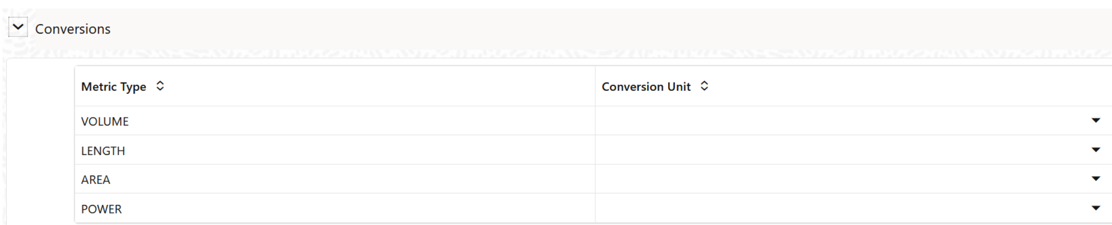



| Canvas Name | Threshold Category | Low | Moderate | High |
|---|---|---|---|---|
| Executive Summary | Aggregate Emissions | 0 | 0 | 0 |
| Executive Summary | Financial Impact | 0 | 0 | 0 |
| Executive Summary | Total GHG Savings | 0 | 0 | 0 |
| Executive Summary | Total Scope 1 Emissions | 0 | 0 | 0 |
| Executive Summary | Total Scope 2 Emissions | 0 | 0 | 0 |
| Executive Summary | Total Scope 3 Emissions | 0 | 0 | 0 |
| Financed Emissions | Aggregate Emissions | 0 | 0 | 0 |
| Financed Emissions | Financial Impact | 0 | 0 | 0 |
| Securities Exchange Commission (SEC) | Aggregate Emissions | 0 | 0 | 0 |

Configure the values in the **Thresholds** tab:

- **From Date -** To select a date from which these configurations will be applicable to the report:
    1. Click the calendar icon and select a date.
       Multiple dates can be added to this field.
    2. In the **From Date** field, select a date.
- **To Date**- Depending on the **From Date** that was configured, the **To Date** field is automatically populated.
- **Low-** Enter a numeric value in this field to define the lower threshold for a particular threshold category that is mapped to a specific canvas.
- **Moderate**- Enter a numeric value in this field to define the moderate threshold for a particular threshold category that is mapped to a specific canvas.
- **High**- Enter a numeric value in this field to define the higher threshold for a particular threshold category that is mapped to a specific canvas.

**Figure 11-3 The Conversion of Standard Units Tab**

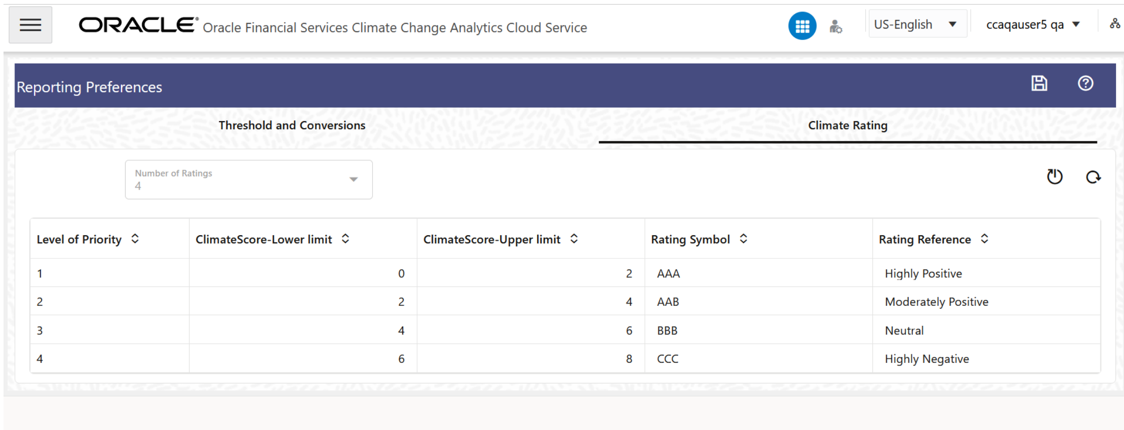



Configure the values in the **Conversion of Standard Units** tab:

- **Volume**- Select a conversion unit for the volume metric type from the droop-down list:
    - Kiloliters
    - Litre
    - Gallon
- **Length**- Select a conversion unit for the length metric type from the droop-down list:
    - Meters
    - Kilometers
- **Area**- Select a conversion unit for the area metric type from the droop-down list:
    - Square Kilometer
    - Acre
- **Power**- Select a conversion unit for the power metric type from the droop-down list:
    - Horsepower
    - Watts

### Climate Rating

**Figure 11-4 The Climate Rating Tab**




- **Number of Ratings -** This field is disabled by default on this tab.
- **ClimateScore-Lower limit**- Enter a climate score lower limit in the field. Depending on the value entered in this field, the **ClimateScore-Upper limit** field is automatically populated sequentially.
- **Reset to previous and saved values**- Click this icon to rest the values to their previous and saved state.
- **Reset to defaults**- Click this icon to rest the values to their default state.

