Opower Analytics Visualization User Guide

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Oracle Utilities Opower Analytics Visualization User Guide

Welcome to the Oracle Utilities Opower Analytics Visualization user guide. Find a topic using the search field or select from the list below. Have a question? Contact My Oracle Support.

> **Note**
>
> This guide describes Analytics Visualization for the Oracle Utilities Opower program. For information on Analytics Visualization for Oracle Utilities enterprise applications (such as the Customer Cloud Service or Meter Solution Cloud Service), see the Oracle Utilities Analytics Visualization cloud service documentation.

Get Started

- Application Overview
- Administer the Service
- Activate Account and Log In
- Subject Areas Out of the Box
- Measures, Attributes, and Dimensions

Common Tasks

- Perform Common Tasks
- Use Prebuilt Dashboards
- Explore, Visualize, and Analyze Data
- Filter Your Data
- Share and Export Workbooks and Files
- Contact Your Delivery Team

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Get Started

Oracle Utilities Opower Analytics Visualization enables utilities to explore customer data and create custom data extracts and visualizations related to the Opower program. It includes rich pre-built analytical subject areas, visualizations, and workbooks that allow you to derive strategic insights from your data. For example, you can view digital engagement metrics related to customers who receive Oracle Utilities Opower products. See Perform Common Tasks for more information about how to use the application to support your business goals.

Audience and Scope

This guide describes the Analytics Visualization application for the Opower program, and provides basic procedures for using it. The content is intended for consumers and creators of workbooks and data visualizations using Opower Analytics Visualization. The content also covers administration tasks, such as adding users to the application.

For information on Analytics Visualization for Oracle Utilities enterprise applications (such as the Customer Cloud Service or Meter Solution Cloud Service), see the Oracle Utilities Analytics Visualization cloud service documentation.

> **Note**
>
> While the data within Opower Analytics Visualization is unique to the Opower program, the application itself is built on Oracle Analytics Server technology. Some references in this guide therefore lead to the Oracle Analytics Server online help.

Subject Areas

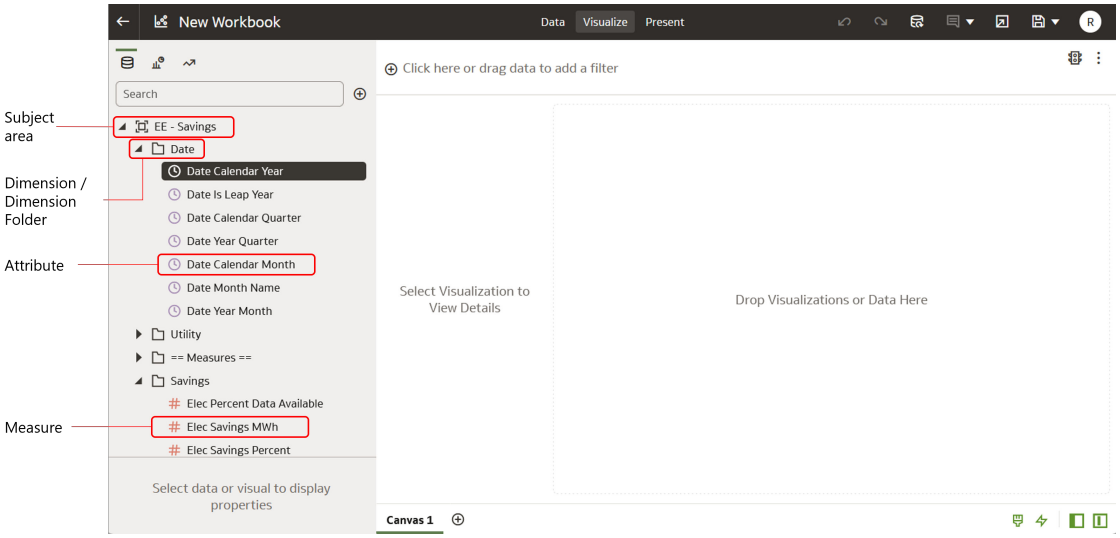
One of the key benefits of Opower Analytics Visualization is that it comes with predefined subject areas that are specific to the Opower program. A subject area is a logical grouping of data that can be analyzed in a manner that reflects the structure of your business. For more information, see Subject Areas Out of the Box.

Measures, Attributes, and Dimensions

There are three common components within Opower Analytics Visualization subject areas: measures, attributes, and dimensions.

Measures and attributes are data elements that you use to build your visualizations. Dimensions are simply categories or folders that contain attributes.

You can think of a *measure* as a "numerator" with a quantitative number that can be divided or filtered by an attribute. Conversely, an *attribute* is a "denominator" that can divide or filter a measure. Or you can think of a *measure* as a quantity for the y-axis of a graph, and an *attribute* as a value used on the x-axis of a graph. Both elements are used to dissect and analyze your data in different ways.

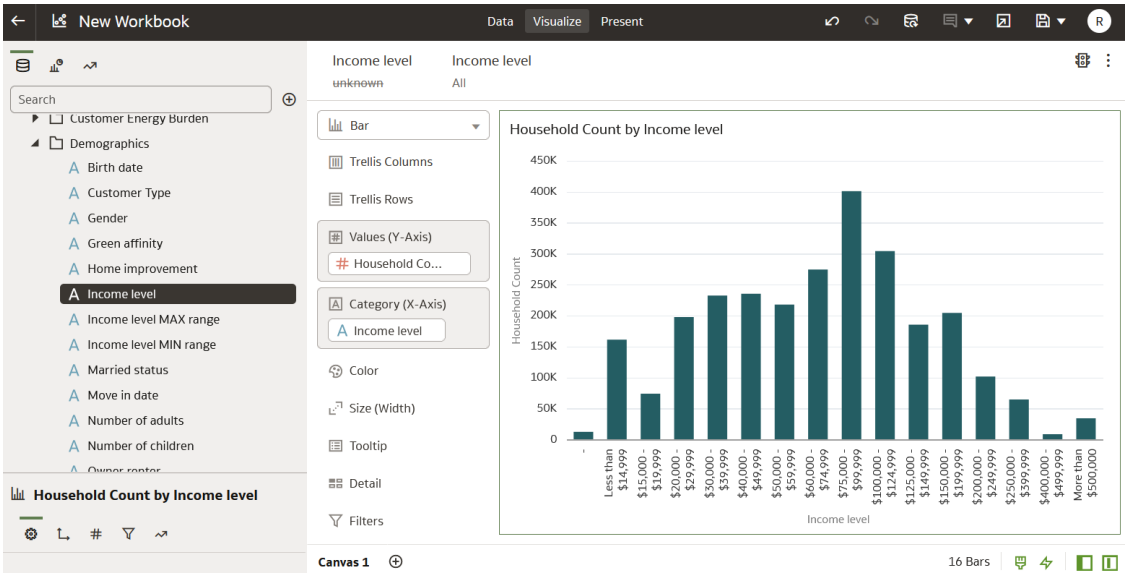


See the examples below for more information about how you can use attributes and measures together to create visualizations.

Example 1: Households by Income Level

One common measure in Opower Analytics Visualization is household count, which can be found in the Household - Count of Customers subject area. Let's say you want to know the number of households in your service area that have a certain income level. You would want to filter the number of households in your service territory into income level groupings.

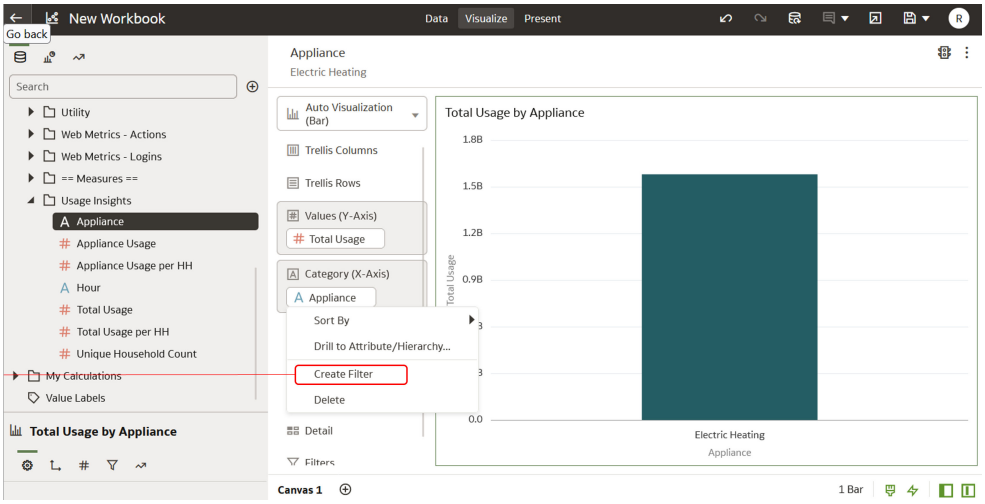
To do this, you would navigate to the Household - Count of Customer subject area. Then you would select Household Count as your measure, and select Income Level as your attribute, and drag both to the canvas. See the screenshot below for how this might look in the user interface. Notice that Household Count is on the y-axis and Income Level is on the x-axis.



Example 2: Total Usage by Appliance (Electric Heating)

Another measure you can filter on is the Total Usage measure available in the Appliance - Usage Insights subject area. For example, let's say you want to know the total energy usage of a single appliance, such as electric heating.

In this case, you would navigate to the Appliance - Usage Insights subject area. Then you would select Total Usage as your measure, and select Appliance as your attribute, and drag both to the canvas. You would then need to right-click the Appliance attribute and create a filter to only include Electric Heating. See the screenshot below for an example of how this might look.



Note about Attributes Filtering Attributes

Note that an attribute cannot be used to filter another attribute. For example, let's say you wanted to create a x-y axis bar graph with two attributes: Site Sections and Income Level. This would be a nonsensical filter because site sections are just names for different sections of a website, and income level groupings are just names for different categories of income. Neither of these attributes has a quantity, and so there would be no numerical value to show.

Terminology

There are several terms in the Analytics Visualization documentation that might be unfamiliar to you as you learn about the application. Review the information below to gain a better understanding of these terms and the concepts behind them.

Attribute

An attribute is an individual data element within a dimension or dimension folder within a subject area. Often, an attribute describes a business entity. See Measures, Attributes, and Dimensions for more information about how attributes work.

Calculation

A calculation is a predefined SQL query that can be dragged and dropped onto a canvas to create visualizations for key areas of your business operations.

Canvas

A canvas is a page within a workbook that contains one or more visualizations.

Data Panel

The Data Panel is a side menu that displays in Analytics Visualization. From the Data Panel, you can select data elements and visualization options when creating a canvas.

Dataset

A dataset defines the structure of usable data that can be leveraged in a workbook. There are a few different types of datasets:

- Subject areas that are constructed within a logical model
- Data sets based on a direct connection to a source (such as a database)
- Data sets from an imported file (such as a spreadsheet

Dimension / Dimension Folder Test

A dimension is a category or folder that contains individual attributes. For example, in the Web Pageviews subject area, there is a dimension folder with attributes such as Birth Date, Customer Type, and Gender.

Measure

A measure is an individual data element that is typically a calculated value, such as an energy usage amount or a unique customer count. For example, you could use measures to determine the amount of AMI energy use of an appliance (such as a clothes washer or dishwasher) over a selected period of time. See Measures, Attributes, and Dimensions for more information about how measures work.

Subject Area

A subject area is a logical grouping of data that can be analyzed in a manner that reflects the structure of your business. A subject area consists of one or more dimension folders (which contain attributes) and a folder containing measures.

Visualization

Visualizations are graphical displays that help you to analyze your data in a productive and meaningful way.

Visualization Type

A visualization type refers to the type of graphic you want to create in your canvas, such as a pie chart, bar chart, or tree map.

Workbook

A workbook is a grouping of canvases which can include data from one or more subject areas.

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Administer the Service

Designated users can perform administrative tasks in Opower Analytics Visualization. These users are considered "Client User Administrators" who manage access for all other users within the environment. Oracle employees are not permitted to administer user access.

- Add a User
- Reassign Administrator Duties

Add a User

Administrators can add users to Opower Analytics Visualization and manage user permissions through the Oracle Cloud Infrastructure (OCI) Identity Access Management (IAM) administration console.

> **Note**
>
> This procedure can only be completed after you have received a URL to your OCI IAM administration console and created a password. You receive a URL and password creation instructions in an email after your Oracle Utilities Service Delivery Manager has added you to the system.

To set up a user:

1. Navigate to the OCI IAM administration console you received from your Service Delivery Manager. **Tip**: Bookmark the URL so that you can easily find it later.
2. Complete the following procedure to add a new user: Creating a User.
3. Complete the following procedure to add users to one or more groups: Adding Users to a Group. In most cases, you should assign the user to all four of the groups listed in the table below. The table defines the permissions for each group.

Group	Permissions
BIContentAuthor	• Provides read and write access to BI Publisher, a tool for creating reports. • Provides read-only access to Data Visualization, a tool for creating graphs and visualizations.
BIConsumer	• Provides read-only access to BI Publisher. • View and explore reports.
DVContentAuthor	• Provides read and write access to Data Visualization. • Create, delete, modify, and view visualizations.
DVConsumer	• Provides read-only access to Data Visualization. • View and explore visualizations.

The users you add will receive a confirmation email with a link to activate their account and set a password. When this is done, they can log in to the application.

Reassign Administrator Duties

If you are unable to perform the role of administrator for Opower Analytics Visualization, you can easily reassign the role.

> **Note**
>
> In the event that the current administrator is unavailable or unable to reassign administrator duties, you can go to My Oracle Support and file a request to complete this task.

