

Oracle Utilities Opower Digital Self Service - Transactions Cloud Service

Product Overview

E87472-48

Last Updated: March 12, 2024

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Getting Started

The Digital Self Service - Transactions web portal is a flexible web experience that allows utilities to provide their customers with a one-stop portal to manage their utility account, pay their bill, and start, stop, or transfer service. The web experience is delivered through a modular, mobile responsive design that allows customers to perform self-service transactions on a desktop or mobile device. This documentation reflects the most recent release of Digital Self Service - Transactions, which is listed as part of the [Release Readiness documentation](#).

For an overview of all cloud services available from Oracle Utilities, see the *Oracle Energy and Water Cloud Service Descriptions* online at [Oracle Contracts - Cloud Services Service Descriptions](#).

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers of Oracle Utilities Opower Digital Self Service - Transactions. This documentation reflects the most recent release of Digital Self Service - Transactions, which is listed as part of the [Release Readiness documentation](#).

Utility Data Requirements and Limitations

The following list describes the utility requirements for Digital Self Service - Transactions:

- **Customer Integrated System:** Integration is required with an Oracle Utilities Customer Care and Billing system or an Oracle Utilities Customer to Meter system. This includes a real-time connection between Digital Self Service - Transactions and the Customer Care and Billing or Customer to Meter system. Your Oracle Utilities Delivery Team will work with you to configure your Customer Care and Billing or Customer to Meter system, which has a direct impact on the functionality available to customers. See the [Oracle Utilities Customer Care and Billing or Customer to Meter Documentation](#), as well as the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#) for applicable configuration tasks.
- **Oracle Version Requirements:** The list below includes Oracle products that can be integrated with Oracle Utilities Digital Self Service - Transactions Cloud Service, including the supported versions:
 - Oracle Utilities Customer Cloud Service 22C
 - Oracle Utilities Customer Cloud Service 23A
 - Oracle Utilities Customer Cloud Service 23B
 - Oracle Utilities Customer Care and Billing 2.6 SP1

- Oracle Utilities Customer Care and Billing 2.7 SP3
- Oracle Utilities Customer Care and Billing 2.9
- Oracle Utilities Customer to Meter 2.6 SP1
- Oracle Utilities Customer to Meter 2.7 SP3
- Oracle Utilities Customer to Meter 2.9
- **Oracle Cloud Services:** Your Oracle Utilities Cloud Services may include the following applications. Refer to your license agreement to confirm your applicable Cloud Services:
 - Oracle Utilities Digital Self Service - Transactions
 - Oracle Utilities Digital Self Service - Energy Management features are an optional add-on, available through the Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service. Exceptions include the Data Browser and Green Button, which are included directly with the Digital Self Service - Transactions Cloud Service. For information on how these features are presented as part of Digital Self Service - Transactions, see "Your Utility Use" on page 82. For additional information on the Digital Self Service - Energy Management feature functionality and requirements see the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) .
 - Oracle Cloud Infrastructure Identity and Access Management
 - Oracle Utilities Customer Cloud Service
 - The Savings Hub feature is an optional add-on, available through the Oracle Utilities Opower Affordability Cloud Service. For information on how these features are presented as part of Digital Self Service - Transactions, see "Savings Hub" on page 21. For additional information on the Affordability Cloud Service feature functionality and requirements, see the [Oracle Utilities Opower Affordability Savings Hub Cloud Service Overview](#).
- **Customer Account Authentication:** The utility must configure and integrate an identity management system in implementation, test, and prod environments to handle customer account creation and authentication. This includes defining account requirements, such as password rules, using the third-party identity management system. See the [Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide](#) for supported authentication protocols.
- **Deployment:** Digital Self Service - Transactions can be included as part of a utility's existing website and must be hosted within a utility's third-party content management system.
- **Credit Card Payments:** Credit card payments require a third-party processor. The utility must configure and integrate with a payment processor to support the Digital Self Service - Transactions credit card payments feature. The preferred payment processing vendor for Oracle Utilities is Paymentus. The integration with Paymentus

utilizes a Paymentus capability (CP Flow) where accounts and actions are passed to Paymentus as part of an API call. Out-of-the-box APIs for real-time transactions are available between Paymentus and Customer Care and Billing version 2.6 Service Pack 1 and later. Digital Self Service - Transactions can redirect users using single sign-on to a Paymentus portal that can be customized for credit card processing. The Paymentus portal can leverage the existing APIs to Customer Care and Billing to validate the account and display the amount due, without requiring users to log in again. Users with multiple accounts can view up to 100 accounts available for payments when being redirected to Paymentus. Refer to Paymentus' third-party documentation for information on the supported flow.

- **Outbound Notifications:** The utility must configure and integrate an external system with their customer integrated system to deliver outbound notifications for the defined Billing and Payment Alerts. Oracle recommends integrating with Oracle Responsys and Oracle Integration Cloud to support outbound notification delivery. For additional information on configuring outbound notifications, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- **Rates Engagement:** Rate Comparison web features are an optional add-on of Digital Self Service - Energy Management, which require the Oracle Utilities Opower Rates Engagement Cloud Service. For information on how Rate Comparison features are presented as part of Digital Self Service - Transactions, see "Your Utility Use" on page 82. For additional information on the Rates Engagement Cloud Service feature functionality and requirements see the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#).
- **Advanced Metering Infrastructure (AMI):** AMI features are an optional add-on, available through the Oracle Utilities Opower Digital Self Service - Energy Management AMI Cloud Service. Exceptions include the Data Browser and Green Button, which are included directly with the Digital Self Service - Transactions Cloud Service. See the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) for more information.
- **Bill Provision Service:** The bill provision framework chosen by the utility must be configured to specify the Oracle Utilities Opower bill download API. For more information, see the [Oracle Utilities Opower Digital Self Service - Transactions Bill Download Integration Guide](#).
- **Implementation Support Services:** For information on implementation support services for Digital Self Service - Transactions, refer to [Oracle Contracts - Cloud Services Service Descriptions](#).

- **Analytics:** Digital Self Service - Transactions supports integration with Google Analytics to analyze web traffic. You must provide Oracle Utilities with your Google Analytics tracking ID to support this integration.
- **Chat Support:** Digital Self Service - Transactions can be integrated with chat services to allow customers and utilities to communicate in real time in a chat channel. Genesys chat service is a third-party service that requires a separate service agreement and contracting with the third-party Genesys chat vendor prior to integration with Digital Self Service - Transactions.
- **Outage Management System:** The utility must configure and integrate an outage management system with their customer integrated system to push issue information reported by the customer to an Outage Management System, and to provide issue information to the Outage Map. Oracle Utilities recommends integrating with Oracle Utilities Network Management System to support the customer outage experience. For additional information on configuring outage features, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Customer Data Requirements and Limitations

- **Service Type:** Customers can have electric, gas, dual fuel, water, or wastewater service. Supported functionality varies by service. All features that are not applicable to a customer's service types are hidden from view. Refer to the feature descriptions below for feature-specific requirements.
- **Browser Support:** The customer must use a supported web or mobile browser. Oracle Utilities Web products adhere to the [Oracle Software Web Browser Support Policy](#).

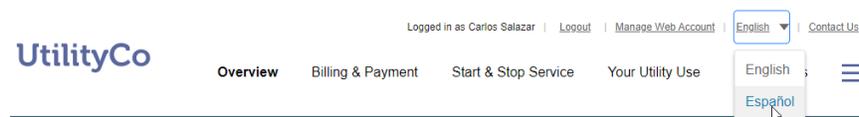
Customer Experience

Digital Self Service - Transactions is an authenticated digital customer experience that increases customer satisfaction and reduces cost to serve. Customers can complete transactional self-service functions such as viewing and paying their bills, signing up for utility programs, and starting and stopping service. The responsive design allows customers to complete all transactions on any device or screen size and orientation.

Digital Self Service - Transactions offers a digital customer experience through the following features.

Language Selection

In addition to the major areas and features listed above, utilities can choose to enable a language selection drop-down list to allow customers to select either English or Spanish. If a customer has defined either English or Spanish as their browser language setting, Digital Self Service - Transactions Web Portal can automatically detect this configuration and display content in the appropriate language. For more information on supporting the Spanish locale, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).



Multiple Division Support

Multiple division support allows utilities to provide unique experiences on Digital Self Service - Transactions to customers that belong to different divisions and states. This support allows utilities to provide a customized experience to each division without the need of maintaining different portals.

A single Oracle Utilities Customer to Meter portal application can support multiple divisions. Users belonging to different divisions can be provided personalized experiences, ensuring that service agreements and premises match the account's CIS division. Self-service master configuration can be cloned and re-used across multiple divisions allowing utilities to first re-purpose master configuration broadly, and then modify configurations unique to each division. For details on how to configure the different divisions and cloning master configuration, refer to the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

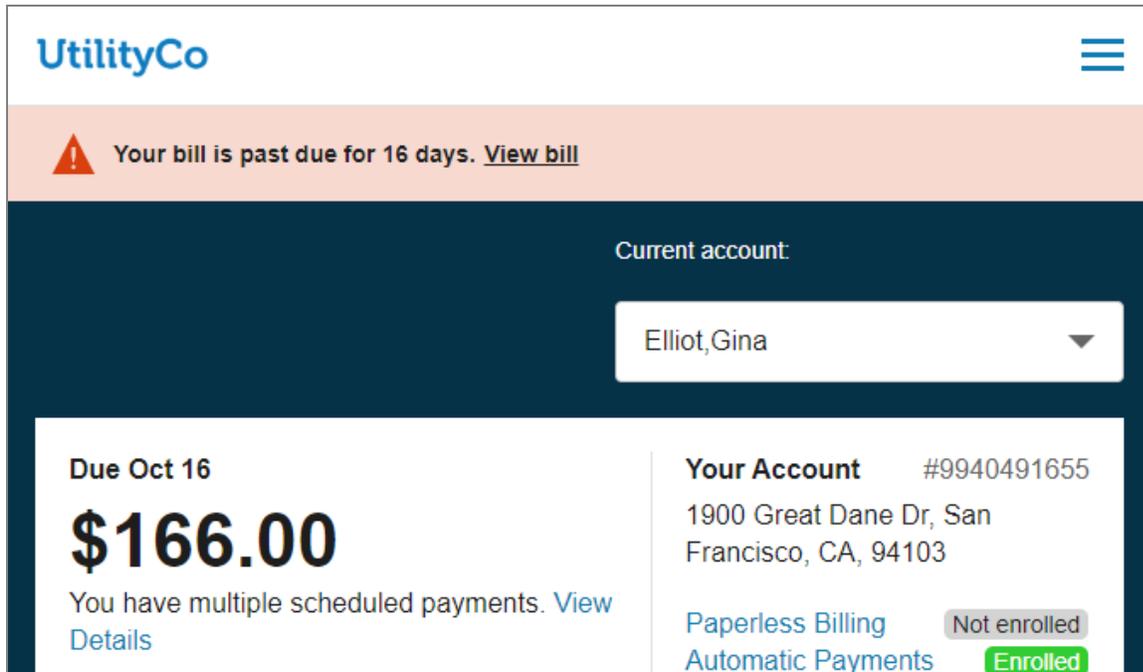
If a utility also configures multiple operating companies, an operating company can have one or more divisions associated with it, allowing utilities to leverage the master configuration cloning mentioned earlier in a single Customer to Meter portal application. If multiple operating companies exist, a Digital Self Service - Transactions application is required to map to and support each operating company. For details on how to map operating companies to associated divisions in a single Digital Self Service - Transactions application, refer to the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Overview Dashboard

The Overview dashboard introduces customers to information about their account and energy use. It includes the following major components.