After configuring the reporting preferences, click the **Save** icon to save the settings. Additionally, the following actions can be performed on this page:

- **Reset** - Click the Reset icon to reset the values on this page to their default state.
- **Copy** - Click this icon to copy the configurations set for one legal entity to another:
  1. Click the **Copy** icon.
     A window pops up.
  2. In this window, select a legal entity.
     The legal entity that was selected in the **Legal Entity** field on the **Reporting Preferences** page appears in this drop-down.
  3. In the net field, select a legal entity from the drop-down list. Only a legal entity that does not contain any reporting preference configurations can be selected in this field.
  4. Click **Apply**.
  5. Additionally, click **Close** to close the window without copying the configurations from a configured legal entity to another.
- **Summary View** - To view a specific canvas's configurations and information:
  1. In the **Canvas Name** field, select a canvas from the drop-down list.
  2. In the **Property Name** field, select a property name from the drop-down list.
     The selected canvas's details appear in a table format.
  3. Additionally, click the Download icon to download the threshold details in a .

12

# Reports

This chapter contains information on the various sections of reports that are available in the Oracle Financial Services Climate Change Analytics Cloud Service:

- Executive Summary
- Annual Reports
- Trend Analysis Reports
- U.S. Securities Exchange and Commission (SEC) Reports
- European Sustainability Reporting Standards (ESRS) Reports
- International Sustainability Standards Board (ISSB) Reports
- Counterparty Reports

## Executive Summary

This section contains reports to aid executives, and senior management in visualizing the state of affairs in their organization across various emission categories, countries of operation, and industries.

The Executive Summary contains the following visualizations:

**Figure 12-1 Executive Summary Visualizations**


Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

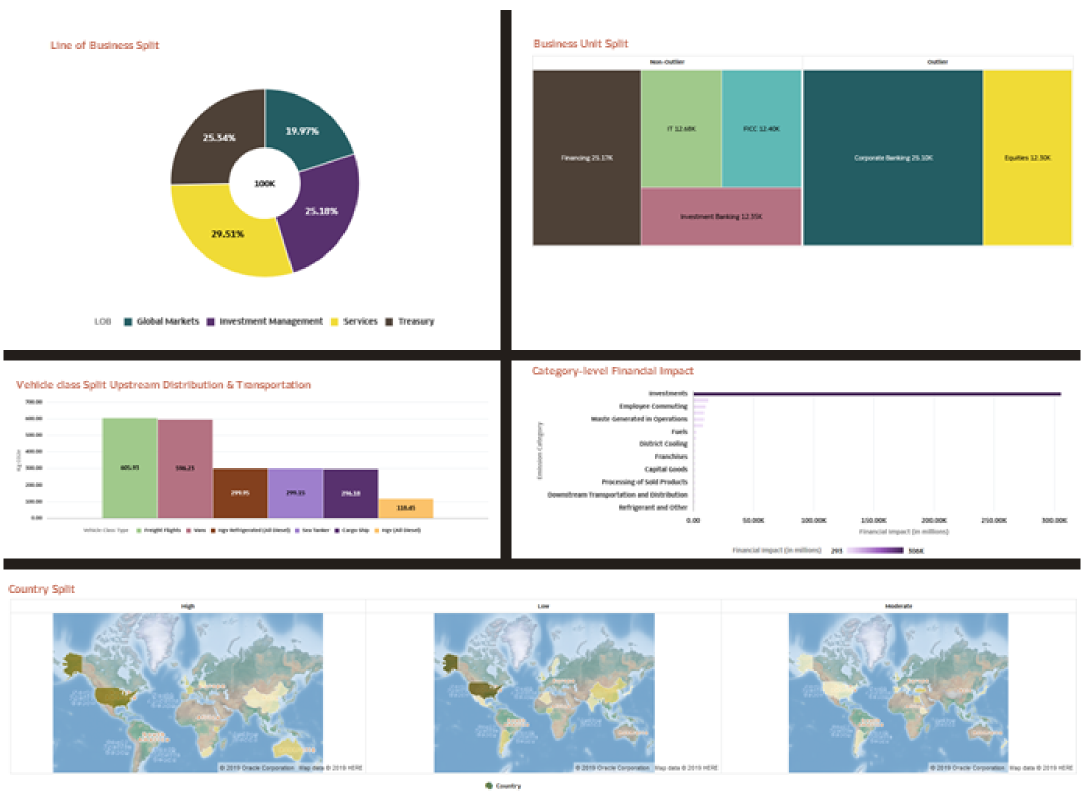
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# Annual Reports

This section contains reports to aid users with a summary of annual emissions and financial impact numbers with a specific focus on individual categories of GHG emissions.

The Annual Reports - Annual Emissions Summary contains the following visualizations:

**Figure 12-2 Annual Reports Annual Emissions Summary Visualizations**



Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation -** Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