To reassign primary administrator duties:

1. Navigate to the Oracle Cloud Infrastructure (OCI) Identity Access Management (IAM) administration console for Opower Analytics Visualization, and log in. (The URL to the console is in the provisioning email you received from your Service Delivery Manager.)
2. Follow the steps in this topic to assign a user as an administrator: Adding Identity Domain Administrators.
3. Optional. If necessary, follow the instructions at Removing an Identity Domain Administrator to remove any admins who are no longer at your organization.

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Activate Account and Log In

Users of Opower Analytics Visualization receive a welcome email after their administrator has added them to the system. You must use the welcome email to activate your account before you can log in.

To activate your account:

1. Open your welcome email and click the **Activate Your Account** button.
2. Enter a new password in the account login page that displays and click to set it.

After you have successfully activated your account, you can log in.

To log in for the first time:

1. Log in to Inside Opower: https://inside.opower.com/. Inside Opower is a program administration portal for Oracle Utilities Opower products. You should have already received credentials for accessing Inside Opower from your Service Delivery Manager. If you do not yet have credentials or are unable to log in, contact your Service Delivery Manager.
2. Click the **Analytics Visualization** link in the left navigation. An Oracle account sign in page displays. **Tip**: Bookmark this link so that you don't need to log in to Inside Opower in the future to access it.
3. Enter your username and password, and click **Sign In**.

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Subject Areas

Subject areas are the building blocks of your visualizations and canvases in Opower Analytics Visualization. A visualization is built by choosing an appropriate subject area that has information that answers the business question you're analyzing.

Technically, subject areas are groupings of information, called data objects, that relate to each other in a particular context. The subject area data comes from data objects pulled from your transactional database. The data is then grouped in a way that is intended to answer a specific set of questions about your organization. Any information your organization tracks can be grouped into a subject area and then used to build analytics.

To open a subject area:

1. Log in to your instance of Opower Analytics Visualization.
2. Click the navigator menu in the top left corner of the screen and select **Data**.
3. In the **Datasets** tab, click any of the subject areas available. A new workbook opens. You can browse the folders on the left-hand side of the screen, and you can select and drag attributes or measures to the canvas to begin building visualizations.

The subject areas available are listed below. Additionally, there are shared data elements that appear in most or all subject areas. Most subject areas are available out of the box, but some require a prerequisite cloud service.

Available with Prerequisite Cloud Service

- Disaggregation Insights
  - Appliance - Presence Discovery
  - Appliance - Usage Insights
- Energy Affordability Identification

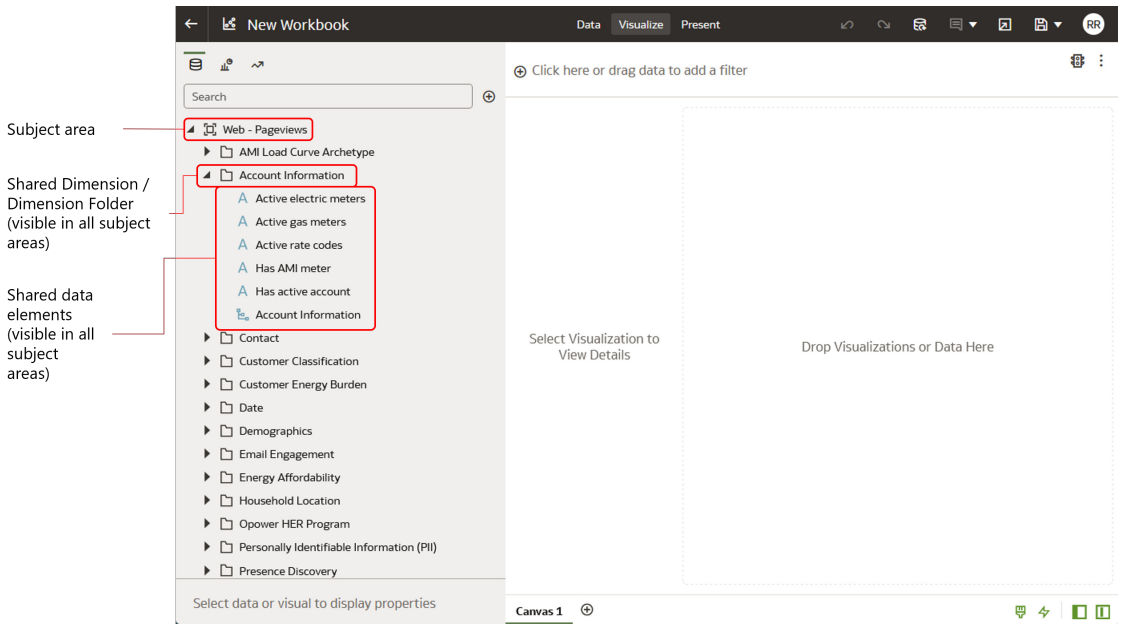
Available Out of the Box

- Energy Efficiency (EE) - Savings
- Survey - Questions and Answers
- Survey - Starts and Completions
- Household - Count of Customers
- Opt Out - Products
- Opt Out - Products and Channels
- Outbound Communications - Dispatch and Engagement
- Products - Historical Preferences
- Unauthenticated Home Energy Analysis - HEA
- Web - Authentications
- Web - Pageviews

For more information on how to leverage these subject areas to build visualizations, see Perform Common Tasks or watch the video overviews available in the Oracle Analytics Server online help.

Shared Data Elements

Opower Analytics Visualization comes with a variety of data elements that are shared across subject areas. These data elements are organized in "dimensions", which are simply categories or folders that contain them. To find these dimensions and their shared data elements, open a subject area and look in the folders that appear immediately under the name of the subject area.



Use the information in this section to learn more about each dimension and the shared data elements it contains.

AMI Load Curve Archetype

The AMI Load Curve dimension contains shared data elements about common customer energy use patterns, also known as load curve archetypes or load curve profiles. This information categorizes customers based on the times of day when they tend to use the most energy.

Data Element	Description
Centroid Index	A numeric classification for the Usage Archetype attribute, such as 1 for Evening Peaker or 2 for Night Owl. **Example Values**: • **-1**: None • **0**: Steady Eddie • **1**: Evening Peaker • **2**: Night Owl • **3**: Daytimer **Type**: Attribute

Data Element	Description
Evening user	A usage classification indicating that a customer tends to use energy in the evening (5 PM - 8 PM). **Type**: Attribute
Flat user	A usage classification indicating that a customer's energy usage is relatively constant throughout the 24-hour cycle. **Type**: Attribute
Home during day	A usage classification indicating that a customer's energy usage is relatively constant throughout the 24-hour cycle. **Type**: Attribute
Late bedtime	A usage classification indicating that a customer's energy usage typically extends into the late evening (past 10 PM). **Type**: Attribute
Midday user	A usage classification indicating that a customer's energy usage typically peaks in the middle of the day. **Type**: Attribute
Morning user	A usage classification indicating that a customer tends to use energy in the morning (6 AM - 9 AM). **Type**: Attribute
Overnight user	A usage classification indicating that a customer tends to use energy throughout the night. **Type**: Attribute
Usage Archetype	A classification indicating the type of energy use pattern for a customer. The values can be “Steady Eddie”, “Evening Peaker”, “Night Owl”, “Daytimer”, or “None” in correspondence with the Centroid Index attribute. **Type**: Attribute

Account Information

The Account Information dimension contains shared data elements about a customer's account.

Data Element	Description
Active electric meters	The number of electric meters associated with a service point. **Type**: Attribute
Active gas meters	The number of gas meters associated with a service point. **Type**: Attribute
Active rate codes	A list of rate codes associated with a customer's utility accounts. **Type**: Attribute
Has AMI meter	An indicator of whether a resident has an AMI meter. **Type**: Attribute
Has active account	An indicator of whether a customer is an active customer at a utility. It is recommended that you use this attribute as a common filter in your dashboards to ensure you are viewing customers who are active. **Type**: Attribute

Contact

The Contact dimension contains shared data elements about customer email addresses , phone numbers, and contact preferences.

Data Element	Description
Email Has Hard Bounced	An indicator of whether an email cannot be delivered. A hard bounce typically indicates a permanent reason that an email cannot be delivered. **Type**: Attribute
Has Email Address	An indicator of whether there is an email address for the customer. **Type**: Attribute
Has Phone Number	An indicator of whether there is a phone number for the customer. **Type**: Attribute
Has Push Notifications	An indicator of whether the customer receives push notifications. **Type**: Attribute
Has SMS Phone Number	An indicator of whether there is an SMS phone number for the customer. **Type**: Attribute
Has Voice Phone Number	An indicator of whether there is a voice phone number for the customer. **Type**: Attribute
Locale Code	The customer's preferred language with which to be contacted, if provided. **Type**: Attribute

Customer Classification

The Customer Classification dimension contains shared custom data elements from the Customer Classification File that a utility can send to Oracle Utilities Opower. The purpose of the file is to categorize customers into different groups or “classifiers." Based on this information, Oracle Utilities can then create tailored communications and user experiences. Note that there is an additional charge for setting up this data feed. Contact your Delivery Team if you have any questions.

Data Element	Description
Classifier	The utility-specific classifier used to designate a group of customers. For example, this could be a classifier that identifies low-income customers. **Type**: Attribute
Value	The value of the utility-specific classifier. For example, this could be a value like True or False, or some other value that supports the classifier. **Type**: Attribute

Customer Energy Burden

The Customer Energy Burden dimension contains shared data elements about household spending on energy costs.

> **Note**
>
> This data is only available for utilities who have purchased the Affordability Identification and Analytics cloud service. Contact your Delivery Team if you have any questions.

Data Element	Description
HH Level Energy Burden	The energy burden of an individual customer's household. Energy burden is defined as the total household energy costs divided by the household's income. This value is a percentage which ranges from 0-100%. An energy burden above 6% is considered a high energy burden. **Note** The HH Level Energy Burden attribute is different from the Energy Burden attribute defined in the Energy Affordability dimension. HH Level Energy Burden is calculated for individual households, whereas Energy Burden is calculated for groups of households within the same census tract. Each household in a tract is assigned the same value as other households in the tract. **Type**: Attribute

Date

The Date dimension contains shared data elements about calendar information, such as a day, month, and year.

Data Element	Description
Date Calendar Date	The calendar date in a standard date (MM/DD/YYYY) and time (HH:MM:SS) format. **Example**: 01/13/2021 12:00:00 AM **Type**: Attribute
Date Calendar Day	A numeric value for a calendar day in a month. The number can be 1-31. **Example**: 13 **Type**: Attribute

Data Element	Description
Date Calendar Month	A numeric value for a calendar month in the year. The number can be 1-12. **Example**: 1 **Type**: Attribute
Date Calendar Quarter	A numeric value for a calendar quarter in a year. The number can be 1-4. **Example**: 1 **Type**: Attribute
Date Calendar Year	The calendar year in YYYY format. **Example**: 2021 **Type**: Attribute
Date Day Name	The name of the day of the week. **Example**: Wednesday **Type**: Attribute
Date Day Of Week	The numeric value of the day of the week. The number can be 1-7. **Example**: 4 **Type**: Attribute
Date Day Of Week Iso	The day of the week in ISO format. **Example**: 3 **Type**: Attribute
Date Day Of Year	The numeric value of the day of the year. The number can be 1-365. **Example**: 13 **Type**: Attribute
Date First Day In Month	The first day of the month in date and time format. **Example**: 01/01/2021 12:00:00 AM **Type**: Attribute
Date First Day In Week	The first day of the week in date and time format, where Sunday is the first day of the week. **Example**: 01/10/2021 12:00:00 AM **Type**: Attribute
Date First Day In Week Iso	The first day of the week in ISO date and time format, where Monday is the first day of the week. **Example**: 01/11/2021 12:00:00 AM **Type**: Attribute
Date Is Leap Year	A flag to indicate whether the year is a leap year. **Example**: 0 **Type**: Attribute

Data Element	Description
Date Is Weekday	A flag to indicate whether the day is a week day. **Example**: 1 **Type**: Attribute
Date Last Day In Month	The last day in the month in date and time format. **Example**: 01/31/2021 12:00:00 AM **Type**: Attribute
Date Last Day In Week	The last day in the week in date and time format, where Saturday is the last day. **Example**: 01/16/2021 12:00:00 AM **Type**: Attribute
Date Last Day In Week Iso	The last day in the week in ISO date and time format, where Sunday is the last day. **Example**: 01/17/2021 12:00:00 AM **Type**: Attribute
Date Month Name	The name of the month. **Example**: January **Type**: Attribute
Date Week Of Month	The numeric value of the week of the month. **Example**: 3 **Type**: Attribute
Date Week Of Month Iso	The numeric value of the week of the month in ISO numbering. **Example**: 3 **Type**: Attribute
Date Week Of Year	The numeric value of the week of the year. **Example**: 3 **Type**: Attribute
Date Week Of Year Iso	The numeric value of the week of the year in ISO numbering. **Example**: 3 **Type**: Attribute
Date Year Month	The month of the year in YYYY-Mmm format. **Example**: 2021-Jan **Type**: Attribute
Date Year Month Day	The calendar date in YYYY-MM-DD format. **Example**: 2021-11-02 **Type**: Attribute
Date Year Quarter	The quarter of the year in YYYY-Q format. **Example**: 2021-1 **Type**: Attribute

Data Element	Description
Date Year Week	The week of the year in YYYY-WW format. **Example**: 2021-02 **Type**: Attribute

Email Engagement

The Email Engagement dimension contains shared data elements about how customers interact with Oracle Utilities Opower email products.