Alerts

Any critical, active alerts for a customer are displayed near the top of the screen with an applicable alert message. Only high severity alerts are displayed in this location. All other alerts are available as part of the Notification Center. For more information on these alerts, see "Notifications" on page 94.



The screenshot displays the UtilityCo web portal interface. At the top left is the UtilityCo logo, and at the top right is a hamburger menu icon. Below the logo is a red alert banner with a warning icon and the text: "Your bill is past due for 16 days. [View bill](#)". Below the alert is a dark blue header area with the text "Current account:" and a white dropdown menu showing "Elliot, Gina". Below the header is a white content area with a dark blue background. On the left side of this area, it says "Due Oct 16" and "\$166.00" in large font. Below the amount, it says "You have multiple scheduled payments. [View Details](#)". On the right side, it says "Your Account #9940491655" and "1900 Great Dane Dr, San Francisco, CA, 94103". Below this, there are two options: "Paperless Billing" with a "Not enrolled" button, and "Automatic Payments" with an "Enrolled" button.

Account Selector

Customers can use the **Current account** drop-down list to select the utility account they want to view. All utility accounts connected to a web login are available for selection, and an account search is displayed for customers with five or more accounts. Additionally, the account selector is available on all applicable areas of the Digital Self Service - Transactions web portal such as Billing and Payment and Alerts and Notifications. Customers can also select the **Manage Accounts** option from the drop-down list to modify their connected accounts. For more information on options customers have for managing their accounts, see "Manage Web Account" on page 36.

Bill Information and Announcements

Details about a customer's most recent bill and summary information about their account are presented as an initial insight into the customer's account. Customers can also quickly navigate to bill actions such as paying their current bill or enrolling in billing programs such as autopay.

Outstanding balance.

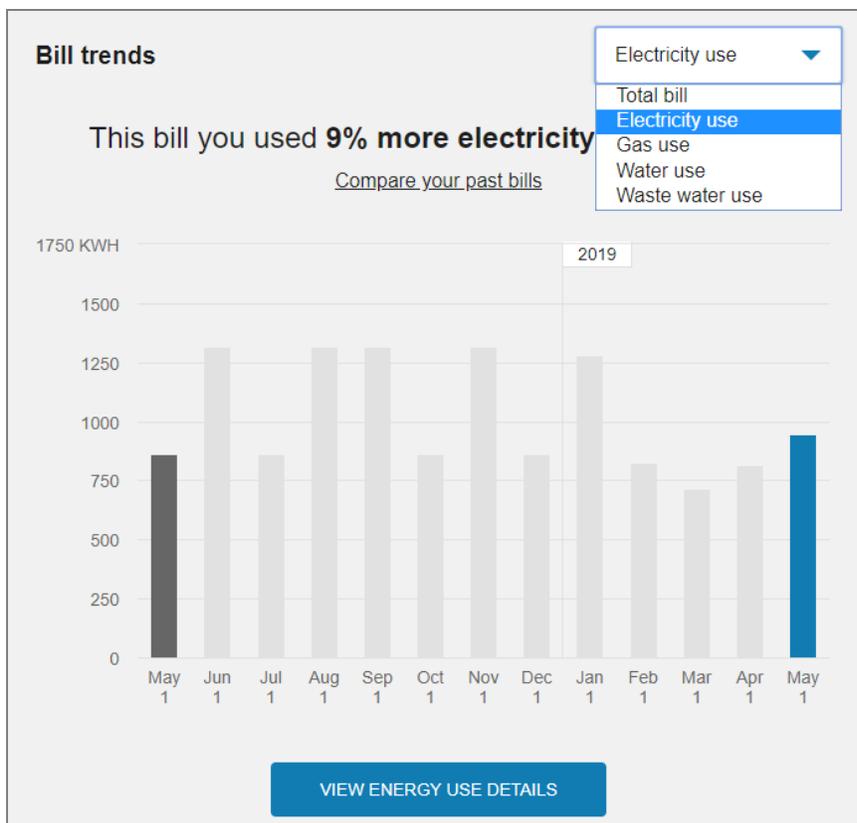
< 2 of 3 >

The amount of \$903.01 is outstanding on your account.

Announcements provide important information to the customer such as an outstanding balance notice, program enrollment status (see "Manage Billing" on page 14), open service tickets, or pending start or stop service requests.

Usage and Bill Trends

Graphs display insight into a customer's use and costs trends for their available service types. Insights for each applicable service type allow the customer to compare the current bill to the bill from the same time last year.

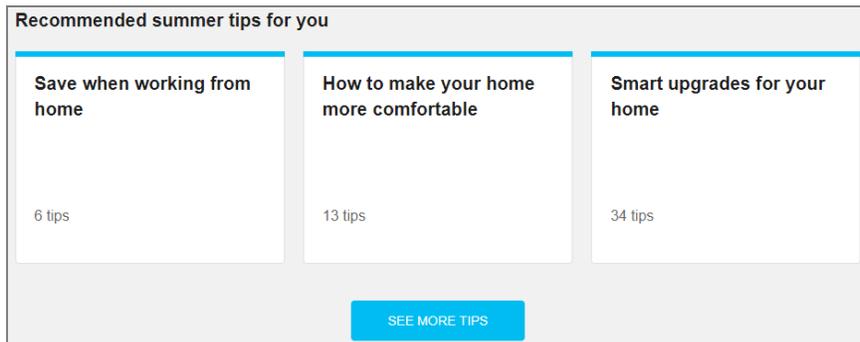


If a utility purchases Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service, links to Digital Self Service - Energy Management tools are provided for customers to review additional details about energy cost or use trends.

Recommended Tips

Links to cost-saving tips are displayed, which instruct customers on how they can use less energy, water, or wastewater, and save money. See the [Oracle Utilities Opower Digital](#)

[Self Service - Energy Management Cloud Service Product Overview](#) for more information on the Ways to Save features.



Next Best Action

Promotion of programs and services to customers are available through Next Best Action, which is a Digital Self Service - Energy Management Cloud Service add on. Next Best Action provides dynamic and actionable web banners that can be shared with all customers or targeted to specific customer groups. The web banners guide customers to the most valuable opportunities or solutions available and helpful tools to help them manage energy use and costs. See the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) for more information on the Next Best Action features.

Data Requirements and Limitations

- **Prior Bill Comparison:** If less than one year of billing data is available for a customer, the bill trend compares the most recent prior bill rather than the bill from the same time last year.

Billing and Payment

Digital Self Service - Transactions includes billing and payment features such as viewing and paying a bill, reviewing payment history, and selecting billing and payment options such as paperless billing. Links are available to customers to take common billing actions such as viewing more details about their current bill, comparing previous bills, exploring their energy use, and changing their utility account communication preferences.

Note: Restrictions can be configured across the Digital Self Service - Transactions web portal to prohibit cash-only users from making payments. This configuration hides the options for users to make a payment online, sign-up for auto-pay, or add a bank account to their wallet. Additional configurations are available to display

messaging for cash-only users in their balance overview, landing page, and manage bank account options.

Data Requirements and Limitations

- **Credit Card Payments:** By default, Digital Self Service - Transactions supports customer payments using their bank account information. Utilities must have a third-party payment vendor to integrate and support credit card payments. When a user selects to make a credit card payment, they are redirected to the third-party payment provider portal to process their payment.

View Bill

Customers can view their current bill at a glance to review their new charges, bill due date, previous balance, and any applicable payments or adjustments. An option is available to make a one-time payment on the current bill. Customers that select this option are prompted to select the payment amount, date, and payment method. If customers have saved bank accounts to their account, as described in "Manage Bank Accounts" on page 19, they can choose one of their saved bank accounts for payment. The total balance due is provided as the default payment amount. Customers can also be provided an option to make a charitable donation before submitting their payment. If a customer manages multiple accounts, they have the option to pay multiple accounts in a single payment transaction. If an account is a cash-only account, it cannot be used to submit online payments.

Note: If customers are enrolled in automatic charitable contributions for a given charitable organization as described in "Charity Contributions" on page 18, the customer is shown their automatic charitable payment amount when making a one-time payment. The customer cannot apply further contributions to that charity as part of the one-time payment.

The option to download a PDF copy of the current bill is available if the utility completes the integration to support bill downloads. Refer to [Oracle Utilities Opower Digital Self Service - Transactions Bill Download Integration Guide](#) for steps to complete bill download integration.

Bill Details

Posted November 1, 2019

Previous Balance	\$715.58
------------------	----------

Payment Towards Previous Balance	\$0.00
----------------------------------	--------

Past Due	\$715.58
-----------------	-----------------

Please pay this balance right away

New Charges	\$290.87
--------------------	-----------------

[See details in module below](#)

Total	\$1,006.45
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[View bill \(PDF\)](#)

[MAKE A PAYMENT](#)

Due November 18, 2019

A comprehensive listing of current bill details is available with the **Breakdown of new charges**. Customers can review their current bill charges broken down by premises, service type, and service point. Factors that can influence use and costs such as bill length, rate tariffs, tier breakdowns, and taxes are also highlighted.

Breakdown of new charges

1900 Great Dane Dr, San Francisco, CA, 94103

Electric residential rate **\$85.24**

Apr 1 - May 1 30 days

Apr 2 - May 1

Service charge	\$15.00
166.36 kWh at \$0.134 per kWh peak usage	\$22.29
552.12 kWh at \$0.03029 per kWh off peak usage	\$16.72
143.00 kWh at \$0.06783 per kWh mid peak usage	\$9.70
PCA 861.48 kWh at \$0.00547 per kWh	\$4.71
Energy total	\$53.42
City sales tax 11.5%	\$7.87
State sales tax 7.5%	\$8.78
County sales tax 0.25%	\$0.17
Total charges	\$85.24

Service ID: 9949136356

Rate Plan: Electric residential time of use (on/off/mid)

Total new charges **\$85.24**

[View bill \(PDF\)](#)

Billing and Payment History

Customer can select to view **Billing and Payment History**, which provides a record of posted bills and payments scheduled by the customer. Posted bills include a summary of the previous balance and new charges, as well as a link to view the applicable bill. The most recent transactions are displayed first, along with the option to view additional transactions. All payment transactions include a confirmation number, the last four digits of the applicable payment method, and the tender type that provides additional details on how the payment was processed.

Note: Transactions such as bill cancellations and rebills are grouped into the current bill and are included as an adjustments line item.

Future, scheduled payments are also displayed, including a breakdown of charges which may include multiple account transactions or charitable contributions. Customers can also cancel any scheduled payments.

To help find applicable transactions quickly, customers can use the filters on transaction type and transaction date to limit the transactions that are displayed. This can include displaying only pending transactions, or displaying only transactions from this year. All filters can be cleared to display all available transactions.

Customers can select to download all financial history as a comma separated value (CSV) file.

For historical bill posting events, customers can select to download a copy of the bill. The option to download a PDF copy a bill is available if the utility completes the integration to support bill downloads. Refer to [Oracle Utilities Opower Digital Self Service - Transactions Bill Download Integration Guide](#) for steps to complete bill download integration.