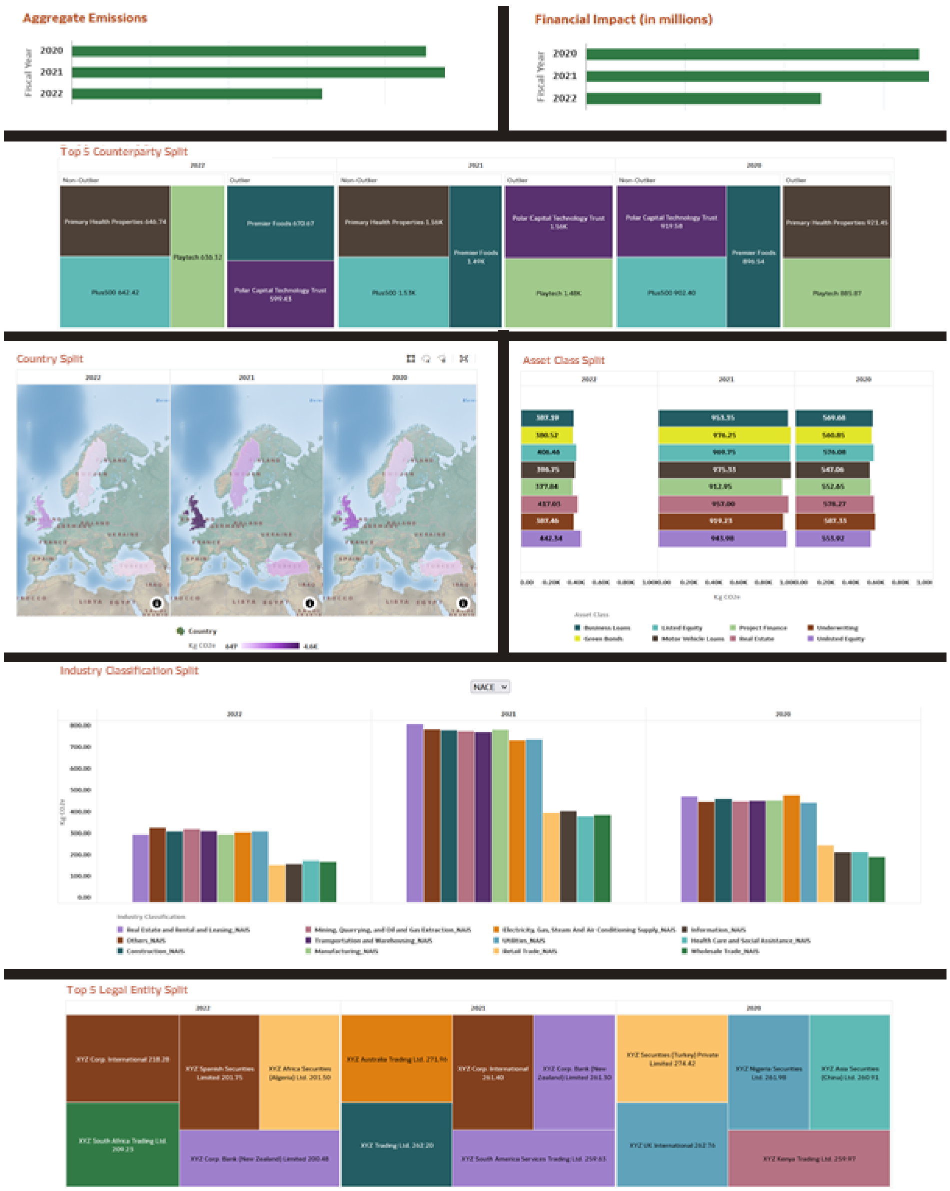
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# Trend Analysis Reports

This section contains reports to aid users with trend analysis across multiple years. The topic includes subjects like Financed Emissions, Climate Targets etc.

The Trend Analysis Reports contains the following visualizations:

**Figure 12-3 Trend Reports Visualizations**




Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Region** - Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** - Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit
- **Counterparty** - Use this filter to select a Counterparty.
- **Sector** - Use this filter to select a sector.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allows users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# U.S. SEC Reports

This section contains reports to aid users visualize reports curated to the specific needs of U.S. SEC climate change reporting rules.

The U.S. SEC Reports contain the following visualizations:

**Figure 12-4 U.S. SEC Reports Visualizations**


Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.

- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

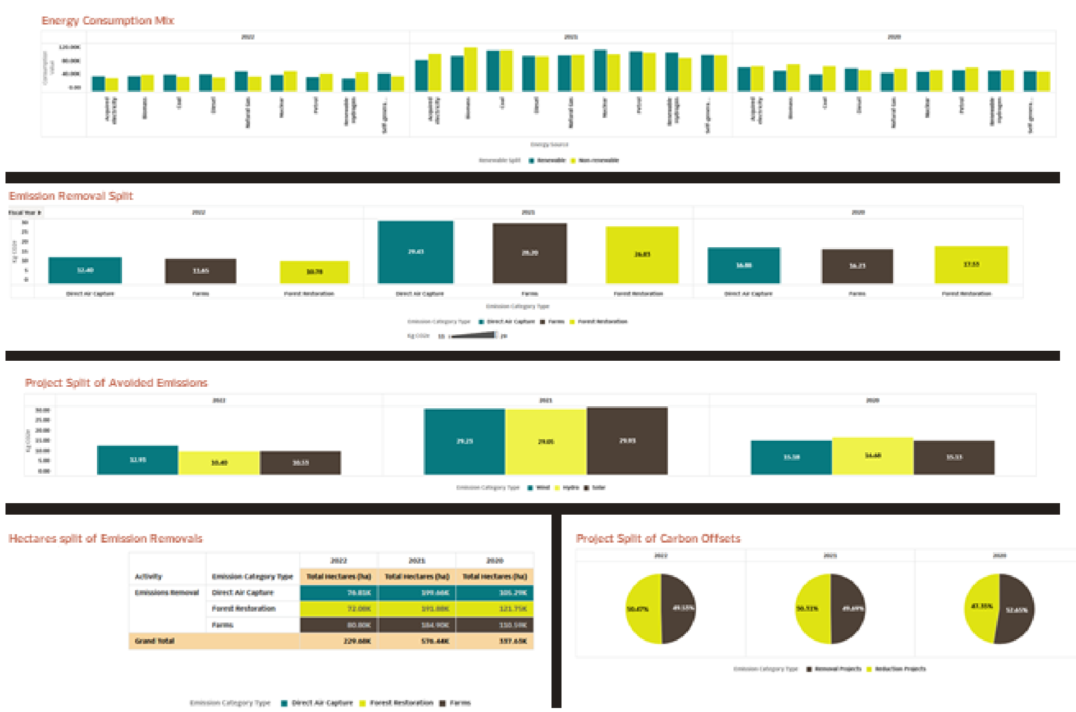
For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# ESRS Reports

This section contains reports to aid users visualize reports curated to the specific needs of ESRS climate change reporting rules.