Data Element	Description
Load Shifting: Rate Coach - adjusted click to open rate	The rate at which Load Shifting: Rate Coach email communications opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
Load Shifting: Rate Coach - adjusted open rate	The rate at which Load Shifting: Rate Coach email communications delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
Load Shifting: Rate Coach - click rate	The rate at which delivered Load Shifting: Rate Coach email communications were clicked. This is calculated by: Email Clicked Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
Load Shifting: Rate Coach - click to open rate	The rate at which opened Load Shifting: Rate Coach emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
Load Shifting: Rate Coach - open rate	The rate at which delivered Load Shifting: Rate Coach emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
Load Shifting: Rate Coach - received	An indicator of whether a customer received a Load Shifting: Rate Coach email from Oracle Utilities Opower. **Type**: Attribute
High Bill Alert (AMI) - adjusted click to open rate	The rate at which High Bill Alert AMI email communications opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
High Bill Alert (AMI) - adjusted open rate	The rate at which High Bill Alert AMI email communications delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
High Bill Alert (AMI) - click rate	Percentage of High Bill Alert AMI opened emails that were opened and had at least one link clicked. **Type**: Attribute
High Bill Alert (AMI) - click to open rate	The rate at which opened High Bill Alert AMI emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute

Data Element	Description
High Bill Alert (AMI) - open rate	The rate at which delivered High Bill Alert AMI emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
High Bill Alert (AMI) - received	An indicator of whether an AMI customer received a High Bill Alert AMI email from Oracle Utilities Opower. **Type**: Attribute
High Bill Alert (non-AMI) - adjusted click to open rate	The rate at which High Bill Alert (non-AMI) email communications opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
High Bill Alert (non-AMI) - adjusted open rate	The rate at which High Bill Alert (non-AMI) email communications delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
High Bill Alert (non-AMI) - click rate	Percentage of High Bill Alert (non-AMI) emails that were opened and had at least one link clicked. **Type**: Attribute
High Bill Alert (non-AMI) - click to open rate	The rate at which opened High Bill Alert (non-AMI) emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
High Bill Alert (non-AMI) - open rate	The rate at which delivered High Bill Alert (non-AMI) emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
High Bill Alert (non-AMI) - received	An indicator of whether a non-AMI customer received a High Bill Alert (non-AMI) email from Oracle Utilities Opower. **Type**: Attribute
Overall adjusted click to open rate	The overall rate at which emails opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
Overall adjusted open rate	The overall rate at which emails delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
Overall click rate	Percentage of opened emails that had at least one link clicked. **Type**: Attribute
Overall click to open rate	The overall rate at which opened emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
Overall open rate	The overall rate at which delivered emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
Received Opower email	An indicator of whether the customer received an email from Oracle Utilities Opower. **Type**: Attribute

Data Element	Description
WAMI - adjusted click to open rate	The rate at which Weekly Energy Update email communications opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
WAMI - adjusted open rate	The rate at which Weekly Energy Update email communications delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
WAMI - click rate	Percentage of opened Weekly Energy Update emails that had at least one link clicked. **Type**: Attribute
WAMI - click to open rate	The rate at which opened Weekly Energy Update emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
WAMI - open rate	The rate at which delivered Weekly Energy Update emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
WAMI - received	An indicator of whether the customer received a Weekly Energy Update email from Oracle Utilities Opower. **Type**: Attribute
eBill - adjusted click to open rate	The rate at which email utility bills opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
eBill - adjusted open rate	The rate at which email utility bills delivered to *non auto-opening email clients only* were opened. **Type**: Attribute
eBill - click rate	Percentage of opened email utility bills that had at least one link clicked. **Type**: Attribute
eBill - click to open rate	The rate at which opened email utility bills, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
eBill - open rate	The rate at which delivered email utility bills were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
eBill - received	An indicator of whether the customer received an email utility bill from Oracle Utilities Opower. **Type**: Attribute
eHER - adjusted click to open rate	The rate at which Email Home Energy Reports opened from *non auto-opening email clients only* were clicked. **Type**: Attribute
eHER - adjusted open rate	The rate at which Email Home Energy Reports delivered to *non auto-opening email clients only* were opened. **Type**: Attribute

Data Element	Description
eHER - click rate	Percentage of opened Email Home Energy Reports that had at least one link clicked. **Type**: Attribute
eHER - click to open rate	The rate at which opened Email Home Energy Reports, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Attribute
eHER - open rate	The rate at which delivered Email Home Energy Reports were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Attribute
eHER - received	An indicator of whether the customer received an email Home Energy Report from Opower. **Type**: Attribute

Energy Affordability

The Energy Affordability dimension contains data elements about the income level of customers in a given area. This data is primarily sourced from the US Census and other reputable US government sources. The Energy Affordability shared data comes with the benefit of offering nearly comprehensive coverage for each attribute for all of the customers in your service territory. The US Census asks a number of questions and then offers a number which is an average for an area, such as a census tract. There could be as few as 1,500 people in a census tract, but there are typically ~5,000 people in an average census tract, so each person in that area would be assigned the same value.

Data Element	Description
Ability to Pay	The Ability to Pay of a household is defined as income minus housing costs, by Census Tract. The Ability to Pay serves as a proxy for a consumer's available household budget. (Housing costs are the sum of payments for mortgages, rent, and real estate taxes; fire, hazard, and flood insurance on the property; utilities; and fuels). This index was calculated using an Analytical Hierarchical Process (AHP) weighting method to reconcile the relative importance of income versus housing costs, where income is a first order factor and housing cost is second order. The AHP method resulted in an index that ranged from 0-1000 where 1000 represented the highest need, or lowest available income, by households that had the least income and the highest housing costs. By contrast, those households with the highest income and the lowest housing costs would have the lowest index, closest to 0. The index is normalized for a number of households. Income bins used are derived from the Area Median Household (AMI) delineation. • Non-LMI: 0 to 310 or >120% Area Median Income (AMI) • Moderate: 310 to 580 or 80-120% • Low: 580 to 720 50-80% • Very Low: 720 to 860 or 30-50% • Extremely Low: 860 to 1000 or < 30% AMI **Allowed Values**: double **Source**: 2016 US Department of Energy. Calculated from the American Community Survey. For more information, see Affordability and Access in Focus: Metrics and Tools of Relative Energy Vulnerability (Lin et al. 2018). **Notes**: The ability to pay provides a more accurate interpretation of affordability for communities that have high housing costs, such as New York City, San Francisco, and other high-cost metro areas. **Type**: Attribute
Approximate Income Level	Median household income in the past 12 months (in 2018 Inflation-Adjusted Dollars). This data is available in $10,000 increments. **Allowed Values**: integer **Source**: 2018 US Census, American Community Survey (ACS) **Type**: Attribute
Dominant Fuel Price	The price of the dominant fuel type. **Source**: American Community Survey (ACS) **Type**: Attribute
Dominant Fuel Type	Dominant heating fuel type. This data is available at the county level. **Allowed Values:** Fuel price units are $/mmbtu. **Source**: Fuel type estimates are from the 2014 US Census American Community Survey housing units by fuel type estimates. Fuel costs are from the 2017 Energy Information Administration (EIA) Residential Energy Consumption Survey (RECS). Costs are joined to counties by the dominant fuel type and census division. **Type**: Attribute

Data Element	Description
Energy Burden	Energy burden is defined as the total household energy costs divided by the household's income. (Transportation is out of scope.) This value is a percentage which ranges from 0-100%. An energy burden above 6% is considered a high energy burden. **Note**: This attribute is different from the HH Level Energy Burden attribute in the Customer Energy Burden dimension. **Allowed Values**: integer **Source**: 2016 US Department of Energy. Low Income Energy Affordability Data (LEAD) Tool. **Type**: Attribute
Housing Vintage	Percentage of houses by vintage for a census tract. **Sources**: 2016 US Census, American Community Survey. Data downloaded using IPUMS NHGIS, University of Minnesota, NHGIS. **Type**: Attribute
Locale	The locale of the customer using the National Center for Education Statistics (NCES) framework. The NCES locale framework is composed of four basic types: City, Suburban, Town, and Rural. Each of these basic types contains three subtypes. It relies on standard urban and rural definitions developed by the U.S. Census Bureau. Each type of locale is either urban or rural in its entirety. A city is considered urban, and a town is considered a subset of the "Rural" category. **Allowed Values**: • City: Large, midsize, or small • Suburban: Large, midsize, or small • Town: Distant, fringe, or remote • Rural: Distant, fringe, or remote **Source**: 2016 National Center for Education Statistics (NCES), Education Demographic and Geographic Estimates Program (EDGE). **Type**: Attribute
Percent Children and Elderly	Tract-level estimates for percent children (<18 years) and elderly (>65 years) populations. **Sources**: 2016 US Census, American Community Survey. Data downloaded using IPUMS NHGIS, University of Minnesota, NHGIS. **Type**: Attribute
Sub Locale	The sub locale of the population. **Type**: Attribute

Household Location

The Household Location dimension contains shared data elements about a household's city, state, and postal code.

Data Element	Description
City	The city where the household is located. **Type**: Attribute
State	The state where the household is located. **Type**: Attribute

Data Element	Description
Postal code	The postal code where the household is located. **Type**: Attribute

Opower HER Program

The Opower HER Program dimension contains shared data elements about Oracle Utilities Opower Home Energy Reports (HERs) and the deployment waves in which customers are placed. A deployment wave is used to track the year, month, and fuel type of a customer recipient or control group that is launched on Home Energy Reports.

Data Element	Description
Deployment Wave	An identifier for a population of customers who start receiving Home Energy Reports around the same time. The population can include a control group of customers who do *not* receive reports but who are associated with the recipients for measurement purposes. The identifier includes indicators for the year and month of the launch of HERs for a specific customer population, followed by the fuel type of the customer population. The fuel type can be E (electricity), G (gas), or D (dual fuel). **Example(s)**: • 202303_E • 202303_G • 202303_D **Type**: Attribute
Opt out status	A flag to indicate if a customer has opted out of the Oracle Utilities Opower program. **Type**: Attribute
Recipient status	A flag to indicate if a household is a recipient or control group member in an Opower Home Energy Reports program. This is used for measurement purposes. **Type**: Attribute

Personally Identifiable Information (PII)

The Personally identifiable information (PII) dimension includes shared data elements about customers' location and contact information. This data is sent by the utility to Oracle Utilities Opower.

Data Element	Description
Account Number	The customer's account number in a utility's Customer Information System or other system of record. **Type**: Attribute

Data Element	Description
Email	The customer's email address. **Type**: Attribute
First Name	The customer's first name. **Type**: Attribute
Full Name	The customer's first and last name. **Type**: Attribute
Last Name	The customer's last name. **Type**: Attribute
Mail City	The city where the customer receives mail. **Type**: Attribute
Mail State	The state where the customer receives mail. **Type**: Attribute
Mail Street	The street where the customer receives mail. **Type**: Attribute
Mail Zip	The zip code where the customer receives mail. **Type**: Attribute
Mailing Address	The mailing address on record for the customer. This may be different than the customer's site address. For example, a customer may own a property, but rent it out while living at a different address. **Type**: Attribute
Phone SMS	SMS phone number for the customer. **Type**: Attribute
Phone Voice	Primary voice phone number for the customer. **Type**: Attribute
Premise ID	Premise ID in a utility's Customer Information System or other system of record. Often the premise ID is part of the Util Customer ID field listed below. **Type**: Attribute
Site Address	The address of the site where the customer's meter is located. **Type**: Attribute
Site City	The city of the site where the meter is located. **Type**: Attribute
Site Country	The country of the site where the customer's meter is located. **Type**: Attribute
Site Latitude	The latitude of the site address, expressed as a decimal number. **Type**: Attribute

Data Element	Description
Site Longitude	The longitude of the site address, expressed as a decimal number. **Type**: Attribute
Site State	The state of the site where the customer's meter is located. **Type**: Attribute
Site Street	The street of the site where the customer's meter is located. **Type**: Attribute
Site Zip	The zip code of the site where the customer's meter is located. **Type**: Attribute
Util Customer ID	A customer identifier in a utility's Customer Information System or other system of record. Often this is a number that includes the customer's premise ID. **Type**: Attribute
Util Internal ID	An internal customer identifier in a utility's Customer Information System or other system of record. **Type**: Attribute
Util Internal ID 2	A secondary internal customer identifier in a utility's Customer Information System or other system of record. This is not applicable for all utilities. **Type**: Attribute
Util Service Point ID	A unique identifier for the customer's service point. **Type**: Attribute

Presence Discovery

The Presence Discovery dimension includes shared data elements about whether a major appliance is present at a customer's household. These shared data elements are tied to customer IDs and can be used as attributes in other subject areas to show customer counts related to Presence Discovery. There is also a Presence Discovery subject area that is based on timeline data and should only be used for historical analysis, such as how the number of major appliances has changed over time.

Note: Use caution when interpreting and applying Presence Discovery data. See Presence Discovery - Usage Notes for more information.

Data Element	Description
Appliance	The type of appliance that may be present at a customer's site. The appliances currently available for presence discovery include: • Electric Heating. This represents the presence of electric heating, but does not specify the equipment type (such as electric furnace, heat pump, or baseboard). • Level 1 EV Charger • Level 2 EV Charger • Solar **Note**: Solar customers are excluded from certain presence discovery processes. This is because the data science models have not yet been trained to produce results for solar customers who have Level 1 EV chargers or electric heating. Therefore, customers who have Level 1 EV chargers will be excluded if the presence of solar technology is predicted to be "very likely" for them. Similarly, customers with electric heating will be excluded if the presence of solar technology is predicted to be "very likely" or "somewhat likely" for them. **Type**: Attribute
ISO Week	The numeric value of the week of the month in ISO numbering. **Example**: 3 **Type**: Attribute
Site Presence	The likelihood that an appliance is present at a customer site. Oracle Utilities uses proprietary data science models to determine the likelihood of an appliance's presence. The values currently available are: • **Unlikely**: The models predict with a high degree of confidence that a major appliance is not present at a customer's household. • **Somewhat Likely**: The models predict with a moderate degree of confidence that a major appliance is present at a customer's household. This information is useful for utilities interested in reaching as many customers as possible where an appliance may be present. • **Very Likely**: The models predict with a high degree of confidence that a major appliance is present at a customer's household. This information is useful for utilities interested in reaching customers who are most likely to have an appliance present. **Type**: Attribute

Program Participation

The Program Participation dimension contains shared data elements based on Program Participation Files received from a utility. Program participation files are used to measure customer participation in utility-sponsored energy efficiency programs. For example, a program participation file could specify customers who participate in an EnergyStar appliance or recycling program at a utility.