The availability period for bill downloads, along with an informative message that explains bill download availability, are configurable. The bill download button is automatically displayed or hidden based on the configured availability. By default, bills within the last year are available for download.

Billing and payment history

All transactions ▼ All dates ▼ Clear [Download history](#)

i You can only download files up to a year old.

Date	Activity	Amount	
Oct 15, 2022	▼ Bill posted	-\$8.70	↓
	Gas service	\$41.30	
	Adjustment	-\$50.00	
	Total bill	-\$8.70	
	View bill details		
Sep 23, 2018	► Payment received	-\$38.00	
Sep 12, 2018	► Bill posted	\$38.00	↓
Sep 12, 2018	► Bill posted		↓

Projected Bill

The projected bill shows customers their current usage or cost so far in the billing period, their projected usage or cost for the billing period, and how that compares to their typical usage or cost for the period, based on their past usage.

Data Requirements and Limitations

- Cloud Service Requirements:** The projected bill is provided through the Digital Self Service - Energy Management Bill Forecast, available through the Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service. For more information on the available Digital Self Service - Energy Management add-ons, see "Your Utility Use" on page 82.

Compare Bills

Customers can compare the costs of their current bill to previous bills. The Bill Comparison allows customers to compare their current bill to their previous bill and to the corresponding bill from the same time period the previous year. If data from the previous year is not available, only an analysis against the previous bill period is available. A bill period from the previous year is defined as the bill period that overlaps the most with the

current bill period. Customers can also use the **This Bill** drop-down list to select a historical bill to review the applicable previous bill comparison.

Data Requirements and Limitations

- **Cloud Service Requirements:** The projected bill is provided through the Digital Self Service - Energy Management Bill Comparison, available through the Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service. For more information on the available Digital Self Service - Energy Management add-ons, see "Your Utility Use" on page 82.

Manage Billing

Customers can enroll in the following programs, configured by the utility to manage the payment of their utility bills. All programs, except for paperless billing and charitable contributions, include a list of FAQs to explain the programs and provide more details on how they affect a customer's account.

Note: If a utility chooses not to offer a program to customers or a customer is ineligible for a program, the program is hidden from the Manage Billing list.

Manage billing

<p>Paperless Billing Ditch the paper with emailed bills</p>	Enrolled >
<p>Automatic Payments Automate your bill payments</p>	Enrolled >
<p>Payment Arrangement Pay off an outstanding balance in manageable pieces</p>	Not Enrolled >
<p>Budget Billing Even out your bills</p>	Not Enrolled >
<p>Charity Contributions Charity Auto-Pay</p>	Not Enrolled >
<p>Payment Extensions Allow extra time to pay your bill</p>	Enrolled >
Set your billing preferences	
<p>Preferred Payment Date Pick the date your utility bill is due each month</p>	>

Paperless Billing

Paperless billing provides the same information as paper bills, delivered through email. Links to important customer actions such as viewing or paying a bill are included.

Customers can enroll in paperless billing at any time using their desired email address. They can also edit their email address or unenroll at any time.

Note: Paperless billing enrollment can be configured to allow customers to enroll in paperless billing while also retaining the option to receive paper bills as well. Customers who enroll in paperless billing then have the option to remain enrolled in paper bills as well or opt-out of paper bills. For information on this configuration, refer to the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Paperless Billing
Ditch the paper and receive your bills via email.

How it works
You'll get your bill delivered to your inbox, faster than you would normally receive it in the mail. And if you want a paper copy of your bill, you can always print one out from your online account.

Send to your primary email address:
jdoe@example.com

ENROLL

Automatic Payments

Automatic payments allow customers to automatically pay their bills using their preferred payment method. Customers who enroll in automatic payments must provide their checking account or credit card information, along with a recurring date for the automatic payments. Enrolled customers can unenroll at any time. If automatic payments are processed by a third-party provider, customers are redirected to the third-party credit card processor to complete the unenrollment.

Automatic Payments
Never worry about missing a bill payment.

How it works
Once you choose your preferred payment settings, you'll be automatically charged each bill period when the bill is due—no need to log in or worry about when your bill is due.

Frequently asked questions

- ▶ [When will this go into effect?](#)
- ▶ [How does the "maximum" payment setting work?](#)

How would you like to set up automatic payments?


Credit Card


Bank account / Debit card

Budget Billing

Customers interested in fixed payments, also referred to as budget billing, can review details about the utility's fixed payment plan. This includes information on how the plan works, how much it costs per bill, advantages of signing up for the program, and a list of frequently asked questions.

Interested customers can easily enroll in the program, and enrolled customers are provided the option to unenroll from the program. Budget billing allows customers to avoid fluctuations in their billing throughout the year and pay a set price which remains

consistent for the length of the program. A true-up for the difference the customer paid and their actual costs is sent at the end of the budget billing cycle.

Budget Billing

Budget Billing evens out your utility bills into fixed payments, so you know exactly what you'll owe each month.

How it works

The Budget Billing program averages your utility bills from the previous 12 months and divides them into equal monthly payments.

To settle any differences between your monthly payments and actual use, you may receive a true-up charge or credit at the end of the year.

What you'll get

- Zero bill fluctuation, even during periods of higher use.
- Easier-to-manage monthly expenses.
- No monthly fees—this service is completely free.

Budget Billing is only available to customers that have been with UtilCo for at least 12 months.

Frequently asked questions

- ▶ [How is Budget Billing calculated?](#)
- ▶ [What is a "true-up"?](#)
- ▶ [Understanding your monthly statement](#)

Your monthly bill \$ 20.20

You will pay \$20.20 each bill period with a true-up payment every 12 periods.

 **Enrolled** [UNENROLL](#)

Payment Arrangement

Utilities can offer payment arrangement plans to customers with unpaid balances. Customers can review details about the utility's payment arrangement plan, including information on how the plan works, their current unpaid balance, and a list of frequently asked questions. Interested customers can enroll in the program and select from available payment options. The payment options break the unpaid balance down into equal payments over a specified number of bills.

Enrolled customers can monitor their remaining balance from the payment arrangement page. They can review the start date of their plan, the initial amount, and the monthly amount due to keep track of their progress on paying off their balance. Service agreement types and service agreement numbers related to the payment arrangement can also be displayed to customers and customer service representatives.

Payment arrangement											
<p>Payment arrangement spreads out an unpaid balance over future bills, so you can pay it off in manageable amounts.</p> <p>How it works</p> <p>Your previously unpaid balance is divided into smaller amounts, and then added to new bills in equal installments.</p> <p>What you'll get</p> <p>Smaller amounts to pay off at a time.</p> <p>Frequently asked questions</p> <ul style="list-style-type: none"> ▶ How does Payment arrangement affect my bill? ▶ Who is eligible for Payment arrangement? 											
<p>Plan details</p> <p>Pay arrang. - Regulated debt</p> <table border="0"> <tr> <td>Remaining balance</td> <td>\$68.00</td> </tr> <tr> <td>Start date</td> <td>07/11/2023</td> </tr> <tr> <td>Initial amount</td> <td>\$68.00</td> </tr> <tr> <td>Monthly amount</td> <td>\$22.67</td> </tr> <tr> <td>Remaining payments</td> <td>3</td> </tr> </table> <hr/> <p> Enrolled</p>		Remaining balance	\$68.00	Start date	07/11/2023	Initial amount	\$68.00	Monthly amount	\$22.67	Remaining payments	3
Remaining balance	\$68.00										
Start date	07/11/2023										
Initial amount	\$68.00										
Monthly amount	\$22.67										
Remaining payments	3										

Payment Arrangement Data Requirements and Limitations

- **Unenrolling:** After a customer is enrolled, they cannot unenroll online. Contact information can be provided for customers interested in unenrolling from partial payment plans. Customers can use the contact us form to request unenrollment, which notifies a customer service representative to contact the customer and guide them through the process.
- **Eligible Customers:** A utility must use their Oracle Utilities Customer Care and Billing system to define the set of customers eligible for payment arrangement plans.
- **Number of Bills:** The utility can define the number of bills that are included for the payments, based on the total unpaid balance.

Charity Contributions

Utilities can offer charitable contribution plans that allow customers to make donations to available charitable organizations every billing period. When a customer enrolls in charitable contributions, they are presented with charitable organizations that the utility has configured. Each organization is a separate enrollment, and during enrollment customers can select their contribution amount to apply during each billing cycle. Customers can unenroll in a charitable payment or modify their contribution amount at any time.

Payment Extensions

Utilities can offer payment extension plans that allow customers to extend the due date of their bills. The customer eligibility requirements, length of extension, and amount of a customer's bill that can be included in a payment extension is configurable by a utility.

There are two ways that a utility can offer extensions, extension of a past due amount only, or extension of the full account balance. A utility can configure either or both options and allow users to choose which one they want when both options are available. If a utility chooses not to offer payment extensions, this option is hidden from view.

Eligible customers can enroll in payment extensions from the Manage Billing area. Enrollment in payment extensions can modify alerts related to a customer's bill. For more information on alerts, see "Notifications" on page 94.

The customer's program options and their enrollment status are displayed regardless of whether they signed up with an agent of the utility or through the self-service options. Customers enrolled in a payment extension for a bill are automatically unenrolled after they complete payment for their extended amount. Customers can then re-enroll in payment extensions for future bills if required.

Preferred Payment Date

Customers can choose a due date for their utility bill that better meets their needs. There are two ways a utility can offer a preferred due date program, customers can either be offered to extend their current due date by a certain number of days or they can choose from a list of available due dates that have been set by the utility. The request is automatic, in real time, and is effective as early as the customer's next bill.

Preferred Payment Date

With the preferred due date program, residential customers can pick the date their utility bill is due each month, such as the 1st or 15th.

How it works

Our Preferred Due Date option lets you request a billing due date that fits with your cash flow. It's a program that works well for those on a fixed income or whose paychecks come at specific times during the month.

Frequently asked questions

- ▶ [Who is eligible?](#)
- ▶ [When does it take effect?](#)

Preferred due date

Your due date for John Smith is 16th of every month

Choose a new day of the month

Due date: 16th Day ▼ of every month

[CONTINUE](#)

Utilities can also define eligibility criteria for requesting a due date change. For example, eligible customers can be required to have an active account with no past due balances.

Manage Bank Accounts

Customers can manage their Automated Clearing House payments directly from within Digital Self Service - Transactions by adding and managing bank accounts. Customers can add or delete their bank accounts using Digital Self Service - Transactions without calling their utility. This feature also eliminates the customer's need to add their bank account for every payment. Customers can manage and distinguish between multiple bank accounts with descriptive names.