The ESRS Reports contain the following visualizations:

**Figure 12-5 ESRS Reports Visualizations**




Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** – Use this filter to select a Line of Business.

- **Business Unit** – Use this filter to select a business unit.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# ISSB Reports

This section contains reports to aid users visualize reports curated to the specific needs of ISSB climate change reporting rules.

The ISSB Reports contains the following visualizations:

Users will be able to filter reports using various prompts. Examples of such prompts include:

- **Fiscal Year** - You can use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - You can use this filter to select a specific Month derived from As-of-Date.
- **Region** - Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.
- **LOB** - Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a business unit.
- **Asset Class** - Use this filter to select an Asset Class.
- **Counterparty** - Use this filter to select a Counterparty.
- **Sector** - Use this filter to select a sector.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

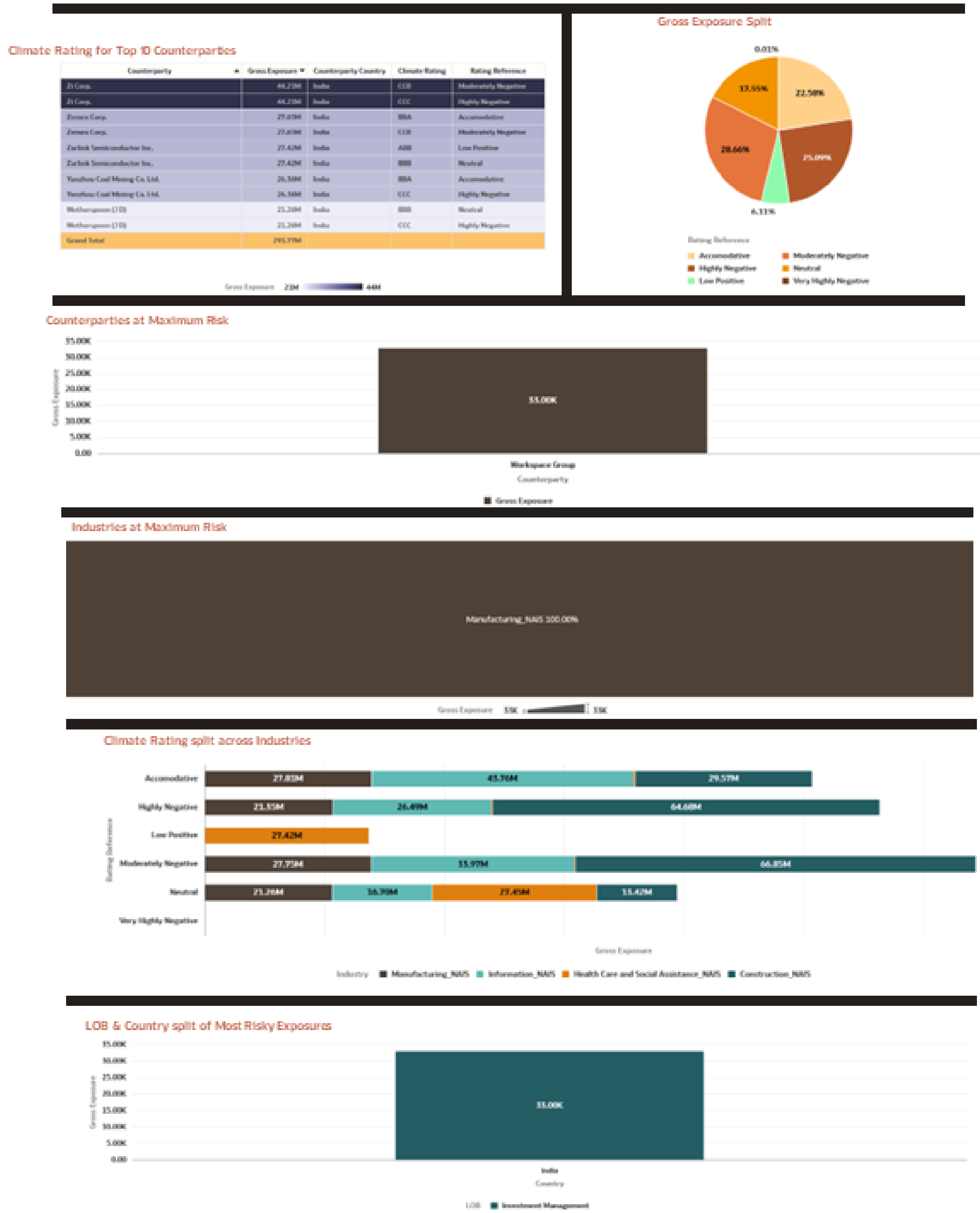
- **Legal Entity** – Showcasing breakup of various legal entities holding relevant value.
- **Line of Business** - Showcasing breakup of various lines of businesses holding relevant value.
- **Business Unit** - Showcasing the breakup of various business units holding relevant value.
- **Country of Incorporation** - Showcasing the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Showcasing breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Showcasing breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# Counterparty Reports

This section provides the visualization of reports curated to the analytical needs on a counterparty. It contains the following visualizations.

**Figure 12-6 Counterparty Reports**




You can also filter the visualizations by using the following prompts:

- **Fiscal Year** - Use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - Use this filter to select a specific Month derived from As-of-Date.
- **Region** – Use this filter to select a Region.
- **Legal Entity** - Use this filter to select a Legal Entity.