Data Element	Description
Measure Name	The name of the measure used in the program. For example, the name of a measure in a recycling program could be "Freezer_recycled." **Type**: Attribute
Program Name	The name of the utility program in which a customer participates. For example, the name of an appliance recycling program could be "Recycling." **Type**: Attribute

Usage

The Usage dimension contains shared data elements about customer energy usage as measured in kilowatt-hours for electricity or therms for gas.

Data Element	Description
Avg Daily Elec	Average daily electric usage. **Type**: Attribute
Avg Daily Elec Fall	Average daily electric usage in the fall season. **Type**: Attribute
Avg Daily Elec Spring	Average daily electric usage in the spring season. **Type**: Attribute
Avg Daily Elec Summer	Average daily electric usage in the summer season. **Type**: Attribute
Avg Daily Elec Winter	Average daily electric usage in the winter season. **Type**: Attribute
Avg Daily Gas	Average daily gas usage. **Type**: Attribute
Avg Daily Gas Fall	Average daily gas usage in the fall season. **Type**: Attribute
Avg Daily Gas Spring	Average daily gas usage in the spring season. **Type**: Attribute
Avg Daily Gas Summer	Average daily gas usage in the summer season. **Type**: Attribute

Data Element	Description
Avg Daily Gas Winter	Average daily gas usage in the winter season. **Type**: Attribute
Elec Days	A count of days that have usage reads for a customer's active electric meter. For example, if a customer has an active electric meter for a year, and used electricity every day of that year, then the Elec Days would be 365. **Type**: Attribute
Elec Percent Actual Reads	The percentage of *actual* electric usage reads versus *estimated* electric usage reads over the available time period. **Type**: Attribute
Gas Days	A count of days that have usage reads for a customer's active gas meter. For example, if a customer has an active gas meter for a year, and used gas every day of that year, then the Gas Days would be 365. **Type**: Attribute
Gas Percent Actual Reads	The percentage of *actual* gas usage reads versus *estimated* gas usage reads over the available time period. **Type**: Attribute

Utility

The Utility dimension indicates the operating company for utilities that have chosen to roll up the data from the various operating companies to the parent company. It can be used as a filter for disaggregating data about operating companies that are part of a larger operating company.

Data Element	Description
Utility	A filter that shows data for a specific utility operating company within a collection of operating companies. This is only applicable for utilities that have multiple operating companies, and that want to aggregate data from those companies. **Type**: Attribute

Web Metrics - Actions

The Web Metrics - Actions dimension contains shared data elements about customer web behavior, such as completing tips or finishing the Home Energy Analysis survey.

Data Element	Description
Exports - num data exports	The number of data exports the customer has performed using the web portal. **Type**: Attribute

Data Element	Description
Exports - num data exports bucket	A category in which customers are placed based on how many data exports they have performed. • **1:** The category for customers who have exported data once. • **1+**: The category for customers who have exported data two or more times. • **Unknown**: The category for customers if there is no data export data available for them. **Type**: Attribute
Tips - has done	An indicator of whether the customer has indicated on the web portal that they have completed a tip action. **Type**: Attribute
Tips - num clicked	The total number of tips on the web portal that the customer has indicated a tip action for (done, will do, or no thanks). **Type**: Attribute
Tips - last action	The last tip action that the customer has performed. **Type**: Attribute
Tips - visited	An indicator of whether the customer has visited the Ways to Save page on the web portal. **Type**: Attribute
Web Audit - completed	An indicator of whether a customer has finished the Home Energy Analysis survey. **Type**: Attribute
Web Audit - not started	An indicator of whether a customer has not started the Home Energy Analysis survey. **Type**: Attribute
Web Audit - started	An indicator of whether a customer has answered at least one question in the Home Energy Analysis survey. **Type**: Attribute
Web Audit - started not completed	An indicator of whether a customer has started but not completed the Home Energy Analysis survey. **Type**: Attribute
Web Audit - visited	An indicator of whether a customer has visited the Home Energy Analysis tab. **Type**: Attribute

Web Metrics - Logins

The Web Metrics - Logins dimension contains shared data elements about customer login actions. For data elements related to the total number of logins, see Web Authentications.

Data Element	Description
Has Logged In	The total number of unique web logins across all customers. This shows how many different usernames have been used to log in. For example, if one user logs in three times and a separate user logs in five times, this would count as two unique logins. **Type**: Attribute
Has Returned	A flag to indicate whether a customer has logged in two or more times. **Type**: Attribute
Login Frequency Recency Group	An indication of how recently a customer has logged in and how frequently they log in. For example, a customer may be designated in one of the following ways: • Logging in frequently: Defined as having logged in 25% of the months of the available time period. • Logging in recently: Defined as having a login within the last three months. • Logging in frequently but not recently: Defined as having logged in 25% of the months of the available time period, but not within the last three months. **Type**: Attribute
Login count	The number of times the customer has logged into the Opower web portal while being an active customer. **Type**: Attribute
Login frequency	The frequency with which the customer logs in to the Opower web portal. **Type**: Attribute
Login recency	The amount of time that has elapsed since the user last logged in. **Type**: Attribute

Disaggregation Insights

The Disaggregation Insights subject area contains customer-level data elements derived from proprietary data science models.

> **Note**
>
> This data is only available if you have purchased the Disaggregation Insights add-on. Contact your Delivery Team if you have questions.

The following datasets are currently available:

- Appliance - Presence Discovery: Data about whether or not a major appliance (such as electric heating or an electric vehicle charger) exists at a customer's home.
- Appliance - Usage Insights: Data about how much energy customers use on individual types of appliances.

Appliance - Presence Discovery

The Appliance - Presence Discovery subject area includes data elements about whether a major appliance is present at a customer's household. This data is automatically generated by

Oracle Utilities proprietary data science models. The models use customer AMI data and weather data to predict the presence of an appliance at a household.

The goal of this information is to help utility program managers improve the performance of their energy efficiency programs and marketing use cases. For example, you might use this information to send targeted communications to your customers to promote an electric vehicle program, or to offer a rebate incentivizing customers to install a more energy efficient type of electric heating.

Usage Notes

Treating the Presence Discovery output as a prediction

The output of the Presence Discovery models is a prediction, not an absolute. This means that some households might not be identified as having a major appliance, while other households may be misidentified as having a major appliance when in fact there isn't one. Use caution depending upon the intended use.

For example, if you intend to use this data to send targeted customer communications, think about how to adjust the language of your communication to account for the possibility of a misidentified home, and offer a clear way to opt out of the communication if it isn't relevant to the customer. You could also design your communication to prompt customers to take the Home Energy Analysis survey so that they can confirm the presence or absence of a major appliance, and thereby receive more accurate personalized recommendations.

If you have any questions or would like some guidance about how best to use or interpret this information, contact your Delivery Team.

Using the Presence Discovery subject area versus attribute

The Appliance - Presence Discovery subject area is based on timeline data and includes data for all past historical weeks, as defined by the International Standards Organization (ISO). It should therefore only be used for historical analysis, such as showing how the number of major appliances has changed over time. For all other scenarios, use the *shared* Presence Discovery attributes, which are tied to customer IDs and can be used in other subject areas. For example, you can use the shared Presence Discovery attributes in the Household - Count of Customers subject area to see how many major appliances are predicted to be present in a specific city.

Data Elements

Data Element	Description
Appliance	The type of appliance that may be present at a customer's site. The appliances currently available for presence discovery include: • Electric Heating. This represents the presence of electric heating, but does not specify the equipment type (such as electric furnace, heat pump, or baseboard). • Level 1 EV Charger • Level 2 EV Charger • Solar **Note** Solar customers are excluded from certain presence discovery processes. This is because the data science models have not yet been trained to produce results for solar customers who have Level 1 EV chargers or electric heating. Therefore, customers who have Level 1 EV chargers will be excluded if the presence of solar technology is predicted to be "very likely" for them. Similarly, customers with electric heating will be excluded if the presence of solar technology is predicted to be "very likely" or "somewhat likely" for them. **Type**: Attribute
Appliance Detections	The number of total detections of all or selected appliances. **Type**: Attribute
Presence Confidence Level	The likelihood that an appliance is present at a customer site. Oracle Utilities uses proprietary data science models to determine the likelihood of an appliance's presence. The values currently available are: • **Unlikely**: The models predict with a high degree of confidence that a major appliance is not present at a customer's household. • **Somewhat Likely**: The models predict with a moderate degree of confidence that a major appliance is present at a customer's household. This information is useful for utilities interested in reaching as many customers as possible where an appliance may be present. • **Confirmed**: The presence of an appliance has been confirmed because the customer completed the Home Energy Analysis survey and indicated that they own the appliance. **Type**: Attribute
Response Count	A count of the total number of responses to the Home Energy Analysis. **Type**: Measure

Data Element	Description
Unique Household Count	A count of how many unique households have one or more major appliances. For example, this shows a count of how many households at a utility are very likely or somewhat likely to have electric heating, or how many households do not have electric heating. The households in this case are households with AMI data. **Type**: Measure

Limitations

- Non-residential customers are excluded from the Presence Discovery process.
- Customers with more than one electricity service point are excluded from the Presence Discovery process.

Appliance - Usage Insights

The Appliance - Usage Insights subject area includes data elements about energy use for individual electricity appliances, such as clothes washers, ovens, heating, and cooling. Utilities can use this data to gain insights into how customers use energy in different appliance end-use categories. For example, you could use these data elements to create a bar graph that visualizes what types of appliance are used the most, or a time-based line graph to show which appliances draw the most energy at different points during the day.

> **Note**
>
> The appliance usage insights are for electricity usage only.

Data Element	Description
Appliance	The name or type of appliance for which usage insights are available. The appliances that can be reported on include: • Clothes Washer • Dishwasher • Level 2 EV Charger • Electric Cooling • Electric Dryer • Electric Heating • Electric Oven • Refrigerator • Water Heater **Type**: Attribute
Appliance Usage	The energy use of selected appliances during a selected period of time. This value is calculated using Oracle Utilities Opower proprietary data science models. **Type**: Measure
Appliance Usage per HH	The energy use of selected appliances during a selected period of time for each household at a utility. This value is calculated by dividing the following: Appliance Usage / Unique Household Count. **Type**: Measure

Data Element	Description
Hour	The hour of the day for the appliance usage, expressed in whole numbers between 0 and 23. **Note** This attribute can be found in the **Hour** dimension folder within the subject area. **Type**: Attribute
Presence Confidence Level	The level of confidence about the presence of an appliance in a customer's household. This indication is derived from the Oracle Utilities Opower proprietary data science models or the results of customers taking the Home Energy Analysis survey. The values currently available are: • **Somewhat Likely**: The models predict with a moderate degree of confidence that a major appliance is present at a customer's household. • **Very Likely**: The models predict with a high degree of confidence that a major appliance is present at a customer's household. • **Confirmed**: The presence of an appliance has been confirmed because the customer completed the Home Energy Analysis survey and indicated that they own the appliance. **Type**: Attribute
Unique Household Count	A count of how many unique households have one or more major appliances. **Type**: Measure

Energy Affordability Identification

The Energy Affordability Identification subject area contains data that will help users identify customers who are likely to have a limited income or who are behind on their bills.

Note

This data is only available if you have purchased the Oracle Utilities Opower Affordability Identification and Analytics Cloud Service. Contact your Delivery Team if you have questions.

Data Element	Description
Household-Level Energy Burden	Household-level energy burden is defined as the total household energy costs divided by the household's income. The input for energy usage is derived from the customer's actual energy usage so this data is more accurate than the US Department of Energy's energy burden data, which is based on US Census sources. (Transportation is out of scope.) This value is a percentage which ranges from 0-100%. An energy burden above 6% is considered a high energy burden. This data is refreshed automatically over time. **Allowed Values**: integer **Source**: Customer energy usage information from the utility, as well as US American Community Survey (ACS) Census income information. **Type**: Attribute

Energy Efficiency (EE) - Savings

The Energy Efficiency - Savings subject area contains data elements about the energy savings achieved through Oracle Utilities Opower products. Savings data is organized into groupings called measurements. Each measurement includes a population of utility customers who received one or more Oracle Utilities Opower products during a particular month and year. Information about each measurement is shown in the Measurement Name element defined below.

> **Note**
>
> Depending on your setup and configuration, your savings data may be the result of customers either using a single product (such as Home Energy Reports) or a combination of products working together to contribute to the savings. Contact your Delivery Team if you have any questions.