Manage Bank Account

Add a new bank account Close ▲

First Name

Last Name

Checking

Bank Routing Number

Bank Account Number Re-enter Bank Account Number

01013001421
123456789
0101

Bank Routing Number
Bank Account Number
Checking Number
(Not Needed)

You have only one active bank account

▶ Wells Fargo Bank 🗑

Rates

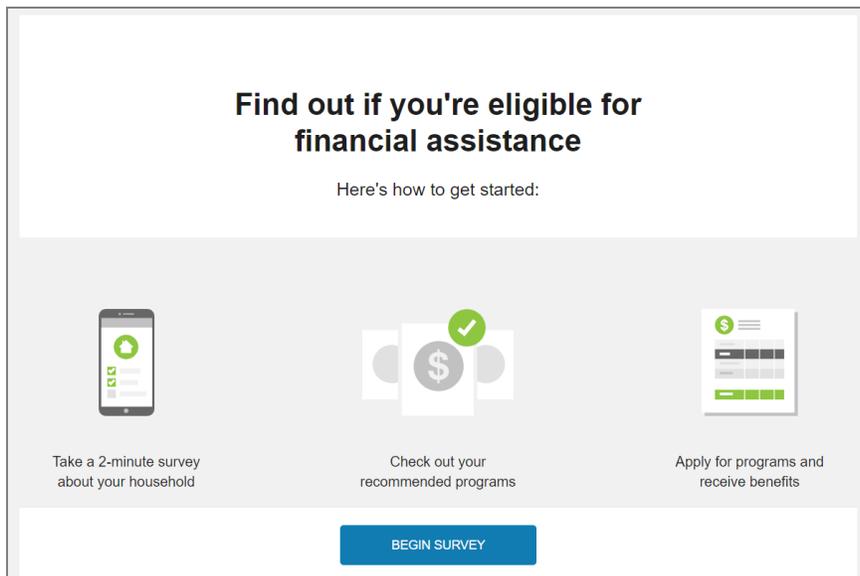
The Rate Comparison feature allows customers to see an overview of rate plans for which they are eligible, estimated cost information, and details about each rate plan option. Customers can compare rate plans in terms of estimated annual costs and quickly identify their cheapest rate. Further rate analysis is available through additional rate details and the ability to perform what-if scenarios representing energy use choices the customer can make. For additional information on the features available with Rate Comparison, refer to the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#).

Data Requirements and Limitations

- **Cloud Service Requirements:** The rates features are provided through the Digital Self Service - Energy Management Rate Comparison, available through the Oracle Utilities Opower Rates Engagement Cloud Service. For more information on data requirements and limitations, refer to the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#)

Savings Hub

Savings Hub is a visual, interactive tool that prompts customers to answer simple questions about their home and finances. A customer's responses to the questions are then used to create a personalized list of available energy efficiency and financial assistance programs that can help them reduce and pay their utility bills.



Data Requirements and Limitations

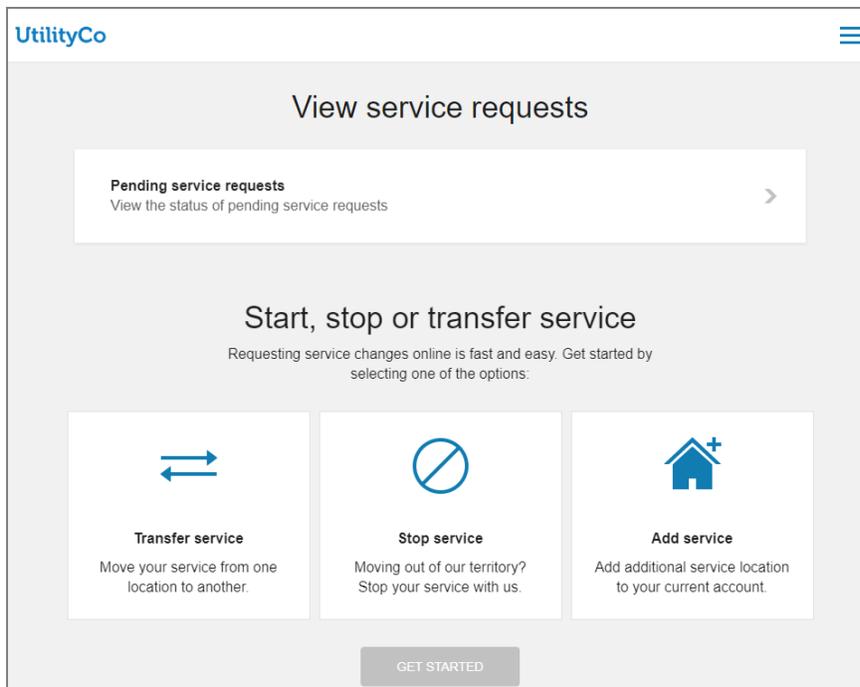
- **Cloud Service Requirements:** The Savings Hub features are available through the Oracle Utilities Opower Affordability Cloud Service. For additional information on the Affordability Cloud Service feature functionality and requirements, see the [Oracle Utilities Opower Affordability Savings Hub Cloud Service Overview](#).

Start, Stop, and Transfer Service

Self-service options are available to the customer to start, stop, or transfer utility service. These options quickly walk the customer through the process and requirements to complete their service transaction. Customers can also view pending start and stop requests.

Note: Digital Self Service - Transactions offers two options for Start, Stop, and Transfer Service features. The Classic version provides all functionality available with 23A and earlier releases, along with continued support in current releases. Starting with 23B, Start, Stop, and Transfer Service provides a separate set of

features for these service requests. The Classic terminology in this documentation is used to distinguish the features originally released prior to 23B.



Data Requirements and Limitations

- Start, Stop, and Transfer Service Classic data requirements and limitations:
 - **Service Questions:** Utilities define the available questions using the Oracle Utilities Customer Care and Billing system. This includes determining if a customer can complete the process completely online, or calling the utility is required.
 - **Customer Identification:** Utilities must use Oracle Utilities Customer Care and Billing System to define the characteristics used to identify customers. Common characteristics include customer name, social security number, and driver's license.
 - **Autopay Enrollment:** Utilities must have ACH automatic payments enabled through Digital Self Service - Transactions and Oracle Utilities Customer Care and Billing to offer automatic payment enrollment when customers are completing their start service request. For more information on configuring automatic payments, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

- Start, Stop, and Transfer Service data requirements and limitations:
 - **Minimum supported Oracle product versions:**
 - Oracle Utilities Customer to Meter 2.9.0.1.1
 - Oracle Utilities Customer Care and Billing 2.9.0.1.1
 - Oracle Utilities Customer Cloud Service 23A
 - Oracle Utilities Customer Care and Billing Cloud Service 23A
 - **Configuration:** Utilities define the business rules and controls using one of the above applications.

Start, Stop, and Transfer Service Classic

Start Service Classic

Existing and new customers can start a new service using a process that provides clear instructions and requirements. Customers can start a new service by using the general workflow described below:

1. **Access Site:** Customers access the start service process through the utility website. Customers that do not have an account are not required to log in to complete the start service request. Existing customers that are adding additional service for their account must log in to their account prior to starting an add service request.
2. **New Service Details:** Customers provide the following information to start or add service:
 - **Service Address:** The full street address for the new service. Valid addresses are displayed for selection to the customer based on the address information provided.
 - **Identity Verification:** Personal information from the user is required to verify their identity before they can proceed. Identity verification parameters are configured using Oracle Utilities Customer Care and Billing. For more information on defining identity verification parameters, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
 - **Address Details:** Additional information about the address, which can include the type of home, number of occupants, and whether they rent or own the home. Applicable details are determined by the utility.
 - **Start Date:** The date to begin service. A date selector allows customers to browse to the applicable day. Information on the service start process and requirements are also included.
3. **Account Preferences:** Customer provide the following account preference information to start or add service:
 - **Mailing Address:** A customer's mailing address is required. The service address acts as the default mailing address. Mailing address validation can be enabled

and configured, with additional steps covered in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

- **Optional Programs:** Paperless billing and ACH automatic payments are available for enrollment when a new account is created.

Automatic payment enrollment performed during a start service request follows the same NACHA business rules configured for general automatic payments. For credit card automatic payment enrollment, customers must follow enrollment steps after their account has been created rather than during the start service process.

4. **Review and Confirm:** All information provided by the customer is displayed for review. Customers can choose to edit any information that is incorrect.

For new customers, a new account and service are created, which are linked to the web user automatically. For existing customers, new service is created as part of the customer's existing account. In both scenarios, the customer must connect to their account using the Account and Preferences options (see "Manage Web Account" on page 36).

Stop Service Classic

Customers can stop all services for a given account by using the general workflow described below:

1. **Access Site:** Customers access the stop service process through the utility website and must log in to their account.
2. **Stop Service Details:** Customers provide the following information to stop service:
 - **Service Address:** The street address for the service that is to be stopped.
 - **Stop Date:** The date to stop service. A date selector allows customers to browse to the applicable day. Information on the service stop process and requirements are also included.
3. **Contact Information:** A customer's phone number and mailing address are required. Mailing address validation can be enabled and configured, with additional steps covered in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

The following options are available when updating the phone number:

- Customers can change the primary contact number by selecting one from the list provided.
- Customers can add a new contact, fill in the required information, and the new contact is associated with their account.

- In some cases, contacts may be marked as inactive in the Oracle Customer Information System. If customers attempt to add an inactive contact as their new contact, a notification is displayed. Customers can then choose to reactivate the contact or select a different contact.
4. **Review and Confirm:** All information provided by the customer is displayed for review. Customers can choose to edit any information that is incorrect.

Transfer Service Classic

Customers can quickly move service from one premise to another using the general workflow described below:

1. **Access Site:** Customers access the transfer service process through the utility website and must log in to their account.
2. **New Service Details:** Customers provide the following information to start new service as part of the transfer.
 - **Service Address:** The full street address for the new service.
 - **Start Date:** The date to begin service at the new address. A date selector allows customers to browse to the applicable day. Information on the service start process and requirements are also included.
 - **Address Details:** Additional information about the address, which can include the type of home, number of occupants, and whether they rent or own the home. Applicable details are determined by the utility.
3. **Stop Service Details:** Customers provide the following information to stop service as part of the transfer.
 - **Stop Service Address:** The street address for the service that is to be stopped as part of the transfer of service.
 - **Stop Date:** The date to stop service. A date selector allows customers to browse to the applicable day. Information on the service stop process and requirements are also included.
4. **Contact Information:** A customer's phone number and mailing address are required. The service address acts as the default mailing address.

The following options are available when updating the phone number:

- Customers can change the primary contact number by selecting one from the list provided.
- Customers can add a new contact, fill in the required information, and the new contact is associated with their account.
- In some cases, contacts may be marked as inactive in the Oracle Customer Information System. If customers attempt to add an inactive contact as their new

contact, a notification is displayed. Customers can then choose to reactivate the contact or select a different contact.

5. **Review and Confirm:** All information provided by the customer is displayed for review. Customers can choose to edit any information that is incorrect.

Start, Stop, and Transfer Service

The Start, Stop, and Transfer Service features provide flexible options for:

- Third-party Identity or credit check integration.
- Duplicate customer prevention.
- Co-applicant processing.
- Individual start service selection.
- Questions and answers administration and processing.
- Customer deposit assessment.

Start Service

Existing and new customers can start a new service using a process that provides clear instructions and requirements. Customers can start a new service by using the general workflow described below:

1. **Access Site:** Customers access the start service process through the utility website. Customers that do not have an account are not required to log in to complete the start service request. Existing customers that are adding additional service for their account must log in to their account prior to starting an add service request.
2. **Service Address:** The customer provides the full street address for the start service request. Matching valid addresses are displayed for selection based on the address information provided. The customer selects the correct service address.
3. **Account Type:** The customer selects if they are a residential or commercial customer. This is applicable only if a new account is being created, which can apply for both new or existing customers.
4. **Account Selection:** The customer selects the account they want the new service to be associated to. This is applicable for existing customers only when multiple CIS Division is supported.
5. **Identification:** The customer provides personal or business information to verify their identity such as name, identification information, date of birth, phone number, and email. Not all details are editable for existing customers.
6. **Co-applicant:** The customer provides co-applicant information such as name, identification information, relationship type, date of birth, phone number, and email. This is applicable for new customers only.