- **LOB** – Use this filter to select a Line of Business.
- **Business Unit** – Use this filter to select a Business Unit.

The reports can be filtered by using the following two prompts via a single select drop-down field:

- **Consolidation Type** – Use this filter to select either Standalone or Consolidated status.
- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.
- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

# Portfolio Analytics Reports

This section provides information on the Portfolio Analytics Reports. It contains the following visualizations.

You can also filter the visualizations by using the following prompts:

- **Fiscal Year** - Use this filter to select a specific Fiscal Year derived from As of-Date.
- **Month** - Use this filter to select a specific Month derived from As-of-Date.
- **Industry** - Use this filter to select an industry.
- **Industry Sector** - Use this filter to select an industry sector.
- **Industry Classification** - Use this filter to select an industry classification.
- **Counterparty** – Use this filter to select a counterparty.
- **Counterparty Category** – Use this filter to select a counterparty category.
- **Counterparty Size** – Use this filter to select a counterparty size.
- **Counterparty Type Flag** – Use this filter to select a counterparty type flag.

The reports can be filtered by using the following prompt via a single select drop-down field:

- **Currency** – Use this filter to select a currency.

Several reports within this section allow users with a data drill-down capability, leveraging underlying data across below data elements.

- **Legal Entity** – Displays the breakup of various legal entities holding relevant value.
- **Line of Business** - Displays the breakup of various lines of businesses holding relevant value.

- **Business Unit** - Displays the breakup of various business units holding relevant value.
- **Country of Incorporation** - Displays the breakup of various countries wherein relevant legal entities are incorporated.
- **Counterparty** – Displays the breakup of various counterparties holding relevant value.
- **Country of Counterparty** - Displays the breakup of various countries where relevant counterparties are incorporated.
- **Counterparty Type Flag** – Use this filter to select a counterparty type flag.

For more details on prompts and drill-down capabilities, users can refer to the Reports document on MOS.

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# Glossary

This chapter provides information on the common terms related to various climate disclosure requirements and their descriptions. These terms and their descriptions have been adopted based on reference to the following standards and/or frameworks*:

- Greenhouse Gas Protocol
- Partnership for Carbon Accounting Financials (PCAF)
- International Sustainability Standards Board (ISSB)
- European Sustainability Reporting Standards (ESRS by EFRAG)
- U.S. Securities and Exchange Commission (U.S. SEC)
- **Absolute emissions** - Emissions attributed to a financial institution's lending and investing activity. Expressed in tonnes CO2e.
- **Associated/affiliated company -** The parent company has significant influence over the operating and financial policies of the associated/affiliated company, but not financial control.
- **Asset class** - A group of financial instruments that have similar financial characteristics.
- **Attribution factor** - The share of total greenhouse gas (GHG) emissions of the borrower or investee that are allocated to the loan or investments.
- **Avoided emissions** - Emission reductions that the financed project produces versus what would have been emitted in the absence of the project (the baseline emissions). In the context of the Financed Emissions Standard, avoided emissions are only from renewable power projects.
- **Borrower** A person or company that borrows money from a bank.
- **Business loan -** On-balance sheet loans and lines of credit to businesses, nonprofits, and any other structure of organization that are not traded on a market and are for general corporate purposes (i.e., with unknown use of proceeds as defined by the GHG Protocol).
- **Climate impact -** In the context of this Financed Emissions Standard, climate impact refers to the emissions financed by loans and investments.
- **Climate-Related Physical Risks -** Risks resulting from climate change that can be event-driven (acute physical risk) or from longer-term shifts in climatic patterns (chronic physical risk). Acute physical risks arise from weather-related events such as storms, floods, drought or heatwaves, which are increasing in severity and frequency. Chronic physical risks arise from longer-term shifts in climatic patterns including changes in precipitation and temperature which could lead to sea level rise, reduced water availability, biodiversity loss and changes in soil productivity. These risks could carry financial implications for an entity, such as costs resulting from direct damage to assets or indirect effects of supply-chain disruption. The entity's financial performance could also be affected by changes in water availability, sourcing and quality; and extreme temperature changes affecting the entity's premises, operations, supply chains, transportation needs and employee health and safety.
- **Climate-Related Risks and Opportunities -** Climate-related risks refers to the potential negative effects of climate change on an entity. These risks are categorised as **climate-related physical risks** and **climate-related transition risks**. Climate-related opportunities

refers to the potential positive effects arising from climate change for an entity. Efforts to mitigate and adapt to climate change can produce climate related opportunities for an entity.