Data Element	Description
Elec percent data available	The percentage of electricity usage data that is available for the customers in a measurement. As new electricity usage values are made available over time, measured savings values may change. **Type**: Measure
Elec savings MWh	Electricity savings in megawatt hours for the customers in a measurement. **Type**: Measure
Elec Savings Percent	Electricity savings in percent for the customers in a measurement. This number is expressed a percent of the baseline energy usage. **Type**: Measure
Elec Savings kWh	Electricity savings in kilowatt-hours for the customers in a measurement. **Type**: Measure
Elec usage MWh	Electricity usage in megawatt hours for the customers in a measurement. **Type**: Measure

Data Element	Description
Elec usage kWh	Electricity usage in kilowatt hours for the customers in a measurement. **Type**: Measure
Elec Usage per Household MWh	Average electricity usage in megawatt hours per household in a measurement. **Note**: Only customers who receive Oracle Utilities Opower products are included. Control customers are not included. **Type**: Measure
Elec Usage per Household kWh	Average electricity usage in kilowatt hours per household in a measurement. **Note**: Only customers who receive Oracle Utilities Opower products are included. Control customers are not included. **Type**: Measure
Gas Percent Data Available	The percentage of gas usage data that is available for the customers in a measurement. As new gas usage values are made available over time, measured savings values may change. **Type**: Measure
Gas Savings Percent	Gas savings in percent for the customers in a measurement. This number is expressed a percent of the baseline energy usage. **Type**: Measure
Gas Savings Therm	Gas savings in therms for the customers in a measurement. **Type**: Measure
Gas Usage Therm	Gas usage in therms for the customers in a measurement. **Type**: Measure
Gas Usage per Household Therm	Average gas usage in therms per household in the measurement. **Note**: Only customers who receive Oracle Utilities Opower products are included. Control customers are not included. **Type**: Measure

Data Element	Description
Measurement Name	The name of the measurement used for the energy efficiency savings. For example, a measurement name may look something like gec_202301_e. The name consists of several components separated by underscores to indicate information about the measurement, such as the utility abbreviation, product, year, and month. • **Utility Abbreviation**: A three- or four-letter lowercase abbreviation for the name of the utility (for example, gec for "Great Energy Company"). • **Product or Program (Optional)**: A lowercase abbreviation of the Oracle Utilities Opower product being measured. For example, this could be "her" for Home Energy Reports, or "bls" for Load Shifting: Rate Coach communications. • **Year and Month**: The year (yyyy) and month (mm) in which the customers of the measurement started to receive an Oracle Utilities Opower product. • **Fuel Type**: An indicator of the fuel type. This could be "e" for electricity or "g" for gas. **Examples**: • gec_her_202308_e • gec_bls_202303_e • gec_202301_e • gec_bls_202302_e_trial **Type**: Attribute

Household - Count of Customers

The Household - Count of Customers subject area contains data elements about the number of unique customers in a utility's service territory. This data is commonly combined with other data elements (see Shared Data Elements, for example) to help utilities gain useful insights into their Oracle Utilities Opower program.

Data Element	Description
Household Count	The number of households in a utility's service territory. **Type**: Measure

Opt Out - Products

The Opt Out - Products subject area contains data elements about customers who have chosen to opt out of an Oracle Utilities Opower product, such as Home Energy Reports, High Bill Alerts AMI, or any other product in the program.

Data Element	Description
Product	The product which the customer opted out of. **Type**: Attribute

Data Element	Description
Unique Customers Opted Out	The number of unique customers who have opted to no longer receive a product. This can include customers who have been opted out of a product by Customer Service Representatives using the Oracle Utilities Opower Customer Service Interface tool. **Type**: Measure
Total Opt Outs	The total number of product opt outs. This can include multiple product opt opts per customer. **Type**: Measure

Opt Out - Products and Channels

The Opt Out - Products and Channels subject area contains data elements about customers who have chosen to opt out of an Oracle Utilities Opower product or communication (such as Home Energy Reports, High Bill Alerts AMI, or any other product) and a specific channel through which the product or communication was delivered.

Data Element	Description
Channel	The channel through which the product or communication was sent, such as email, print, SMS, or interactive voice response (IVR). **Type**: Attribute
Product	The product which the customer opted out of. **Type**: Attribute
Unique Customers Opted Out	The number of unique customers who have opted to no longer receive a product. This can include customers who have been opted out of a product by Customer Service Representatives using the Oracle Utilities Opower Customer Service Interface tool. **Type**: Measure
Total Opt Outs	The total number of product opt outs. This can include multiple product opt opts per customer. **Type**: Measure

Outbound Communications - Dispatch and Engagement

The Outbound Communications - Dispatch and Engagement subject area contains data elements about customer interactions with Oracle Utilities Opower email and print products.

Data Element	Description
Adjusted Email Click to Open Rate	The rate at which email communications opened from non auto-opening email clients only were clicked. **Type**: Measure
Adjusted Email Open Rate	The rate at which email communications delivered to non auto-opening email clients only were opened. **Type**: Measure
Adjusted Email Opened Count	A count of the email communications delivered to non auto-opening email clients only that were opened. **Type**: Measure

Data Element	Description
Channel	The digital channel through which the communication was sent, such as email, print, SMS, or interactive voice response (IVR). **Type**: Attribute
Email Auto-Opened Count	A count of email communications that were auto-opened. **Type**: Measure
Email Click Rate	The number of unique clicks in an email compared to the number of unique opens for an email. **Type**: Measure
Email Clicked Count	The number of opened communications that had at least one link clicked. **Type**: Measure
Email Click to Open Rate	The rate at which opened emails, including auto-opens, were clicked. This is calculated by: Email Clicked Count / Email Opened Count. **Type**: Measure
Email Dispatched Count	The number of email communications dispatched by Oracle Utilities Opower. **Type**: Measure
Email Hard Bounce Count	The number of email communications that could not be delivered for permanent reasons, such as a fake email address or an email server not accepting emails. **Type**: Measure
Email Manually Opened Count	The number of email communications that were manually opened rather than automatically opened. **Type**: Measure
Email Open Rate	The rate at which delivered emails were opened, including auto-opens. This is calculated by: Email Opened Count / (Email Dispatched Count - Email Hard Bounce Count - Email Soft Bounce Count). **Type**: Measure
Email Opened Count	The number of email communications opened at least once, including auto-opens. **Type**: Measure
Email Soft Bounce Count	The number of communications that could not be delivered for temporary reasons, such as a full inbox or an email that is too large. **Type**: Measure
Engagement Count	A total count of all engagement types: clicks, hard bounces, not sent, opens, sent, soft bounces, and spam complaints. **Type**: Measure
Engagement Type	An indicator of how the communication was delivered, such as hard bounce, clicked, soft bounce, not sent, or opened. **Type**: Attribute
Event Type	The type of outbound communication event, such as Home Energy Reports (HERs), Email Home Energy Reports (eHERs), etc. **Type**: Attribute
IVR Dispatched Count	The number of interactive voice response (IVR) communications dispatched. **Type**: Measure

Data Element	Description
Is Auto Open	A flag to indicate whether an open event was triggered by an auto-opening email client. This data element only applies to the OPEN engagement type. **Note**: Currently the only auto-opening email client that can be flagged in this manner is Apple Mail. **Type**: Attribute
Print Dispatched Count	The number of print communications dispatched. **Type**: Measure
Report Period End Tstamp	The end date and time of the report period. In this context, a report period defines the time frame in which a customer on a specific track can receive a report or communication from Oracle Utilities Opower. (See Track Name below for details about tracks.) **Type**: Time
Report Period Start Tstamp	The start date and time of the report period. **Type**: Time
SMS Dispatched Count	The number of SMS communications dispatched. **Type**: Measure
Template Name	The name of the template for the module used in the outbound product or communication. There are different templates with different layouts and designs to provide customers with a dynamic experience. Contact your Delivery Team if you need help understanding the meaning of a template name. **Type**: Attribute
Total Dispatched Count	The total number of outbound communications (email, print, IVR, or SMS communications) dispatched. **Type**: Measure
Track Name	The name of the track in which a customer population has been placed. A track is a set of product, report, or communication experiences for a group of customers to receive over time. For example, a track could specify that a population of customers with electricity and monthly billing will receive an Email Home Energy Report every month of the year. **Type**: Attribute
Unique Customers Count	A count of unique customers. **Type**: Attribute

Products - Historical Preferences

The Products - Historical Preferences subject area contains data elements about customers who have enrolled in or unenrolled from an Oracle Utilities Opower product, such as Home Energy Reports, High Bill Alerts AMI, or any other product in the program. Enrollments and unenrollments in this subject area may have originated from the customer, the utility, or Opower. This differs from the Opt Out - Products subject area, which only includes unenrollments originating from the customer or utility.

> **Note**
>
> When using time series visualizations, be aware of the shared data elements for "Date Enrolled" and "Date Unenrolled". Selecting "Date Enrolled" will break down metrics according to the date customers were enrolled in the product, while selecting "Date Unenrolled" will break down metrics by the date customers were unenrolled (if unenrolled). Choose the appropriate date field to ensure the visualization accurately reflects the desired breakdown.

Data Element	Description
Audit Detail	The audit detail associated with the unenrollment (only applies to unenrollments). **Type**: Attribute
Audit Source	The audit source associated with the unenrollment (only applies to unenrollments). **Type**: Attribute
Audit Type	The audit type associated with the unenrollment (only applies to unenrollments). **Type**: Attribute
Channel	The channel the customer enrolled into or unenrolled from. **Type**: Attribute
Record Count	The number of total enrollments and unenrollments. **Type**: Measure
Product	The product the customer enrolled into or unenrolled from. **Type**: Attribute
Unique Customers Count	The number of unique customers who have enrolled into or unenrolled from a product. **Type**: Measure

Survey - Questions and Answers

The Survey - Questions and Answers subject area contains data elements related to the surveys available in the Oracle Utilities Opower program, including the Home Energy Analysis (HEA) survey, Savings Hub survey, and Business Profile.

Data Element	Description
Answer	The exact response to the question presented in the survey. The response will vary depending on the type of question. Some questions call for a numeric response, in which case an integer is collected. For example, if the survey presents a question asking users to enter their age, then users will enter a numeric value. Other questions do not require a numeric response, but instead call for a response to a check box, radio button, or drop-down menu. **Type**: Attribute

Data Element	Description
Answer Bucket	The bucket associated with the response to the given question in the survey. Answer buckets are used to simplify aggregations for numeric answers, such as questions about a customer's age or the size of the home. For example, for customers who enter a numeric value for their age, the Answer Bucket might group responses into buckets such as **25-35 y.o.** and **36-45 y.o.** For answers that are non-numeric in nature, the Answer Bucket value typically matches the Answer value. For example, if the survey question is "Do you own your home?" and the customer answers "Yes", then the Answer will be "Yes" and the Answer Bucket will also be "Yes". **Type**: Attribute
Is Latest Answer	A Boolean flag to indicate whether an answer value for a specific survey question is the latest one or not. This is helpful, for example, in the event that an end user answers the same question in a survey at different points in time. Multiple answer values will be recorded, but only one answer value will be the latest. The 'Is Latest Answer' attribute indicates "No" for historical answers and "Yes" for the latest answer. **Note** You can pair this data element with a **Date** dimension such as **Date Calendar Date** to determine when the latest answer value was made. **Type**: Attribute

Data Element	Description
Question	The abbreviated form of the survey question. **Note** Custom survey questions are included as well, but are not defined in the list of default questions below. Contact your Delivery Team if you need to know the text for any custom survey questions. **Questions related to the Business Profile:** • buildingSize ("Approximate square footage") • businessCoolingType ("Cooling equipment") • businessHeatSystem ("Heating equipment") • businessHeatType ("Primary heating fuel type") • businessName ("Business name") • businessType ("Business type") **Questions related to the Savings Hub survey :** • EMERGENCY ("Do any of these crisis situations currently apply to you?") • GOVERNMENT_PROGRAM ("What programs are you currently receiving benefits from?") • INCOME_ANNUAL ("What is your annual household income before taxes?") • NUM_PEOPLE ("How many people live in your home?") • OWNER_RENTER ("Do you own or rent your home?") • PRIORITY_GROUP ("Are there members of your household who fit any of these categories?") **Questions related to the Home Energy Analysis (HEA) Survey:** • appliancesAge ("On average, how old are the appliances in your home?") • auditReason ("?") • boilerAge ("?") • boilerType ("What type of boiler?") • centralHeating ("What's the primary way you heat your home?") • cfls ("Do you turn off lights when nobody is in the room?") • clothesDryerLoadsPerWeek ("How often do you use your clothes dryer?") • clothesWasherLoadsPerWeek ("How often do you use your clothes washer?") • coolingMechanism ("What's the primary way you cool your home?") • devicesInHome ("Which of the following do you use in your home?") • dishwasherLoadsPerWeek ("How often do you use your dishwasher?") • evYearsOwnership ("How long have you owned or leased an electric vehicle?") • fireplace ("Do you use a wood fireplace?") • frequencyAirConditioningUsedDuringSummer ("How often do you use air conditioning in the summer?")