7. **Start Service Details:**

- a. **Start Date:** The customer selects the date for the new service to begin.
- b. **Services to Start:** The customer selects or confirms the services that are to be started as part of the request.
- c. **Miscellaneous Start Service Information:** The customer answers various questions, which may include meter access, safety, rates, and other options that can be used to further process the start service request.

8. **Preferences:**

- a. **Mailing Address:** The customer provides an alternate mailing address or confirms if it is the same as the service address.
- b. **Optional Programs:** The customer can enroll in paperless billing and in automatic payments. This is applicable for new customers only.

9. **Deposit:** The customer confirms any required deposit for the start service request.

10. **Review and Submit:** The customer reviews and submits the start service request. The customer can go back to previous steps and edit the information provided.

11. **Confirmation:** The customer confirms that the start service request was submitted successfully. A confirmation number is shown to the customer. For new accounts, the customer may also see an account number.

For logged-in customers, new account or services are created and, if enabled, can be linked to the web user automatically. Otherwise, the customer must connect their account to their web user through the Account and Preferences options (see "Manage Web Account" on page 36).

Stop Service

Customers can stop all services for a given account by using the general workflow described below:

1. **Access Site:** Customers access the stop service process through the utility website and must log in to their account.
2. **Stop Service Details:** Customers provide the following information to stop service:
 - a. **Stop Date:** The customer selects the date to stop service. A date selector allows customers to browse to the applicable day. Information on the service stop process and requirements are also included.
 - b. **Services to Stop:** The customer selects or confirms the services that are to be stopped as part of the request.
 - c. **Miscellaneous Stop Service Information:** The customer answers various questions, which may include meter access, safety, and other options that can be used to further process the stop service request.
3. **Contact Information:** A customer's phone number and mailing address are required. Mailing address validation can be enabled and configured, with additional steps

covered in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

The following options are available when updating the phone number:

- Customers can change the primary contact number by selecting one from the list provided.
 - Customers can add a new contact, fill in the required information, and the new contact is associated with their account.
 - In some cases, contacts may be marked as inactive in the Oracle Customer Information System. If customers attempt to add an inactive contact as their new contact, a notification is displayed. Customers can then choose to reactivate the contact or select a different contact.
4. **Review and Submit**The customer reviews and submits the stop service request. Customers can choose to edit any information that is incorrect.
 5. **Confirmation:** The customer confirms that the stop service request was submitted successfully. A confirmation number is shown to the customer.

Transfer Service

Customers can quickly move service from one premise to another using the general workflow described below:

1. **Access Site:** Customers access the transfer service process through the utility website and must log in to their account.
2. **Start Service Details:** Customers provide the following information to start new service as part of the transfer.
 - a. **Service Address:** The customer provides the full street address for the start service request portion of the transfer. Matching valid addresses are displayed for selection based on the address information provided.
 - b. **Start Date:** The customer selects the date to begin service at the new address.
 - c. **Services to Start:** The customer selects or confirms the services that are started as part of the request.
 - d. **Miscellaneous Start Service Information:** The customer answers various questions, which may include meter access, safety, and other options that can be used to further process the start service request.
 - e. **Deposit:** The customer confirms any required deposit for the start service request.
3. **Stop Service Details:** Customers provide the following information to start new service as part of the transfer.
 - a. **Stop Date:** The customer selects the date when the current service is stopped. A date selector allows customers to browse to the applicable day. Information on the service stop process and requirements are also included.

- b. **Services to Stop:** The customer selects or confirms the services that are to be stopped as part of the request.
 - c. **Miscellaneous Stop Service Information:** The customer answers various questions, which may include meter access, safety, and other options that can be used to further process the stop service request.
4. **Contact Information:** The customer updates the phone number or mailing address. Mailing address validation can be enabled and configured, with additional steps covered in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

The following options are available when updating the phone number:

- Customers can change the primary contact number by selecting one from the list provided.
 - Customers can add a new contact, fill in the required information, and the new contact is associated with their account.
 - In some cases, contacts may be marked as inactive in the Oracle Customer Information System. If customers attempt to add an inactive contact as their new contact, a notification is displayed. Customers can then choose to reactivate the contact or select a different contact.
5. **Review and Submit:** The customer reviews and submits the transfer service request. The customer can go back to previous steps and edit the information provided.
6. **Confirmation:** The customer confirms that the transfer service request was submitted successfully. A confirmation number is shown to the customer.

Pending Requests

Customers can review pending start and stop service requests. For transfer requests, the applicable and separate start and stop requests are included in a customer's pending requests.

Note: Pending request functionality is identical for both Start, Stop, and Transfer Server versions.

Pending service requests

A requested change to your service is awaiting processing. If you need to make a change to your pending requests, contact (123) 456-7890.

REQUEST	ADDRESS	SERVICE	DATE OF CHANGE	SERVICE AGREEMENT
 Stop	703 Weis Road San Mateo CA 94404	Electric Service	06/29/2020	0515360264
 Stop	701 Weis Road San Mateo CA 94404	Electric Service	06/29/2020	0518849641
 Start	17 Salem St San Francisco CA 95404	Electric Service	12/10/2020	0518930121

[BACK TO SERVICE PAGE](#)

A customer can select a pending service requests notification or the **Pending service requests** item at the top of the Start, Stop, and Transfer Server page to review information related to pending requests, including:

- **Request Type:** Identifies the requests as start or stop requests.
- **Address:** The address is provided for pending requests for a specific premise.

For requests that are for an account but not a specific location, a description of the pending request is provided. This is applicable for pending requests that apply to a service agreement. This can include requests such as enrolling in payment arrangement or charitable contribution programs, overpayment refunds, starting service deposit requests, and so on. The applicable requests depend on which requests are defined in the system as related to service agreements. These types of requests that are not tied to a specific location can also be hidden from the pending requests location, as described in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

- **Service:** The type of utility service for the request, such as electricity or water.
- **Date of Change:** The date for the service change to be enacted.
- **Service Agreement:** The ID for the applicable service agreement

Service Appointments

Digital Self Service - Transactions allows customers to schedule and manage appointments easily and effectively through the self-service portal.

Service appointments

If you are experiencing a gas leak, fire on pole, or pipeline break, immediately call our emergency number at (555) 555-5555. Some services we provide can be requested online. You will find requested appointments you received by letter or phone here.

At the time of the appointment, an adult (over 18 years or older) must be present to complete this service request.

If you're trying to start, stop, or transfer your service, get started [here](#).

SCHEDULE APPOINTMENT

Need to schedule

You don't have appointments you need to schedule right now.

Upcoming appointments

SERVICE REQUEST	ADDRESS	SERVICE	APPOINTMENT	REFERENCE ID	
Trim Tree	7489-A Demo St., Alameda, CA 94501	Electric (Meter ID: E-SMART-89428)	03/14/2023, 1PM - 3PM	85222732 190868	Edit

Scheduling Appointments

Customers are able to self-serve scheduling appointments related to their utility services. This includes creating and scheduling new appointments such as a meter read or to trim a tree. Customers can also assign a schedule for appointments created to their accounts such as initial start service appointments.

Creating New Appointments

Existing customers can schedule service appointments, such as requesting a meter read or requesting a hazardous tree to be trimmed, using the general workflow described below:

1. **Access Site:** Customers access the service appointments process through the Digital Self Service - Transactions web portal. Customers must log in to their accounts, and from the **Service Appointments** area, select **Schedule Appointment**.

2. **Service Address:** The premise address is populated for the customer based on their account. If a customer has multiple premises associated with their account, a premise selector is displayed to select the appropriate premise for the service appointment.
3. **Service Point:** If a customer has multiple service points associated with a premise, customers select the service point that is relevant to the appointment.
4. **Service Request:** Customers select the service they need performed at their premise from the options available.
5. **Date and Time:** Customers select a date and time from the available options that are suitable for them.
6. **Review and Submit:** All information about the service appointment provided by the customer is displayed for review. Customers can edit any information that is incorrect. An example of this is shown below.

Schedule appointment

If you are experiencing a gas leak, fire on pole, or pipeline break, immediately call our emergency number at (555) 555-5555.

Premise

7489-A Demo St., Alameda, CA 94501

⚡ Electric (Meter ID: E-SMART-89428)

Service request

[Edit](#)

Read Meter

Date and time

[Edit](#)

03/16/2023 | 10AM - 12PM

Submit

 At the time of the appointment, an adult (over 18 years or older) must be present to complete this service request.

I agree to the [terms and conditions](#).

SUBMIT

[Exit appointment scheduling](#)

Upon submitting the service appointment the service appointment is created. This service appointment is then included in their upcoming appointments, as described in "Upcoming Appointments" on page 34.

Assigning a Schedule to Appointments

Customer viewing the Service Appointments area can review a list of **Need to Schedule** appointments. This list includes appointments that are created for the customer's account but do not yet have a scheduled time. There are various scenarios that cause these appointments to be created. For example, a customer starting service can receive an appointment for installing a meter or turning on service.

From the list of appointments that a customer needs to schedule, a customer can select **Schedule** to assign a schedule for the appointment. For some appointments, a customer can choose the date and time that is suitable for them. For appointments related to start, stop, or transfer service, customers are only able to select the time for the appointment. To update the date for start, stop, or transfer service appointments, customers must contact the customer call center.

Upon assigning a schedule for a service appointment, it is then included in their upcoming appointments, as described in "Upcoming Appointments" on page 34.

Upcoming Appointments

All scheduled appointments for a customer's account that are not yet completed are displayed in the list of Upcoming Appointments. A customer can use this list to quickly review important pending appointment information such as the type of service request, the applicable address for the service, and the appointment date and time.

Customers can also select **Edit** for an upcoming appointment to modify the appointment. This can include updating the date and time for the scheduled appointment, or selecting to cancel the appointment, as shown below. Cancelled appointments are removed from a customer's list of upcoming appointments.

Appointment details

If you need to change the premise or service reason for this appointment, please call us at (555) 555-5555.

Reference ID: 85222732190868

Premise

7489-A Demo St., Alameda, CA 94501

 Electric (Meter ID: E-SMART-89428)

Service request

Trim Tree

Date and time

[Edit](#)

03/14/2023 | 1PM - 3PM



At the time of the appointment, an adult (over 18 years or older) must be present to complete this service request.

CANCEL APPOINTMENT

DONE

Manage Web Account

Customers can view their web account information and connected accounts. Customers can also add utility accounts they want to manage online, remove accounts, or invite guests to their accounts if they have permission to invite guests. Changes to the web login details and account details are applied to all accounts linked to that login. Users cannot maintain separate web login details for different accounts under the same login.

Note: Digital Self Service - Transactions provides a view of a customer's web account information. The utility must provide and support the work-flows through configuration of an identity management system for customers to update their web account information.

The screenshot shows a web interface titled "Manage web login and connected utility accounts". Below the title is a subtitle: "Update your web login information and add or remove utility accounts you would like to manage online." The interface is divided into two main sections: "Web login details" and "Connected accounts".