- **Climate-Related Transition Plan -** An aspect of an entity's overall strategy that lays out the entity's targets, actions or resources for its transition towards a lower-carbon economy, including actions such as reducing its **greenhouse gas** emissions.
- **Climate-Related Transition Risks -** Risks that arise from efforts to transition to a lower-carbon economy. Transition risks include policy, legal, technological, market and reputational risks. These risks could carry financial implications for an entity, such as increased operating costs or asset impairment due to new or amended climate-related regulations. The entity's financial performance could also be affected by shifting consumer demands and the development and deployment of new technology.
- **Climate Resilience -** The capacity of an entity to adjust to climate-related changes, developments or uncertainties. Climate resilience involves the capacity to manage **climate-related risks** and benefit from **climate-related opportunities**, including the ability to respond and adapt to **climate-related transition risks** and **climate related physical risks**. An entity's climate resilience includes both its strategic resilience and its operational resilience to climate-related changes, developments and uncertainties.
- **Climate risk -** The potential for adverse effects on lives, livelihoods, health status, economic, social and cultural assets, services (including environmental), and infrastructure due to climate change.
- **CO2 equivalent (CO2-e) -** The universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis.
- **Commercial real estate (CRE) -** This asset class includes on-balance sheet loans for specific corporate purposes, namely the purchase and refinance of CRE, and on-balance sheet investments in CRE. This definition implies that the property is used for commercial purposes, such as retail, hotels, office space, industrial, or large multifamily rentals. In all cases, the owner of the building (the borrower or investor) uses the property to conduct income-generating activities. This includes using the property for their own business as well as renting or leasing the property to tenants who use the property for either commercial or residential purposes.
- **Consumer finance -** Finance provided to individual and household consumers, such as mortgages and motor vehicle loans.
- **Consolidation -** Combination of GHG emissions data from separate operations that form part of one company or group of companies.
- **Control -** The ability of a company to direct the policies of another operation. More specifically, it is defined as either operational control (the organization or one of its subsidiaries has the full authority to introduce and implement its operating policies at the operation) or financial control (the organization has the ability to direct the financial and operating policies of the operation with a view to gaining economic benefits from its activities).
- **Corporate debt -** Money that is owed by companies rather than by governments or individual people.
- **Debt -** A financing instrument that requires repayment by the borrower. In the context of this Financed Emissions Standard, debt refers only to the principal amount owed by the borrower and excludes interest.
- **Direct GHG emissions -** Emissions from sources that are owned or controlled by the reporting company.

- **Double Counting -** Occurs when GHG emissions (generated, avoided, or removed) are counted more than once in a GHG inventory or toward attaining mitigation pledges or financial pledges for the purpose of mitigating climate change.
- **Emissions** The release of GHG into the atmosphere.
- **Emission Factor -** A factor allowing GHG emissions to be estimated from a unit of available activity data (e.g. tonnes of fuel consumed, tonnes of product produced) and absolute GHG emissions.
- **Emission Intensity Metric -** Emissions per a specific unit, for example: tCO2e/€M or $M invested, tCO2e/MWh, tCO2e/tonne product produced, tCO2e/MWh, tCO2e/ton product produced, tCO2e/€M or $M company revenue.
- **Emission Removals -** The action of removing GHG emissions from the atmosphere and store it through various means, such as in soils, trees, underground reservoirs, rocks, the ocean, and even products like concrete and carbon fiber.
- **Environmentally Extended Input-Output (EEIO) Data -** EEIO data refers to EEIO emission factors that can be used to estimate scope 1, 2, and upstream scope 3 GHG emissions for a given industry or product category. EEIO data is particularly useful in screening emissions sources when prioritizing data collection efforts.
- **Enterprise Value Including Cash (EVIC) -** The sum of the market capitalization of ordinary shares at fiscal year end, the market capitalization of preferred shares at fiscal year-end, and the book values of total debt and minorities' interests. No deductions of cash or cash equivalents are made to avoid the possibility of negative enterprise values.
- **Equity -** The ownership of banks or investors in a company or project. There are various types of equity, but equity typically refers to shareholder equity, which represents the amount of money that would be returned to a company's shareholders if all company assets were liquidated and all company debt were paid off.
- **Financed Emissions -** Absolute emissions that banks and investors finance through their loans and investments.
- **Financial Institution** A company engaged in the business of dealing with financial and monetary transactions such as deposits, loans, investments, and currency exchange. Financial institutions encompass a broad range of business operations within the financial services sector, including commercial banks, investment banks, development banks, asset owners/managers (mutual funds, pension funds, close-end funds, investment trusts), and insurance companies.
- **Finance Lease -** A lease which transfers substantially all the risks and rewards of ownership to the lessee and is accounted for as an asset on the balance sheet of the lessee. Also known as a Capital or Financial Lease. Leases other than Capital/Financial/Finance leases are Operating leases. Consult an accountant for further detail as definitions of lease types differ between various accepted accounting principles.
- **Fixed Asset Investment -** Equipment, land, stocks, property, incorporated and non-incorporated joint ventures, and partnerships over which the parent company has neither significant influence nor control.
- **Greenhouse Gases (GHG) -** For the purposes of this standard, GHGs are the six gases listed in the Kyoto Protocol: carbon dioxide (CO2); methane (CH4); nitrous oxide (N2O); hydrofluorocarbons (HFCs); perfluorocarbons (PFCs); and sulphur hexafluoride (SF6).
- **GHG Accounting -** A means of measuring the direct and indirect emissions to the Earth's biosphere of CO2 and its equivalent gases from industrial activities.
- **GHG Accounting of Financial Portfolios -** The annual accounting and disclosure of GHG emissions associated with loans and investments at a fixed point in time in line with financial accounting periods. This is also called portfolio GHG accounting.