Data Element	Description
	• frequencyEvCharging ("How often do you charge your electric vehicle at home?") • frequencyEvMiles ("How many miles (round trip) do you commute each day in your electric vehicle?") • fuelWaterHeater ("What type of fuel does your water heater use?") • furnaceType ("What type of furnace?") • hasElectricVehicle ("Do you own or lease a plug-in electric vehicle?") • hasHotTub ("Do you own a hot hub?") • hasPool ("Do you own a pool?") • heatType ("What type of fuel does your heating system use?") • heatingCoolingSystemAge ("On average, how old are the heating and cooling systems in your home?") • homeSize ("What's the size of your home (square feet)?") • homeType ("What type of home do you live in?") • hoursTelevisionPerDay ("In a typical day, how often is your TV on?") • indoorLightingAmount ("When do you use indoor lights?") • numChildren ("?") • numPeople ("How many people live in your home?") • numberElectricVehicles ("How many plug-in electric vehicles do you own or lease?") • outdoorLightingAmount ("When do you use outdoor lights?") • ovenFuelType ("What type of fuel does your oven use?") • ownedElectronics ("Which of the following do you use in your home?") • ownerRenter ("Do you own your home?") • poolHeating ("What type of fuel do you use to heat your pool?") • summerAC ("Do you use air conditioning in the summer?") • thermostatOffWhenAway ("How often do you turn down your air conditioner when you're away from home or asleep?") • thermostatWhenCold ("In the winter, where do you set your thermostat when you're home?") • thermostatWhenHot ("When you're home in the summer, where do you set your thermostat?") • turnDownHeat ("How often do you turn down the heat when you're away from home or asleep?") • typeCharger ("Do you use a level 1 or level 2 charging station when you charge at home?") • typeWaterHeater ("What type of water heater do you have?") • useAirConditioning ("Do you use air conditioning in the summer?") • useFans ("Do you use fans to cool your home?") • whichHaveAirLeaks ("Which of the following have air leaks in your home?") • winterHeating ("Do you heat your home in the winter?") **Type**: Attribute
Response Count	The total number of responses to questions in the survey. **Type**: Attribute

Data Element	Description
Survey Type	The type of survey that was taken. The available values include: • **BUSINESS_PROFILE**: The Business Profile questionnaire, which allows business customers to capture basic information about their businesses. • **LMI**: The Savings Hub survey, which presents customers with a series of questions about their home and finances, and then uses the answers to determine their eligibility for financial assistance programs. • **WHAT_USES_MOST**: The Home Energy Analysis (HEA) survey, which shows a breakdown of a customer's energy use in different categories, ordered by which category uses the most to the least amount of energy. **Type**: Attribute
Unique Customers Count	The number of unique customers for whom there are survey results. **Type**: Measure

Survey - Starts and Completions

The Survey - Starts and Completions subject area contains data elements about customer interactions with different surveys available in the Oracle Utilities Opower program, including the Home Energy Analysis (HEA) survey, Savings Hub survey, and Business Profile. For example, you can find engagement metrics such as how many customers started and completed the survey, and how they accessed the survey. With this information, you can gain insight into the performance of the survey in different authentication scenarios.

Data Element	Description
Auth Type	A flag to indicate the customer's method of authentication when taking the survey. The available values include: • **LOGIN**: Customers who signed in to their account before starting or completing the survey. • **UHEA**: Customers who were partially authenticated before starting or completing the survey. This is the case for customers who followed the pre-authenticated Home Energy Analysis survey flow by clicking a link in their email and receiving an access token that uniquely identifies them. • **UNKNOWN**: Customers whose authentication method is not known. • **CONVERSION**: Customers who switched from being anonymous to signing in to their account before starting or completing the survey. See Conversions below for more information. • **BITESIZE**: Customers who arrived at the survey after responding to a single survey question embedded in an email and receiving an access token that uniquely identifies them. This is a known use case, for example, with the Home Energy Analysis. See Mini HEA Confirmation for more background information about this experience. **Type**: Attribute
Completed Count	A count of the number of times the survey was completed. **Type**: Measure

Data Element	Description
Completion Rate	The rate of customers who started and completed the survey. This number is expressed as a percentage and is calculated by simple division: Completed Count / Started Count. **Type**: Measure
Conversions	The number of customers who started the survey flow as anonymous users, and then signed into their account before completing the survey. This is applicable to situations where anonymous users are given the option to complete the survey anonymously, as well as the option to sign in before completing it. **Type**: Measure
Event Count	A sum of the number of customers who started and completed the survey. This number is calculated by simple addition: Started Count + Completed Count. **Type**: Measure
Event Type	A flag to indicate whether the survey was started or completed. **Type**: Attribute
Event Timestamp	A timestamp indicating when the survey was started or completed. **Type**: Attribute
Is Csr Event	A flag to indicate if a Customer Service Representative (CSR) signed in to a customer's account and started or completed the survey on the customer's behalf. For example, this scenario may occur if a customer calls in to their utility to ask for help with general troubleshooting or with improving their energy efficiency tips. **Type**: Attribute
Questionnaire Version	The version of the survey being used. Whenever a change is made to the survey, such as updating a question or adding or removing a question, a new version of the survey is released. The highest Questionnaire Version number refers to the latest version of the survey. With this data, you can track the number of survey starts or completions on a version-by-version basis, or investigate how the latest version of the survey is performing. **Type**: Attribute
Started Count	The number of customers who have started but not finished the survey. **Type**: Measure
Survey Type	The type of survey that was taken. The available values include: • **BUSINESS_PROFILE**: The Business Profile questionnaire, which allows business customers to capture basic information about their businesses. • **LMI**: The Savings Hub survey, which presents low and medium income (LMI) customers with a series of questions about their home and finances, and then uses the answers to determine their eligibility for financial assistance programs. • **WHAT_USES_MOST**: The Home Energy Analysis (HEA) survey, which shows a breakdown of a customer's energy use in different categories, ordered by which category uses the most to the least amount of energy. **Type**: Attribute
Unique Customers Count	A count of unique customers who started or completed the survey. **Type**: Measure

Unauthenticated Home Energy Analysis (HEA)

The Unauthenticated Home Energy Analysis subject areas contain data about customers who were unauthenticated when they took the Home Energy Analysis (HEA) survey. It includes elements such as how many unauthenticated customers started and completed the survey, click rates for links leading to the survey, and so on. With this information, you can gain more insights into the performance of the unauthenticated version of the survey.

Unauthenticated HEA Shared Data Elements

The data elements on this page are shared across the Unauthenticated Home Energy Analysis survey subject areas.

Date

These attributes are the same as those described in the shared Date data elements page.

Email Provided

Data Element	Description
Email	The email address of the unauthenticated customer (if the customer provided one when taking the survey). **Type**: Attribute

Unauthenticated User

Data Element	Description
Has Email	An indicator of whether there is an email address for the customer. **Type**: Attribute
Locale	The locale of the unauthenticated customer, as described in the **Locale** attribute in the shared Energy Affordability dimension. **Type**: Attribute
Opt In	Indicates a user's preference to receive marketing communications from their utility after providing their email address to receive a link back to the results from the anonymous survey. **Type**: Attribute
Primary Pa	The Primary Program Administrator for the customer. This is generally only applicable for state-wide implementations of the unauthenticated version of the survey. **Type**: Attribute

Data Element	Description
Referral Code	Unique code a customer can enter to help track the origin of a referral or marketing campaign that drove the customer to take the unauthenticated survey. **Type**: Attribute
Secondary Pa	The Secondary Program Administrator for the customer. This is generally only applicable for state-wide implementations of the unauthenticated version of the survey. **Type**: Attribute
State	The state manually entered by the user as part of the survey flow to validate that they live in the correct service territory and to select their utility. This attribute is only applicable for state-wide implementations of the unauthenticated version of the survey. **Type**: Attribute
Zip Code	The zip code manually entered by the user as part of the survey flow to validate that they live in the correct service territory. This attribute is only applicable to state-wide or single implementations of the unauthenticated survey. **Type**: Attribute

Utility

This is the same as the Utility attribute provided in the shared Utility dimension.

Unauthenticated HEA Email Events

The Unauthenticated HEA Email Events subject area lets you track the email events that occurred after unauthenticated customers completed the Oracle Utilities Opower Home Energy Analysis (HEA) survey. Unauthenticated customers who complete the survey have the option of entering their email address into a field so they can be sent a link to review their survey results at a later time. The email events in this subject area are related to this capability.

Data Element	Description
Event	The type of unauthenticated email event that occurred. Possible values include: • **Bounce**: The email is returned back to the server. • **Click**: A link in the email is clicked. • **Complaint**: An is marked as spam or junk. • **Open**: An email is opened. • **Sent**: An email is sent. **Type**: Attribute

Data Element	Description
Event Count	The number of times that an unauthenticated email event occurred, such as the number of bounces, clicks, or opens. **Type**: Measure

Unauthenticated HEA Starts and Completions

The Unauthenticated HEA - Anonymous Starts and Completions subject area contains data elements about customers who interacted anonymously with the Oracle Utilities Opower Home Energy Analysis (HEA) survey. It focuses on engagement metrics such as how many unauthenticated customers started and completed the survey, and how they accessed the survey. With this information, you can gain insight into the performance of the unauthenticated version of the survey.

For information about starts and completions for the authenticated version of the survey, see Survey - Starts and Completions.

Data Element	Description
Auth Type	The customer's method of authentication when taking the survey. The only value available is ANON_SURVEY. **Type**: Attribute
Completed Count	The number of times the Home Energy Analysis survey was completed anonymously (that is, by unauthenticated customers). **Type**: Measure
Completion Rate	The rate of unauthenticated customers who completed the survey. This number is expressed as a percentage and is calculated by simple division: Completed Count / Started Count. **Type**: Measure
Event Count	The number of unauthenticated customers who started and completed the Home Energy Analysis survey. This number is calculated by simple addition: Started Count + Completed Count. **Type**: Measure
Event Type	A flag to indicate whether the unauthenticated Home Energy Analysis survey was started or completed. **Type**: Attribute
First Timestamp	The timestamp indicating when a user started a specific version of the survey, and when a user completed a specific version of the survey. There are different timestamps for the start event and completion event. **Type**: Attribute

Data Element	Description
Questionnaire Version	The version of the survey being used. Whenever a change is made to the survey, such as updating a question or adding or removing a question, a new version of the survey is released. The highest Questionnaire Version number refers to the latest version of the survey. With this data, you can track the number of survey starts or completions on a version-by-version basis, or investigate how the latest version of the survey is performing. **Type**: Attribute
Started Count	The number of unauthenticated customers who have started but not finished the Home Energy Analysis survey. **Type**: Measure

Unauthenticated HEA User Count

The Unauthenticated User Count subject area lets you track how many unauthenticated users completed the Oracle Utilities Opower Home Energy Analysis (HEA) survey.

Data Element	Description
Unauthenticated User Count	The number of unauthenticated users who completed the survey. **Type**: Measure

Unauthenticated HEA Web Events

The Unauthenticated Web Events subject area lets you track how many events (such as survey clicks and tip displays) occurred while unauthenticated users completed the Oracle Utilities Opower Home Energy Analysis (HEA) survey.

Data Element	Description
Authenticated Survey Clicks	The total number of survey clicks representing the decision to take the *authenticated* version of the survey. **Type**: Measure
Device Type	The type of device used to complete the survey, such as a tablet, desktop computer, or mobile phone. **Type**: Attribute
HEA Tip Click Rate	The percentage of Unique HEA Tip Clicks divided by Unique HEA Tip Displays in the unauthenticated survey flow. **Type**: Measure
HEA Tip Clicks	The total number of clicks on tips which displayed after the unauthenticated survey was completed. **Type**: Measure

Data Element	Description
HEA Tip Displays	The total number of times tips displayed after the survey was completed. **Type**: Measure
Is Embedded	A flag to indicate whether or not the anonymous HEA survey is embedded on a utility's web page. If the survey not embedded, then it is part of the standalone version of the Digital Self Service - Energy Management web portal. **Type**: Attribute
Page Views	The total number of pageviews of a web page or widget by all users who visit the site. The definition of a view varies depending on the type and version of the product. • **Standalone Web**: The total number of pages viewed by all users who visit the site. For example, if one user views three pages and a separate user views four pages, this would count as a total of seven page views. Repeated views of a single page by the same user are counted. • **Embedded Widgets v1**: The number of times that a v1 widget is loaded on a utility's website. If two widgets are embedded on the same web page, and a customer visits that page, then two pageview events are triggered—one for each widget—even though the customer technically only visited one page. • **Embedded Widgets v2**: The number of times that an impression event is triggered when a v2 widget appears in a customer's browser (as opposed to when a widget loads). An impression event is triggered when the widget is 10% viewable on a web page. If a customer scrolls down past a widget, then scrolls back up to see the same widget again, multiple impression events are triggered. For this reason, impression events are triggered much more frequently than traditional pageviews. **Type**: Measure
Site Section	The web page or widget in the web experience that the customer viewed. **Type**: Attribute
Survey Clicks	The total number of survey clicks representing the decision to take the *authenticated* version of the survey. **Type**: Measure

Data Element	Description
Tip Name	The name of a tip that was clicked after the survey was completed. (When the survey is completed, tips are displayed below the customer's energy use breakdown.) **Type**: Attribute
Unauthenticated Survey Clicks	The total number of survey clicks representing the decision to take the *unauthenticated* version of the survey. **Type**: Measure
Unique Authenticated Survey Clicks	The number of unique clicks representing the decision to take the authenticated version of the survey. **Type**: Measure
Unique HEA Tip Clicks	The number of unique clicks on the tips which displayed after the unauthenticated survey was completed. **Type**: Measure
Unique HEA Tip Displays	The number of unique times tips displayed after the survey was completed. **Type**: Measure
Unique Page Views	The total number of *unique* pageviews by all users who visit the site. The definition of a unique view varies depending on the type and version of the product. • **Standalone Web**: A unique pageview takes all the pageviews that are from the same user, on the same page, in the same session, and counts them as one. For example, a single user could visit a single page and refresh that page three times in the same session. This would count as only one unique pageview. • **Embedded Widgets v1**: The number of unique web sessions during which a widget loaded on a web page. • **Embedded Widgets v2**: The number of unique web sessions during which a widget came into view as the customer scrolled through the page. **Type**: Measure
Unique Survey Clicks	The number of unique clicks representing the decision to take the authenticated version of the survey. **Type**: Measure
Unique Unauthenticated Survey Clicks	The number of unique clicks representing the decision to take the unauthenticated version of the survey. **Type**: Measure

Web - Authentications

The Web - Authentications subject area contains data elements about customers logging in to their web accounts or viewing an embedded widget. Contact your Delivery Team if you have questions about how logins are defined and tracked.