Web login details

Name	Multi Account	Edit
Email	multi_account@oracle.com	Edit
Username	multi_account@oracle.com	
Password	*****	Edit

Connected accounts [+ Connect new account](#)

Multi	Unlink Account
12345 sanity-01, OH, 12345 Account # 2562882254	
+ Add guest user	
Restricted	Unlink Account
6203-A Demo St., Uniontown, OH, 44001 Account # 3284234335	
+ Add guest user	

Web Login Details

Customers can view the information they provided when they created their web account, including their first name, last name, login username or email address, and edit their password:

- If authentication is configured using Oracle Cloud Infrastructure Identity and Access Management, customers can select the **Edit** password option to change their name, email, and password directly within Digital Self Service - Transactions. Edit email is only available when a utility requires customers to register with a separate username and email address. For information on configuring authentication with Oracle Cloud

Infrastructure Identity and Access Management, see the [Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide](#).

- If authentication is configured using Oracle Cloud Infrastructure Identity and Access Management and utilities support multiple usernames associated with a single email address, customers can select the Edit email option to change their email address directly within Digital Self Service - Transactions. For information on configuring authentication with Oracle Cloud Infrastructure Identity and Access Management, see the [Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide](#).
- If authentication is configured using a third-party identity provider, an **Edit email and password** option is provided, which redirects the customer to an external site to change their credentials as required by the third-party identity provider.

Connected Accounts

Customers might have multiple utility accounts linked to their web login for Digital Self Service - Transactions. Each utility account has a nickname, account ID, and address. A **Premises** expand displays additional addresses for utility accounts with multiple addresses.

Customers can connect new accounts to their web login. This is a common task when starting a new utility service (see "Start, Stop, and Transfer Service" on page 21). By default, only the main customer can be linked to the utility account online. To give other web users access to the utility account, the main customer must invite guests to connect to the account. The following information is required when connecting an account:

- **Account Number:** The account ID for the utility account.
- **Customer Identification:** The identifying information for a customer, as defined by the utility, such as a social security number, driver's license, or phone number.
- **Account Nickname:** A descriptive name for the account such as "Home."

After an account is created and linked to the web login, only the account name can be changed for an account. A user can unlink an account from their web login at any time.

Guest Users

For any connected account a customer can **Add guest users**. Guest users can access the utility account with a level of access lower than what is provided to the primary account holder. When selecting this option, the customer is prompted to provide the guest user's first name, last name, and email address. The email address provided is used to send the user an invitation email to accept the guest user access. The customer adding a guest user must also define the level of access to grant to the guest user. Utilities must provide the roles that are available for assignment to guest users and the access that each role is

granted. For more information, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Note: Digital Self Service - Transactions can be configured to allow main account holders to add guest users to an account and not need to collect personally identifiable information if the guest user is defined as not financially responsible for the account. For guest users that are not financially responsible for the account, a more minimal set of information, including an email address is required to add them to the account.

The main account holder can expand **Guest Users** to view the list of guest users included on a utility account. Full guest user management is available including the options to review what actions the guest user can take given their access level, change the guest user's access level, remove the guest user, and revoke a pending guest user invitation. The list of guest users is not available if there are no guest users or pending guest user invitations for an account.

Guest user invitations do not expire. If the guest has an existing web login with the utility, an invitation notification is displayed upon logging in to their account. If the guest does not have an existing web login with the utility, they are prompted to create a web login when attempting to accept the invitation from the invitation email. When a guest accepts an invitation to a utility account, the account holder receives a confirmation email. Customers can revoke a pending invitation or remove a guest user at any time.

Customers can review the list of utility accounts that they have been granted guest access to by reviewing the list of **Accounts you are a guest on**. Each guest account link describes the role for their guest access and the types of actions that the role allows them to perform for the utility account.

Note: If a guest user has been given permissions to enroll in utility programs, the guest user can view the account's current enrollment status for various programs. For paperless billing, the guest user can individually enroll in paperless billing, and this enrollment does not impact the paperless billing enrollment for the primary account holder. All other program enrollment for the main account holder and guest users are synchronized.

A customer can choose to unlink their account to no longer have guest access to the account. This list is not displayed if the customer is not a guest on any other accounts.

Data Browser

The Data Browser is an interactive tool that allows customers to visualize and explore their energy use trends and costs, and make comparisons to useful benchmarks, such as weather and similar homes. One or more views for [Energy Costs](#), [Energy Use](#), [Water and Wastewater](#), [Demand](#), [Usage Breakdown](#), and [Neighbors](#) are available in the feature. If applicable, customers can also use menus to switch between multiple accounts or service points.

Requirements

Utility Requirements

Same as listed in the [product-wide requirements](#). Same as listed in the [product-wide requirements](#).

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, and quarterly.
Data Delivery Frequency	Monthly, bi-monthly, and quarterly.
Data Requirements	<p>Billing Data: Customers must have a minimum of one historical bill to view data in the Year view.</p> <p>Weather Data: Weather data is required for the weather line graph to display.</p> <p>AMI Data: The Digital Self Service - Energy Management AMI cloud service must be purchased for daily or subdaily energy use AMI data and insights to display. A minimum of one historical bill with at least one day of historical AMI data is required to view such data.</p> <p>Rates Data: The Rates Engagement cloud service must be purchased and rates must be modeled in order for rates or cost insights to display in certain parts of the Energy Costs View.</p>

Category	Description
Data History	<p>A minimum of one historical bill is required for data to display in the Year view.</p> <p>For AMI customers, a minimum of one historical bill which includes at least one day of historical AMI data is required for the Bill view and Day view.</p>
Data Coverage	<p>Not applicable. By default, all graphs and views of the Data Browser display any data that is available, even if some reads are missing.</p>
Supported Fuels	<p>Electricity, gas, and dual fuel. Customers with two fuels can switch between electricity and natural gas views. A combined view, which combines electricity and natural gas use, can also be enabled. Customers must have water or wastewater service to view water or wastewater costs and use, respectively.</p>

Limitations

- **Taxes and Fees Limitation:** The amounts shown for energy use typically do not include taxes or fees, so they will not match the customer's bill. However, with additional setup and configuration, the costs can be made to match a customer's bill. [Contact your Delivery Team](#) for more information. [Contact your Delivery Team](#) for more information.
- **Water and Wastewater Amounts:** The amounts shown for water or wastewater costs and use are based on the cost and use values, respectively, and sent to Oracle Utilities in the [billing data transfer specification](#) without any additional calculations on the values.
- **Water Customers in Neighbors Graph:** The [Neighbors View](#) compares energy use for residential customers. It does not include a comparison of water or wastewater use or comparisons for non-residential customers.
- **Solar or Multi-Register Data:** Utilities must be on the [latest data transfer specifications](#) in order for enhanced solar data to display in the [Energy Use](#) view for customers with multi-register data. Your Delivery Team will work with you to identify which data transfer specifications you need.
- **Responsive Display:** Daily energy use can be displayed in 15 or 30-minute intervals for all customers with sub-hourly read data. When viewed on smaller screens such as

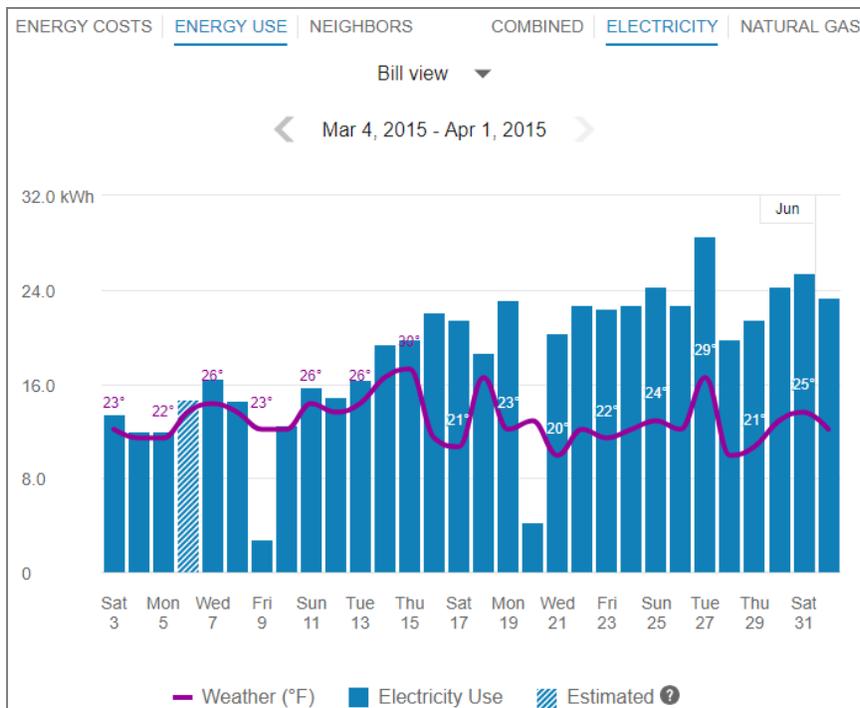
for mobile devices, the responsive design displays hourly intervals to account for reduced screen space.

User Experience

The Data Browser is an interactive visualization tool that allows customers to analyze their energy use trends by fuel type, time period, and a series of other views. Customers can hover over or select a data point in the Data Browser to [see a tooltip](#) containing more information about it. The major views available are:

- [Energy Costs View](#): The cost of energy usage over time, alongside factors such as a weather and solar power (if applicable).
- [Energy Use View](#): The amount of energy usage over time, alongside factors such as a weather and solar power (if applicable).
- [Demand View](#): The demand (or rate) of energy consumption over time.
- [Usage Breakdown View](#): The top costs of energy by disaggregation categories over time.
- [Neighbors View](#): The amount of energy use compared between the customer and their neighbors.
- [Water and Wastewater Views](#): The amount and cost of water usage over time.

The image below is an example of the Energy Use view.



Depending on what data is available, each of these views presents different kinds of trends and insights at varying levels of granularity over time:

- **Year view:** Energy cost or usage by each bill period in a year. Monthly, bi-monthly, and quarterly bills are supported.
- **Bill view:** Energy cost or usage by each day in a bill period, as well as the day with the highest demand.
- **Day view:** Energy cost, usage, or demand by each hour of a day, as well as the interval with the highest demand.

For more information on how the feature behaves and displays data, see [General Display Rules](#) below. Some insights may not be available depending on data availability and the customer's fuel type.

General Display Rules

The Data Browser follows some general rules regarding when and how to display data. These rules vary depending on the view.

Year View

Rules for the Year view include:

- For all major views (Energy Costs, Energy Use, and so on), the Year view will always display any available data, even if some data is missing. For example, if 12 out of 13 months are missing data, the Data Browser will still show data for the one month that is available.
- Energy use and cost data for a bill must be sent to Oracle Utilities Opower for the same billing period. For example, if a customer has quarterly bills, the utility cannot send monthly energy use data, and then later send the total cost of the customer's bill at the end of the quarter. Both the total usage and cost of the quarter must be sent together in order for it to display it in the Year view of the Data Browser.
- Data points are always shown for a full year plus one additional data point. This means that there are 13 data points for monthly billing, 7 data points for bi-monthly billing, and 5 data points for quarterly billing.

Bill View

Daily AMI data is required to display the Bill view. In general, the Bill view will display any available data, even if some data is missing. For example, if only four days of data are available, the Data Browser will still show data for those four days.