- **GHG Credit -** GHG offsets can be converted into GHG credits when used to meet an externally imposed target. A GHG credit is a convertible and transferable instrument usually bestowed by a GHG program.
- **GHG Offset -** Offsets are discrete GHG reductions used to compensate for (i.e., offset) GHG emissions elsewhere, for example to meet a voluntary or mandatory GHG target or cap. Offsets are calculated relative to a baseline that represents a hypothetical scenario for what emissions would have been in the absence of the mitigation project that generates the offsets. To avoid double counting, the reduction giving rise to the offset must occur at sources or sinks not included in the target or cap for which it is used.
- **GHG Program -** A generic term used to refer to any voluntary or mandatory international, national, sub-national, government or non-governmental authority that registers, certifies, or regulates GHG emissions or removals outside the company. e.g. CDM, EU ETS, CCX, and CCAR.
- **GHG Project -** A specific project or activity designed to achieve GHG emission reductions, storage of carbon, or enhancement of GHG removals from the atmosphere. GHG projects may be stand-alone projects, or specific activities or elements within a larger non-GHG related project.
- **GHG Protocol Calculation Tools -** A number of cross-sector and sector-specific tools that calculate GHG emissions on the basis of activity data and emission factors (available at www.ghgprotocol.org).
- **GHG Protocol Initiative -** A multi-stakeholder collaboration convened by the World Resources Institute and World Business Council for Sustainable Development to design, develop and promote the use of accounting and reporting standards for business. It comprises of two separate but linked standards—the *GHG Protocol Corporate Accounting and Reporting Standard* and the *GHG Protocol Project Quantification Standard.*
- **GHG Protocol Project Quantification Standard -** An additional module of the GHG Protocol Initiative addressing the quantification of GHGreduction projects. This includes projects that will be used to offset emissions elsewhere and/or generate credits. More information available at www.ghgprotocol.org.
- **Global Warming Potential (GWP) -** A factor describing the radiative forcing impact (degree of harm to the atmosphere) of one unit of a given GHG relative to one unit of CO**2**.
- **Green Power -** A generic term for renewable energy sources and specific clean energy technologies that emit fewer GHG emissions relative to other sources of energy that supply the electric grid. Includes solar photovoltaic panels, solar thermal energy, geothermal energy, landfill gas, low-impact hydropower, and wind turbines.
- **Group Company / Subsidiary -** The parent company has the ability to direct the financial and operating policies of a group company/subsidiary with a view to gaining economic benefits from its activities.
- **Global Trade Analysis Project (GTAP) database -** GTAP is a global network of researchers and policy makers conducting quantitative analysis of international policy issues. GTAP is coordinated by the Center for Global Trade Analysis in Purdue University's Department of Agricultural Economics. The centerpiece of the GTAP is a global database describing bilateral trade patterns, production, consumption, and intermediate use of commodities and services.
- **Home Equity Line of Credit (HELOC) -** A revolving line of credit usually with an adjustable interest rate, which allows homeowners to borrow up to a certain amount over a period of time. HELOCs work in a manner similar to credit cards, where the homeowner can continuously borrow up to an approved limit while paying off the balance.
- **Home Equity Loan (HEL) -** Sometimes referred to as a second mortgage, usually allows homeowners to borrow a lump sum against their current home equity for a fixed rate over a

fixed period of time. Usually, home equity loans are used to finance large expenditures, such as home repairs or college tuition.

- **IFRS Sustainability Disclosure Standards -** Standards of that name issued by the International Sustainability Standards Board.
- **Indirect GHG Emissions -** Emissions that are a consequence of the operations of the reporting company, but occur at sources owned or controlled by another company.
- **Intensity Ratios -** Ratios that express GHG impact per unit of physical activity or unit of economic value (e.g. tonnes of CO**2** emissions per unit of electricity generated). Intensity ratios are the inverse of productivity/efficiency ratios.
- **Intergovernmental Panel on Climate Change (IPCC) -** International body of climate change scientists. The role of the IPCC is to assess the scientific, technical and socio-economic information relevant to the understanding of the risk of human-induced climate change (www.ipcc.ch).
- **Internal Carbon Price -** Price used by an entity to assess the financial implications of changes to investment, production and consumption patterns, and of potential technological progress and future emissions abatement costs. An entity can use internal carbon prices for a range of business applications. Two types of internal carbon prices that an entity commonly uses are: (a) a shadow price, which is a theoretical cost or notional amount that the entity does not charge but that can be used to understand the economic implications or tradeoffs for such things as risk impacts, new investments, the net present value of projects, and the cost and benefit of various initiatives; and (b) an internal tax or fee, which is a carbon price charged to a business activity, product line, or other business unit based on its **greenhouse gas** emissions (these internal taxes or fees are similar to intracompany transfer pricing).
- **Inventory -** A quantified list of an organization's GHG emissions and sources.
- **Inventory Boundary -** An imaginary line that encompasses the direct and indirect emissions that are included in the inventory. It results from the chosen organizational and operational boundaries.
- **Investee Company or Investee Project-** A company or project in which an investor makes a direct investment.
- **Investment** - The term investment (unless explicitly stated otherwise) is used in the broad sense: "Putting money into activities or organizations' with the expectation of making a profit." Most forms of investment involve some form of risk taking, such as investment in equities, debt, property, projects, and even fixed interest securities which are subject to inflation risk, among other risks.
- **Known use of proceeds -** Known use of proceeds relates to investments and loans for specific (corporate or consumer) purposes, i.e., the financial institution knows for what activity the money is used.
- **Kyoto Protocol -** A protocol to the United Nations Framework Convention on Climate Change (UNFCCC). Once entered into force it will require countries listed in its Annex B (developed nations) to meet reduction targets of GHG emissions relative to their 1990 levels during the period of 2008–12.
- **Latest International Agreement on Climate Change -** An agreement by states, as members of the United Nations Framework Convention on Climate Change, to combat climate change. The agreements set norms and targets for a reduction in **greenhouse gases**.
- **Life Cycle Analysis -** Assessment of the sum of a product's effects (e.g. GHG emissions) at each step in its life cycle, including resource extraction, production, use and waste disposal.