Data Element	Description
Unique Customer Count	A count of unique customers who authenticated. **Type**: Measure
Web Authentications Count	The total number of web authentications or logins across all customers. For example, if one user logs in three times and a separate user logs in five times, this would count as a total of eight authentications. The definition of an authentication varies slightly depending on how the web product is implemented. • **Standalone Web Implementation**: An authentication is defined as a customer logging in to the web portal site. • **Embedded Widget Implementation**: An authentication is defined as any session during which a customer views at least one Opower widget in a web session. If a customer logs in to their utility's website but does not navigate to any pages where Opower data is served through an embedded widget, a login would not be counted. **Note**: If you have both an embedded and a standalone web portal implementation, then the web authentications count is a sum of both types of implementations. The count does not distinguish between authentications for each type. **Type**: Measure

Web - Pageviews

The Web - Pageviews subject area contains data elements about pageview counts for web pages or embedded widgets. The definition of a pageview varies slightly depending on whether your product has a standalone or embedded implementation.

> **Note**
>
> If you have both an embedded and a standalone web portal implementation, then the pageview counts are a sum of both types of implementations. The counts do not distinguish between each type. Contact your Delivery Team if you have questions.

Data Element	Description
Page Views by Location	The number of page views by location of the web experience. The definition of a pageview varies depending on the type and version of the product. • **Standalone Web**: The number of page views by location. • **Embedded Widgets v1**: The number of times a v1 widget loaded on a web page, by location. • **Embedded Widgets v2**: The number of times a v2 widget came into view as a customer scrolled through a web page, by location. **Type**: Measure

Data Element	Description
Percent (%) Page Views by Location	The percentage of page views by location of the web experience. The definition of a pageview varies depending on the type and version of the product. • **Standalone Web**: The percentage of pageviews by location. For example, the percentage of times the Compare My Bills page was viewed as compared to other pages. • **Embedded Widgets v1**: The percentage of times a v1 widget loaded, by location. For example, the percentage of times the Compare My Bills widget loaded compared to other widgets. • **Embedded Widgets v2**: The percentage of times a v2 widget came into view as a customer scrolled through a web page, by location. For example, the percentage of times the Compare My Bills widget came into view as customers scrolled through the web pages, as compared to other widgets. **Type**: Measure
Site Section	The web page or widget in the web experience that the customer viewed. • **Standalone Web**: The site section refers to individual web pages, such as the Home Energy Survey or Compare My Bills page. • **Embedded Widgets (v1 and v2)**: The site section refers to the individual widgets that are embedded on a page, such as the Home Energy Survey or Compare My Bills widget. **Type**: Attribute
Unique Pageview Count	The total number of *unique* pageviews by all users who visit the site. The definition of a unique view varies depending on the type and version of the product. • **Standalone Web**: A unique pageview takes all the pageviews that are from the same user, on the same page, in the same session, and counts them as one. For example, a single user could visit a single page and refresh that page three times in the same session. This would count as only one unique pageview. • **Embedded Widgets v1**: The number of unique web sessions during which a widget loaded on a web page. • **Embedded Widgets v2**: The number of unique web sessions during which a widget came into view as the customer scrolled through the page. **Type**: Measure
Unique Visitors	The number of unique visitors who arrived at a web page or widget in the Oracle Utilities Opower program. **Type**: Measure

Data Element	Description
Web Page View Count	The total number of pageviews of a web page or widget by all users who visit the site. The definition of a view varies depending on the type and version of the product. • **Standalone Web**: The total number of pages viewed by all users who visit the site. For example, if one user views three pages and a separate user views four pages, this would count as a total of seven page views. Repeated views of a single page by the same user are counted. • **Embedded Widgets v1**: The number of times that a v1 widget is loaded on a utility's website. If two widgets are embedded on the same web page, and a customer visits that page, then two pageview events are triggered—one for each widget—even though the customer technically only visited one page. • **Embedded Widgets v2**: The number of times that an impression event is triggered when a v2 widget appears in a customer's browser (as opposed to when a widget loads). An impression event is triggered when the widget is 10% viewable on a web page. If a customer scrolls down past a widget, then scrolls back up to see the same widget again, multiple impression events are triggered. For this reason, impression events are triggered much more frequently than traditional pageviews. **Type**: Measure

6

Pre-Built Dashboards

Opower Analytics Visualization comes with a catalog of pre-built dashboards. Dashboards are the same thing as visualizations. These dashboards save you the time it takes to create brand new visualizations.

To access the pre-built dashboards, click the accordion icon in the upper left corner of the screen, click **Catalog**, and then click the **Shared Folders** tab.

Disaggregation Insights

Dashboards related to the discovery of major appliances at customer households and usage insights for appliances.

Presence Discovery

- **Presence Discovery - Comparison of Appliance Prediction to Income**: A table showing the number of households predicted to have a major appliance, broken down by approximate customer income levels.
- **Presence Discovery - Comparison to HEA**: A table showing the number of households predicted to have a major appliance, alongside the number of customers who answered whether they have a major appliance in the Home Energy Analysis survey.
- **Presence Discovery - List of Appliances**: A list of customer accounts in which a major appliance is predicted to be present in the household.
- **Presence Discovery - Location of Appliances**: A table of how many households are predicted to have a major appliance, broken down by state and city.
- **Presence Discovery - Timeline of Appliances**: A time-based line chart showing the number of households predicted to have a major appliance. **Note**: This dashboard uses the Presence Discovery *subject area* for historical timeline visualization, while the other Presence Discovery dashboards listed above use the shared Presence Discovery data elements as *attributes* in other subject areas for customer counts. For more information about this distinction, see the usage notes in Appliance - Presence Discovery.

Usage Insights

- **EV Hub**: A set of graphs showing information about electric vehicles, such as how many households include an EV1 or EV2 charger, or the time of day when EV charging is at its peak.
- **Appliance Usage Map**: A map showing appliance usage by geographic location.
- **Appliance Disaggregation**: A set of graphs showing information about appliance energy usage, such as total appliance usage by hour of the day, individual appliance usage by hour of the day, or a breakdown of usage by appliance.
- **Appliance Presence Zip Code**: A set of graphs showing the discovery of major appliances over time at households in a specific zip code.

Energy Affordability

Dashboards related to customer income levels and energy burden.

Engagement Rates

Dashboards related to customer interactions, such as web logins, email opens, and clicks.

Home Energy Analysis

A dashboard showing the income level of customers who started the Digital Self-Service Home Energy Analysis survey.

Mapping Location

A dashboard showing web logins by zip code.

Savings

A dashboard showing gas and electricity fuel savings by wave. Tabs in this dashboard include:

- **Electric Savings by Wave**: A breakdown of electric savings (MWh) by month and wave.
- **Gas Savings by Wave**: A breakdown of gas savings (thm) by month and wave.
- **Electric Savings Rate**: A summary of monthly electricity savings and usage data by month.
- **Gas Savings Rate**: A summary of monthly gas savings and usage data by month.

7

Perform Common Tasks

There are many tasks you can perform with Opower Analytics Visualization to uncover new business insights and make faster, more informed business decisions.

> **Note**
>
> Opower Analytics Visualization is built on Oracle Analytics Server. As shown in the links below, many of the tasks that you can perform are documented in the Oracle Analytics Server online help.

Prepare Data: Your Opower data is already available as a set of subject areas, so to prepare your data, you can simply add data to the canvas. See Create a Workbook and Add Data Sets for more information.

Visualize Data: Create and edit visualizations, apply filters to focus on particular pieces of data, and share your workbooks with others. See Visualize and Analyze Data for more information.

Build Reports and Dashboards: Create analyses, dashboards, and reports for others to consume. See Build Reports and Dashboards for more information.

Create Pixel-Perfect Reports: You can create, view, schedule, and publish pixel-perfect reports using Oracle Analytics Publisher (formerly known as Oracle Business Intelligence Publisher). See Create Pixel-Perfect Reports for more information.

To sign in to Oracle Analytics Publisher, remove `dv` from the end of your Analytics Visualization URL, and replace it with `xmlpserver`. The URL should have the following format:

```
https://ocacs.ocs.oraclecloud.com/<tenant id>/xmlpserver
```

Perform Other Common Tasks: There are many tasks you can perform in Analytics Visualization. If you need additional help or instructions, contact your Delivery Team.

- Use Prebuilt Dashboards
- Create a Workbook and Add Data Sets
- Visualize and Analyze Data
- Filter Your Data
- Share and Export Workbooks and Files

Use Pre-Built Dashboards

To make things easier for you, Opower Analytics Visualization comes with a set of pre-built dashboards that you can update and customize for your own purposes. This saves you the time it takes to create brand new visualizations.

To access a pre-built dashboard:

1. Click the accordion icon in the upper left corner of the screen.
2. Click **Catalog**, and then click the **Shared Folders** tab.
3. Click one of the folders that displays. See Pre-Built Dashboards for more information about the available dashboards and what they contain.

To customize a prebuilt dashboard:

If you want to customize any of the pre-built dashboards, you must first create a copy and store it in a different folder. This is because any customizations made to the dashboards will be lost when the application is patched or upgraded.

1. Click the accordion icon in the upper left corner of the screen.
2. Click **Catalog**, and then click **Shared Folders**.
3. Click one of the workbook folders, and then select one of the dashboards to open it.
4. Click **Save As**.
5. In the **Save Workbook** dialog, edit the **Location** section to move the workbook to a new folder, and click **Save**.
6. Customize the dashboard to meet your needs.

Create a Workbook and Add Data Sets

Workbooks contain visualizations that help you to analyze your data in a productive and meaningful ways.

When you create a workbook, you add one or more data sets containing the data that you want to visualize and explore. In Opower Analytics Visualization, data sets contain data from subject areas. You can also add multiple subject areas to existing workbooks.

You can use the Data page to familiarize yourself with all available subject areas. The available subject areas are summarized in Subject Areas Out of the Box.

To create a new workbook:

1. Go to the **Home** page, click **Create**, then click **Workbook**.
2. Add data to a workbook using one of the following options:
   - If you're working with a new workbook, then in the **Add Data Set** dialog, browse and select the subject areas that you want to analyze, then click **Add to Workbook**.
   - If you're working with an existing workbook, then in the **Data Panel**, click **Add (+)**, then **Add Data Set** to display the **Add Data Set** dialog and add a subject area.
3. Drag the data elements that you want to visualize from the Data Panel onto the visualization canvas, and start building your workbook.

Visualize and Analyze Data

There are many ways that you can explore, visualize, and analyze data in Oracle Utilities Analytics Visualization. You can create workbooks and add data, filter your data, and much more. See Visualize and Analyze Data for more a complete list of tasks and instructions.

Filter Your Data

Filters reduce the amount of data shown in visualizations, canvases, and workbooks. You can use filters to find and focus on the data you want to explore. Some of the filter types available include Range, Top / Bottom N filter, List, Date, and Expression. See Filter Your Data for more information and instructions.

Share and Export Workbooks and Files

You can easily share a workbook with others by copying and sharing the URL. You can also export or download your workbooks and your data to different file formats.

Task	Description
Share a Workbook	Save a workbook in a shared folder and grant appropriate privileges to it so that your colleagues can access it.
Export a Workbook or Folder as a File	Export a workbook or folder as an archive file (.DVA) that another user can import. **Note**: Opower Analytics Visualization does not use any database connections. This means that the **Include Connection Credentials** option in this procedure does not apply.
Export a Visualization or Story	Share visualizations or stories as a file in a variety of formats, such as DVA (a visualization workbook), PowerPoint (PPTX), Adobe Acrobat (PDF), PNG, or CSV (data only).
Export a Visualization's Data to a CSV File	Export the data from a visualization to a CSV file. Note that this file format is limited in how many rows of data it can contain.
Export data to an Excel file.	Export data so it can be opened in Microsoft Excel format, and support a larger number of data rows. See instructions below.

Export Data to Excel

You can download data in CSV format and open it in Microsoft Excel format (XLS). However, the CSV format is limited to approximately 100,000 rows of data. If you want to download larger amounts of data, you can download directly to Excel format, which can support up to approximately 500,000 rows. You will need to perform the export using the Publisher or Analytics component of Opower Analytics Visualization. The URL of your application changes slightly depending on which component you use.

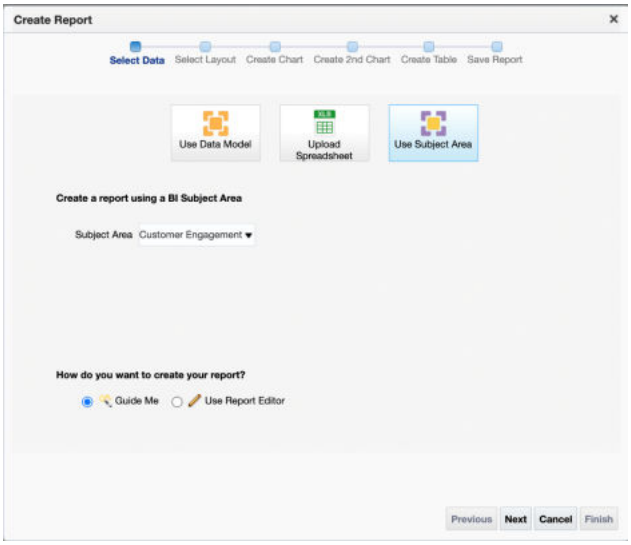
To export to Excel using Oracle Analytics Publisher:

1. Sign in to your instance of Oracle Analytics Publisher. To do this, remove `dv` from the end of your Analytics Visualization URL, and replace it with `xmlpserver` . The URL should have the following format:

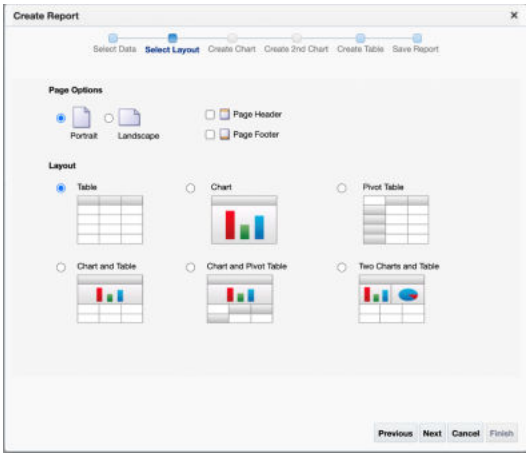
   ```
   https://ocacs.ocs.oraclecloud.com/<tenant
                    id>/xmlpserver
   ```

   Contact your Delivery Team if you need help with this step.