Day View

Subdaily AMI data is required to display the Day view. Data reads are shown by hour or by whatever time interval matches the customer's AMI meter. The supported intervals are 60-minute, 30-minute, and 15-minute.

For the Energy Costs and Energy Use graphs, the Day view will always display any available data, even if some data is missing. For example, if only five hours of data is available, data for those five hours will be shown. Since 24 hours in a day can be assumed, missing data is shown as gaps in the graph.

High and low temperatures are not displayed in the tooltips for the Day view. However, average hourly temperature data will be displayed if it is available.

X-Y Axis

The Data Browser displays data in the form of lines, bars, and data points along an X-Y axis. Customers can hover over a given data point for more information and see a [tooltip](#) containing standard details such as a date range, energy use amount, and other information depending on the view selected.

X-Axis

The labels on the X-axis of the graph represent an interval of time (months, days, or hours).

View	Display Rules
Year view	<p>The abbreviated month and final day for each bill is displayed.</p> <p>For example, if a customer is billed monthly on the 20th of every month, the label for September is Sep 20. This ensures that if more than one bill ends in a given month, each bill can be distinguished by the day information.</p> <p>Labels appear across the X-axis for every bill. Labels are hidden in a manner to ensure that labels do not overlap for reduced screen sizes. For example, labels can be displayed for every other bill when a browser window is reduced.</p>
Bill view	<p>The abbreviated day of the week and numeric day for each daily read is displayed.</p> <p>Labels appear across the X-axis for every other day. Labels are hidden in a manner to ensure that labels do not overlap for reduced screen sizes. For example, labels can be displayed for every third bill when viewing area is reduced due to viewing the graph on a mobile device.</p>
Day	<p>Time of day intervals are displayed, such as 12am, 6am, 12pm, and so on.</p>

View	Display Rules
view	Labels appear across the X-axis for every six hours. Labels are hidden in a manner to ensure that labels do not overlap for reduced screen sizes. For example, labels can be displayed for every twelfth hour when viewing area is reduced due to viewing the graph on a mobile device.

Y-Axis

The labels on the Y-axis of the graph represent an applicable unit of consumption, cost, or demand. The axis begins at 0 and displays increments up until an applicable maximum value that ensures all data can be shown.

Estimated Bills and Usage Reads

Utilities are sometimes unable to obtain billing reads or AMI usage reads for their customers, in which case such bills or reads may be estimated.

- **Estimated Bills:** An estimated bill is an approximate monetary amount that is calculated based on the energy that a customer has consumed in the past rather than the present billing period. Estimated billing reads are marked in the data file sent by the utility to Oracle Utilities Opower. Estimated bills are corrected the next time the customer's meter is read. Any extra costs they were charged will be adjusted in the following bill, ensuring that customers never pay for more energy than they actually used.
- **Estimated AMI Reads:** An estimated AMI read (that is, granular usage reads such as daily or subdaily reads) is an approximate usage amount that is calculated based on the energy that a customer that has consumed in the past rather than in the present billing period. Like estimated bills, estimated AMI reads are marked in the data file sent by the utility to Oracle Utilities Opower.

In the Data Browser, estimated bills or AMI reads are indicated by a tooltip message that displays when the customer hovers over an applicable data point. This message will appear if any bill or usage read shown in the Data Browser was estimated. For example, a single bill period could be estimated or a single day could contain three hourly reads which are estimated.

 This bill was estimated.

Cost	\$49.80
Weather (°F)	24° / H 32° / L 2°

(Click bar to view each day)

Note: Estimated bills and AMI reads are flagged separately in the data files sent by the utility to Oracle Utilities Opower. If a utility has not marked that a billing read was estimated, then no indication of an estimated bill will be displayed for any of the bill periods shown in the Year view of the Data Browser—even if one of the billing periods contains one or more *daily* estimated AMI reads.

Energy Tooltips

A tooltip is displayed when a customer interacts with a data point in the Data Browser. At minimum, the tooltip includes the time period covered and the amount of energy used by the customer. Other elements of a tooltip vary depending on which view of the Data Browser is selected and what data is available.

Aug 8, 2023 - Sep 8, 2023		Aug 8, 2023 - Sep 8, 2023	
Cost	\$65.32	Energy Use	724 kWh
Weather (°F)	20° / H 32° / L 2°	Weather (°F)	20° / H 32° / L 2°
(Click bar to view each day)		(Click bar to view each day)	

Time Period: The time period for the selected data point. The information shown varies slightly depending on the interval of time being viewed.

- **Year View:** The tooltip shows the month and date range of a bill period. Example: May 3, 2020 - June 1, 2020
- **Bill View:** The tooltip shows details about a day in a bill period. Example: Thurs, May 8, 2020
- **Day View:** The tooltip shows an hourly or sub-hourly interval in a bill period. Example: 9:00 - 10:00am

Energy Cost: The cost of energy for the selected fuel type and time period. Energy costs are shown on tooltips for the Energy Costs graph. Hyphens are displayed for any data that is missing. The cost amounts typically do not include taxes and fees, and so do not match a customer's bill. However, with additional setup and configuration, the costs can be made

to match a customer's bill. [Contact your Delivery Team](#) if you have any questions about this configuration. [Contact your Delivery Team](#) if you have any questions about this configuration.

Energy Use: The energy used for the selected fuel type (kWh, therms, and so on) and time period. Hyphens are displayed for any data that is missing.

End-Use Category: In the [Usage Breakdown](#) view, the tooltip shows the customer's top categories of energy use and associated costs for a given bill period. All other fields are hidden from the tooltip. If a customer chooses to view a single category, the tooltip adjusts to show the cost of the selected category and the cost of all other categories.

Energy Insight: In the [Neighbors](#) view, the energy tooltip provides insight into the customer's energy use for the applicable time period as compared to their neighbors. For example, the tooltip may show that a customer used more, less, or about the same as their neighbors.

Weather: The average temperature for the selected time period. Weather data is available in the [Energy Costs](#) and [Energy Use](#) views. High and low temperatures are also provided when using the Year view or Bill view.

Click Bar to View Each Day or Hour: For customers with AMI data, a message is displayed in tooltips in the year view and bill view, directing customers to more granular data. This message allows customers to quickly view data for the days in a bill period or the hours in a day.

Estimated Bills: Estimated bills are listed as estimates in a tooltip. When unusual circumstances prevent a utility from obtaining an actual billing read for a customer, it is sometimes necessary to calculate an estimate. See [Estimated Bills and Usage Reads](#) above for details.

Virtual Bills

A virtual bill shows a business customer's daily energy use and energy costs up to the present day in the Data Browser, even though the bill period is not finished yet. This is accomplished by determining the maximum number of days to display along the horizontal axis in the Bill view. This feature requires AMI data.

A virtual bill is useful because it assumes an end date for an in-progress bill, and it therefore allows daily usage data to be displayed in the Data Browser before the bill period is finished. Because of virtual bills, customers can go to the Bill view and navigate past their most recent bill period to see their daily usage data up to the present day.

Solar Data

The Data Browser supports solar data by displaying a customer's net energy usage in a given interval of time on the horizontal axis. (This may also be referred to as net energy

metering, or NEM.) For example, if a customer has solar power and generates more energy than they consume, the Data Browser will show the customer's energy use as a credit or as a negative value. This data can be configured to display in different ways for a utility. See the [Energy Costs](#) view and [Energy Use](#) view for details.

Weather Data

Any weather data displayed in the feature is based on the geolocation (latitude and longitude coordinates) of the business customer. A weather service is used to select the closest weather station with weather data for the customer. This usually corresponds to the nearest airport station, usually within ~40 kilometers from the customer. Daily average temperatures are based on hourly temperatures.

Multiple Accounts

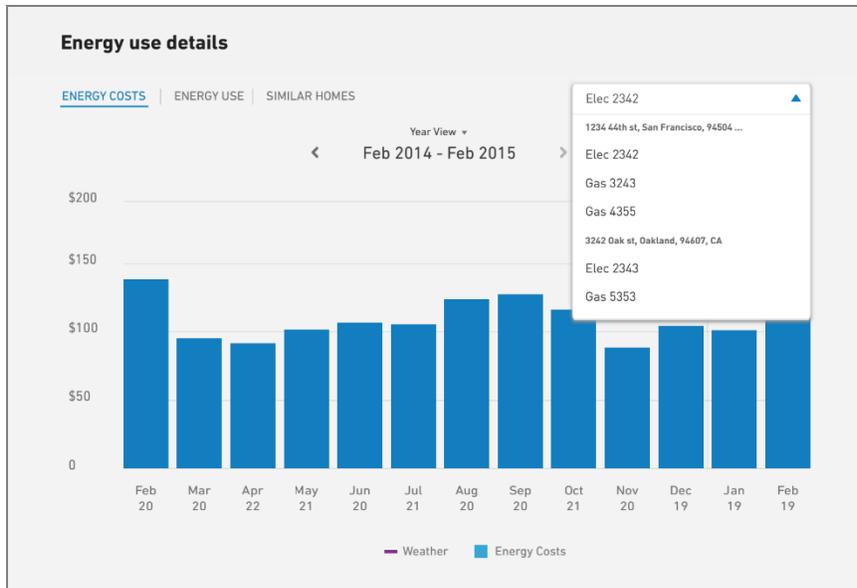
The multiple accounts experience varies depending on whether the feature has been configured for a standalone implementation or an embedded implementation.

In a standalone implementation, the Data Browser shows a drop-down list that allows customers to choose which account to view. The addresses in the list represent the available accounts.

In an embedded widget implementation, the account drop-down is hidden since the utility site is expected to have its own account selection tools. In this case, business customers can switch between their accounts by logging into their utility account using [single sign-on](#), and then clicking an account selector hosted on the utility website. All embedded widgets are then reloaded with data for the specified account.

Multiple Service Points

An account can include one or more service points. In such cases, the Data Browser displays a menu listing multiple accounts and service points for the customer to choose from. Customers can select a service point from the menu, but not the premise itself. The example below shows a customer with a standalone implementation that has multiple accounts and service points.



Missing Data

As discussed above, all available data is displayed in the Data Browser even if there is missing data.

For the [Year View](#) and [Day View](#), any missing bills, data reads, or weather data are displayed as missing data points on the graph. In the case of bar graphs, gaps will be shown for each interval of missing data. In the case of line graphs (such as the Neighbors View), a dotted line is displayed for the missing data point if the missing data is between other data points. If it is at the end, a gap will be shown with no line. The tooltips for these data points use hyphens in place of any missing data.

Customer Feedback

A customer feedback module can be displayed at the bottom of the Data Browser to collect input and inform ongoing improvements. See [Customer Feedback](#) for more information.

Energy Costs View

The Energy Costs view of the [Data Browser](#) displays how much a customer was billed for energy use, based on historical bill amounts. Customers can view energy costs for each bill over a 13-month period. Daily and subdaily views are also available if there is enough data.