- **Listed equity and corporate bonds -** This asset class includes all on-balance sheet listed corporate bonds and all on-balance sheet listed equity that are traded on a market and are for general corporate purposes, i.e., unknown use of proceeds as defined by the GHG Protocol.
- **Material Information -** In the context of **sustainability-related financial disclosures**, information is material if omitting, misstating or obscuring that information could reasonably be expected to influence decisions that **primary users of general purpose financial reports** make on the basis of those reports, which include financial statements and sustainability-related financial disclosures and which provide information about a specific **reporting entity**.
- **Mortgages -** This asset class includes on-balance sheet loans for specific consumer purposes—namely the purchase and refinance of residential property, including individual homes and multi-family housing with a small number of units. This definition implies that the property is used only for residential purposes and not for commercial activities.
- **Motor Vehicle Loans** - This asset class refers to loans and lines of credit to businesses and consumers for specific (corporate or consumer) purposes—namely the finance of one or several motor vehicles.
- **Operating Lease -** A lease which does not transfer the risks and rewards of ownership to the lessee and is not recorded as an asset in the balance sheet of the lessee. Leases other than Operating leases are Capital/Financial/Finance leases. Consult an accountant for further detail as definitions of lease types differ between various accepted financial standards.
- **Paris Agreement -** The Paris Agreement, adopted within the UNFCCC in December 2015, commits participating countries to limit global temperature rise to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C, adapt to changes already occurring, and regularly increase efforts over time.
- **Primary Users of General Purpose Financial Reports (Primary Users) -** Existing and potential investors, lenders and other creditors.
- **Project Finance -** This asset class includes all on-balance sheet loans or equities to projects for specific purposes, i.e., with known use of proceeds as defined by the GHG Protocol. The financing is designated for a defined activity or set of activities, such as the construction and operation of a gas-fired power plant, a wind or solar project, or energy efficiency projects.
- **Reporting Entity -** An entity that is required, or chooses, to prepare general purpose financial statements.
- **Scenario Analysis -** A process for identifying and assessing a potential range of outcomes of future events under conditions of uncertainty.
- **Science-based Reduction Targets (SBTs) -** Targets adopted by companies to reduce GHG emissions are considered science-based if they are in line with what the latest climate science says is necessary to meet the goals of the Paris Agreement—to limit global warming to well-below 2°C above preindustrial levels and pursue efforts to limit warming to 1.5°C.
- **Scope -** Defines the operational boundaries in relation to indirect and direct GHG emissions.
- **Scope 1 Emissions** - Direct GHG emissions that occur from sources owned or controlled by the reporting company—i.e., emissions from combustion in owned or controlled boilers, furnaces, vehicles, etc.
- **Scope 2 Emissions** - Indirect GHG emissions from the generation of purchased or acquired electricity, steam, heating, or cooling consumed by the reporting company. Scope

2 emissions physically occur at the facility where the electricity, steam, heating, or cooling is generated.

- **Scope 3 Emissions** - All other indirect GHG emissions (not included in Scope 2) that occur in the value chain of the reporting company. Scope 3 can be broken down into upstream emissions and downstream emissions:
  - Upstream emissions include all emissions that occur in the life cycle of a material/ product/service up to the point of sale by the producer, such as from the production or extraction of purchased materials.
  - Downstream emissions include all emissions that occur as a consequence of the distribution, storage, use, and end-of-life treatment of the organization's products or services.
- **Scope 3 Category 15 (Investments) Emissions -** This category includes scope 3 emissions associated with the reporting company's loans and investments in the reporting year, not already included in scope 1 or scope 2.
- **Sequestered Emissions** - Refers to atmospheric CO2 emissions that are captured and stored in solid or liquid form, thereby removing their harmful global warming effect.
- **Sovereign Debt -** This asset class includes sovereign bonds and sovereign loans of all maturities issued in domestic or foreign currencies. Both sovereign loans and bonds lead to the transfer of funds to the country, which in turn creates a debt obligation to be repaid by the borrowing country.
- **Stationary Combustion -** Burning of fuels to generate electricity, steam, heat, or power in stationary equipment such as boilers, furnaces etc.
- **Sustainability-Related Financial Disclosures -** A particular form of **general purpose financial reports** that provide information about the **reporting entity's** sustainability related risks and opportunities that could reasonably be expected to affect the entity's cash flows, its access to finance or cost of capital over the short, medium or long term, including information about the entity's governance, strategy and risk management in relation to those risks and opportunities, and related metrics and targets.
- **Total Balance Sheet Value -** A balance sheet is a financial statement that reports a company's assets, liabilities, and shareholders' equity. The balance sheet value refers to the sum of total equity and liabilities, which is equal to the company's total assets.
- **United Nations Framework Convention on Climate Change (UNFCCC) -** Signed in 1992 at the Rio Earth Summit, the UNFCCC is a milestone Convention on Climate Change treaty that provides an overall framework for international efforts to (UNFCCC) mitigate climate change. The Kyoto Protocol is a protocol to the UNFCCC.
- **Unknown Use of Proceeds -** Unknown use of proceeds refers to investments and loans for general (corporate or consumer) purposes, i.e., the financial institution does not know exactly for what activity the money is used, which holds for general-purpose loans.
- **Unlisted Equity -** All on-balance sheet equity investments to businesses, nonprofits, and any other structure of organization that are not traded on a market and are for general corporate purposes, i.e., with unknown use of proceeds as defined by the GHG Protocol. Unlisted equity is also referred to as equity investments in private companies (i.e., the financial institution obtains shares of the company).
- **Users of General Purpose Financial Reports (users) -** See **Primary users of General Purpose Financial Reports (primary users)**. These definitions describe the same population.
- **Value chain emissions -** Emissions from the upstream and downstream activities associated with the operations of the reporting company.

- **Vehicle make -** The name of the company that manufactures the vehicle. Vehicle model The product name of the vehicle.