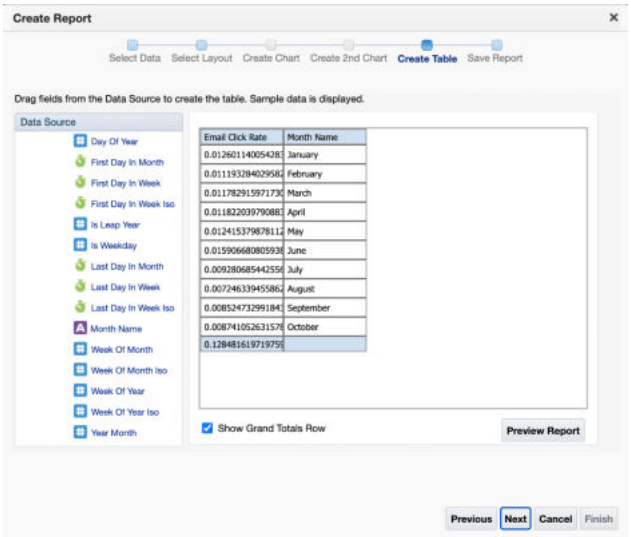
2. In the **Create...** area, click **Report**.
3. In the **Create Report** screen that displays, select **Use Subject Area**.



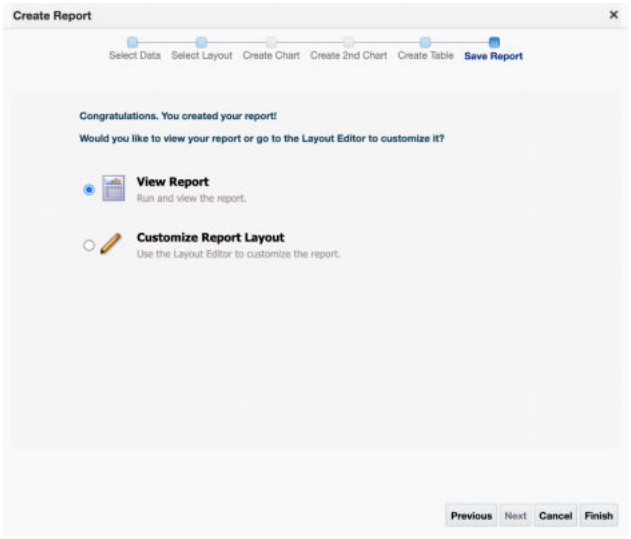
4. Select the desired subject area in the drop-down and click **Next**.
5. Select a layout and click **Next**.



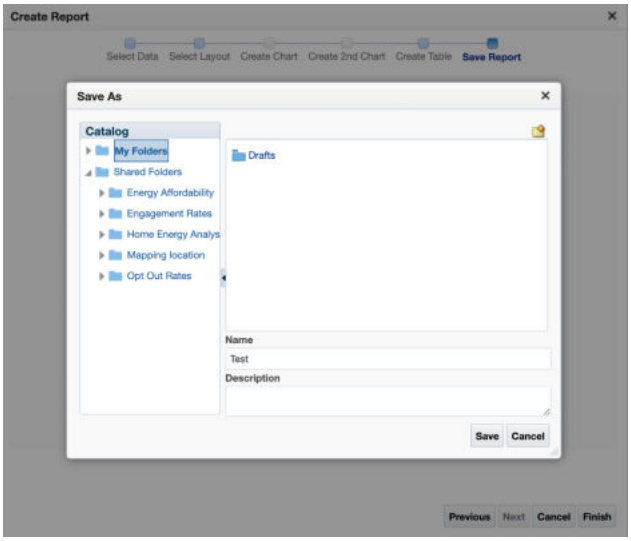
6. Create a table for the data by dragging and dropping fields.



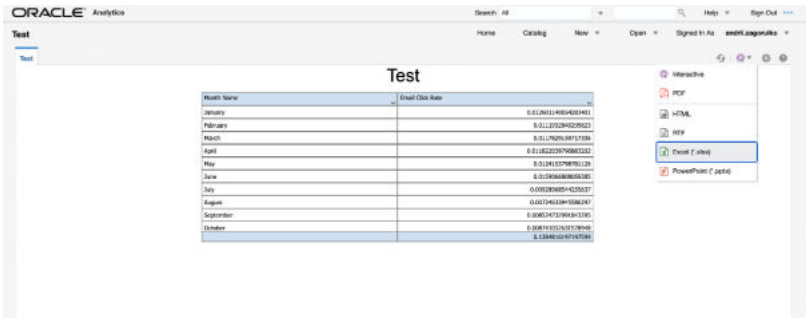
7. Click **Next**.
8. Select **View Report** and click **Finish**.



9. In the **Save As** window that displays, name your report and save it to any folder.



10. When the report opens, click on the circle icon drop-down and select Excel. The file will be downloaded in the Excel file format.



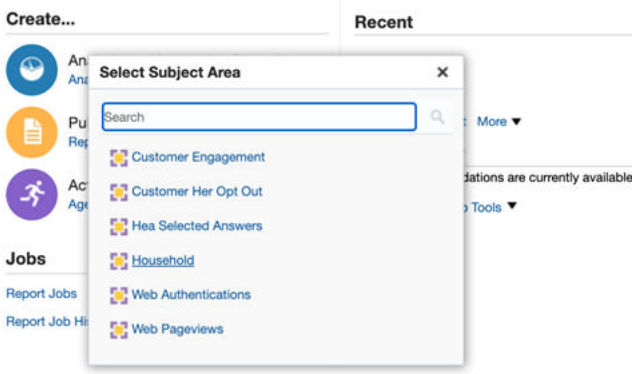
To export to Excel using Analytics:

1. Sign in to your instance of Analytics. To do this, remove `dv` from the end of your Analytics Visualization URL, and replace it with `analytics` . The URL should have the following format:

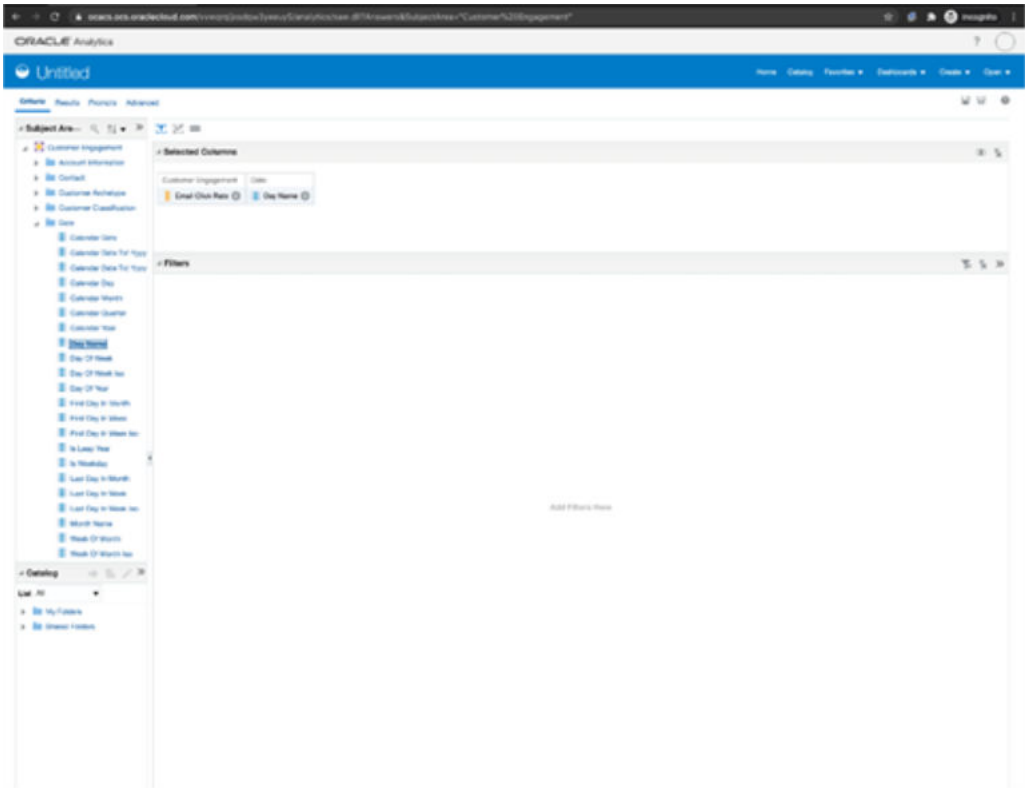
   ```
   https://ocacs.ocs.oraclecloud.com/<tenant
                  id>/analytics
   ```

   Contact your Delivery Team if you need help with this step.

2. In the **Create...** area, under **Analysis and Interactive Reporting**, click the **Analysis** link.
3. Select a subject area from the **Select Subject Area** dialog box that displays.



4. Build your analysis by dragging and dropping columns into the **Selected Columns** area.



5. Click the **Results** tab. A tabular view of the data set you created is shown.
6. Click the **Export this analysis** icon and click either **Data** or **Formatted**. Then click **Excel**.

7. If a prompt displays asking you to confirm that you want to leave the page, click **Leave Page**. The file is downloaded to Excel.

Set Up and Subscribe to an Automated Report

You can create automated reports to run on a specific schedule so that other users (admin and non-admin users) can receive them. You can also subscribe to the reports that other users have created.

> **Note**
>
> You can create automated reports and make them available through an agent, but you cannot specify recipients. Recipients must subscribe to the agent once it is available in order to receive the reports.

Set Up an Automated Report

Users can set up a report to be generated at a specific schedule for an analysis. The report enables other users to explore and interact with information visually in tables, graphs, pivot tables, and other data views. This task can be completed users as well as administrators, and involves creating the report and setting up an agent to deliver it.

To create a report:

1. Sign in to Opower Analytics Visualization.
2. From the **Home** page, click the ellipsis button in the upper right corner of the page (to the right of the **Create** button) and select **Open Classic Home**.
3. In the **Create...** area under **Analysis and Interactive Reporting**, click **Analysis**.
4. In the pop-up menu that displays, search and select a subject area. For example, if you are creating a report about email addresses associated with active accounts based on the number of unique customers in a utility's service territory, you would search and select the **Household - Count of Customers** subject area.
5. In the subject area page that displays, select the columns you want to include in the analysis and set any filters if needed. Continuing with the example from the previous step, you would click-and-drag the following attributes to the **Selected Columns** section:
   - **Email** (Personally Identifiable Information dimension folder)
   - **Has active account** (Account Information dimension folder)

   Then click the gear icon of the **Has active account** attribute, select **Filter**, and set the **Value** to "yes".
6. Click the **Save as** button in the upper right corner of the page.
7. In the **Save As** dialog that displays, select a private or shared folder. Saving in a shared folder provides other users access to the report. If the required folder does not exist, you can add this folder and name it accordingly.

To create an agent to deliver the report:

1. On the **Classic Home** page, select **Create > Actionable Intelligence > Agent**.
2. Click the **Schedule** tab.

3. Select whether you want the agent to run on a schedule, how often it runs, when to start, and when to stop.
   - When you select the date and time, for time zones where daylight savings applies, the time zone reflects the daylight savings time. For example, if, during the summer months, you select (GMT) Greenwich Mean Time: Dublin, Edinburgh, Lisbon, London, this means BST (British Summer Time).
   - The minimum frequency for daily run by delivery agent is 15 minutes.
4. Click the **Delivery Content** tab.
   a. Enter a name in the **Subject** field.
   b. In the **Content** field, select the analysis (report) you previously created.
   c. Select the **Format** for the report.
   d. For **Delivery**, select the **Deliver as attachment** option.
5. Click the **Recipients** tab and select the **Publish Agent for subscription** checkbox.
6. Save the agent in a shared folder.

Subscribe to an Automated Report

Subscribe to an agent if you want to receive the most up-to-date information generated by the automated report. This task can be completed by users as well as administrators.

1. Sign in to Opower Analytics Visualization.
2. From the **Home** page, click the ellipsis button in the upper right corner of the page (to the right of the **Create** button) and select **Open Classic Home**.
3. On the **Classic Home** page, click **Catalog**.
4. Navigate to the agent (automated report) you want to subscribe to.
5. Click the **More** action menu and select **Subscribe**.

8

Contact Your Delivery Team

Your Oracle Delivery Team is the group responsible for setting up, configuring, launching, or expanding your Oracle Utilities Opower program. Contact your Delivery Team if you have any questions about your program products and implementation.

To contact your Delivery Team:

1. Sign in to Inside Opower (https://inside.opower.com). This is your portal for questions and information related to your program.
2. Go to the Community tab to see who is on your Delivery Team.
3. Contact any of the team members using the information provided.

If you need to report an issue or get technical support, contact My Oracle Support.