Requirements

Same as listed in [Data Browser](#). Additional data and cloud service requirements may apply depending on the types of insights (such as rate plan insights or peak time rebates)

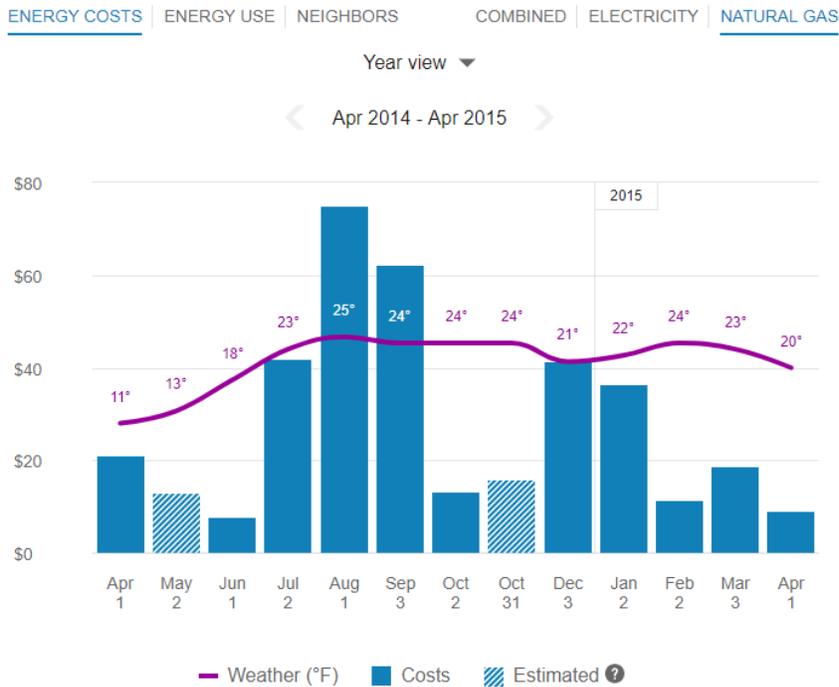
that the utility chooses to display. See the feature descriptions and [User Experience Variations](#) below for details.

Limitations

Same as listed in [Data Browser](#).

User Experience

The Energy Costs view displays how much a customer was billed for energy use over time. This section describes the user experience for customers who have billing data and daily AMI data.



Fuel Menu

The fuel menu allows customers to select which fuel to view data for. By default, electricity is shown. An additional gas menu only appears for dual fuel customers.

A Combined view can be displayed, which combines electric and gas costs into a single number using a price-weighted index. When the Combined view is enabled, the data point [tooltips](#) also display combined totals.



Time Menu

Depending on what data is available, the Energy Costs view presents different kinds of trends and insights at varying levels of granularity over time:

- **Year view:** Energy cost by each bill period in a year. Monthly, bi-monthly, and quarterly bills are supported.
- **Bill view:** Energy cost by each day in a bill period. AMI data is required for this view.
- **Day view:** Energy costs by each hour of a day (or another subdaily interval such as quarter of an hour). AMI data is required for this view.

There are also forward and backward buttons that customers can select to display contiguous blocks of time. In the Year view, for example, clicking the forward or backward button displays contiguous 13-month blocks of time for customers on monthly billing.

Bar Graph

The bar graph uses a vertical axis (Y-axis) to show the cost, and a horizontal axis (X-axis) to show the time period. The bars use the "You" color, which is blue by default and commonly changed to the utility's brand color. See [General Display Rules](#) for details on how the graph behaves and how the data visualization can change depending on the selected view.

Weather Data

A line graph representing the average temperature during each time period is overlaid on the bar graph. This allows customers to see how their usage relates to local weather

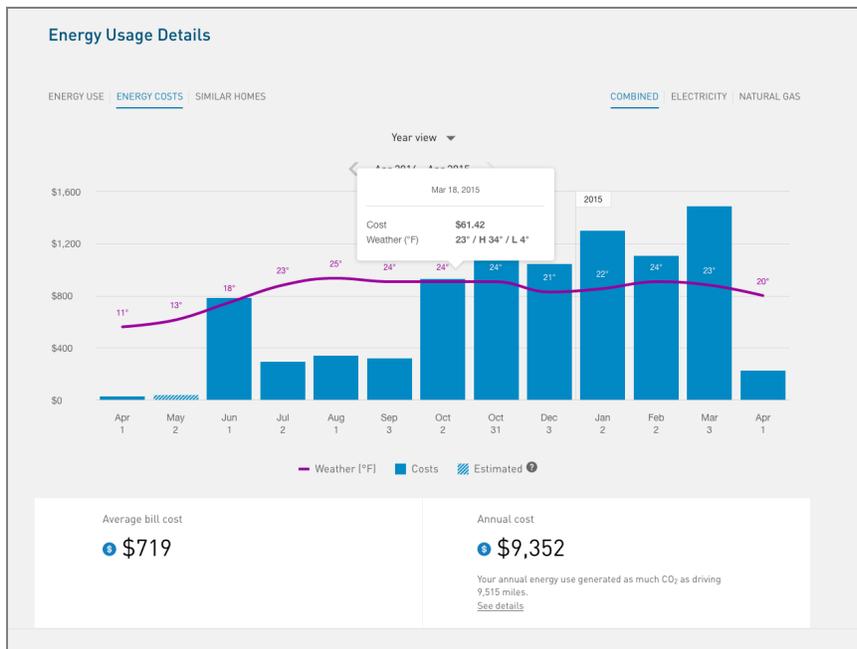
patterns. The weather data is based on data from the airport weather station closest to the location of the customer. See [Weather Data](#) for details on how weather data is retrieved.

Cost Insights Bar

For each fuel type available in the Energy Costs view, a bar is displayed beneath the graph to show additional cost insights. This bar is available for single fuel and dual fuel customers and displays only in the Year and Bill views.

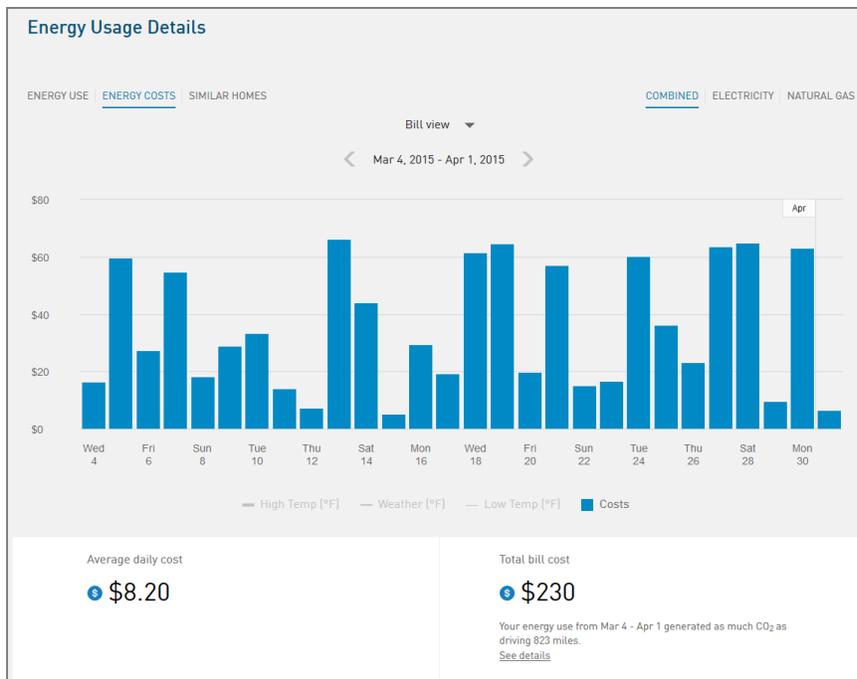
Year View: The bar displays the average bill cost and total annual cost for the selected year. If the year is not yet complete, the average bill and total cost-to-date is shown. The bar can also include an insight about how the customer's energy use equates to miles driven, if applicable.

In the example below, the year is complete, and the customer is using the Combined view.



Bill View: The bar displays the customer's average daily cost and total bill cost for the selected bill. If the bill period is not yet complete, then the daily average and cost to date is shown, and a link is displayed to take the customer to the [Smart Dashboard](#), which includes a bill forecast. The bar can also include an insight about how the customer's energy use equates to miles driven, if applicable.

In the example below, the bill period is complete, and the customer is using the Combined view.



Carbon Emissions / Miles Driven Insight: The cost insights bar can include an insight explaining how the customer's energy use equates to carbon emissions and miles driven. This information allows customers to understand their energy use in more practical, familiar terms. The insight is followed by a link to the US Environmental Protection Agency's greenhouse gas equivalencies calculator.

Note: The carbon emissions insight is disabled by default since it depends on data from the US Environmental Protection Agency. It is therefore only available to utilities in the US. It can be enabled for US utilities upon request. Note that this insight is not available for [Water Use and Water Costs](#) views of the Data Browser, as there is no calculator to convert water usage to CO₂ usage.

Tooltips

Tooltips are displayed when customers interact with a data point on the graph. See [Energy Tooltips](#) for details on what the tooltips may include.

For AMI customers, a message is displayed at the bottom of tooltips for data points for each bill. This messaging acts as a tip for how a customer can quickly view hourly or sub-hourly data for a given bill.

Customers can also view data points for energy costs that have not yet been included on a bill. By default, up to 30 days of in-progress billing data can be displayed to a customer,

which can be configured to align with the length of a customer's billing cycle. See [Virtual Bills](#) for details.

Legend

A legend below the graph defines the elements displayed in the graph. If applicable, the legend includes an indicator for [estimated bills](#).

Disclaimer

Disclaimer messages can be added to the Energy Costs view that are specific to the view. For example, if applicable, a disclaimer message can explain that the amounts shown do not include taxes and other fees. The disclaimer message can also include links to other resources where customers can find more information.

User Experience Variations

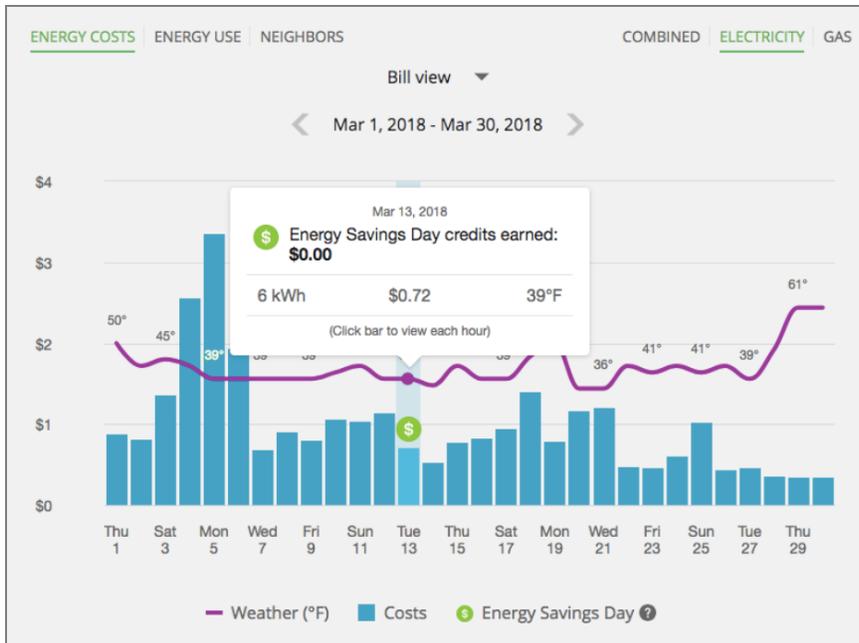
Multiple Accounts and Service Points

If a customer has multiple accounts and service points, a drop-down list is displayed above the graph allowing customers to choose one and view data related to it. See [Multiple Accounts](#) and [Multiple Service Points](#) for details.

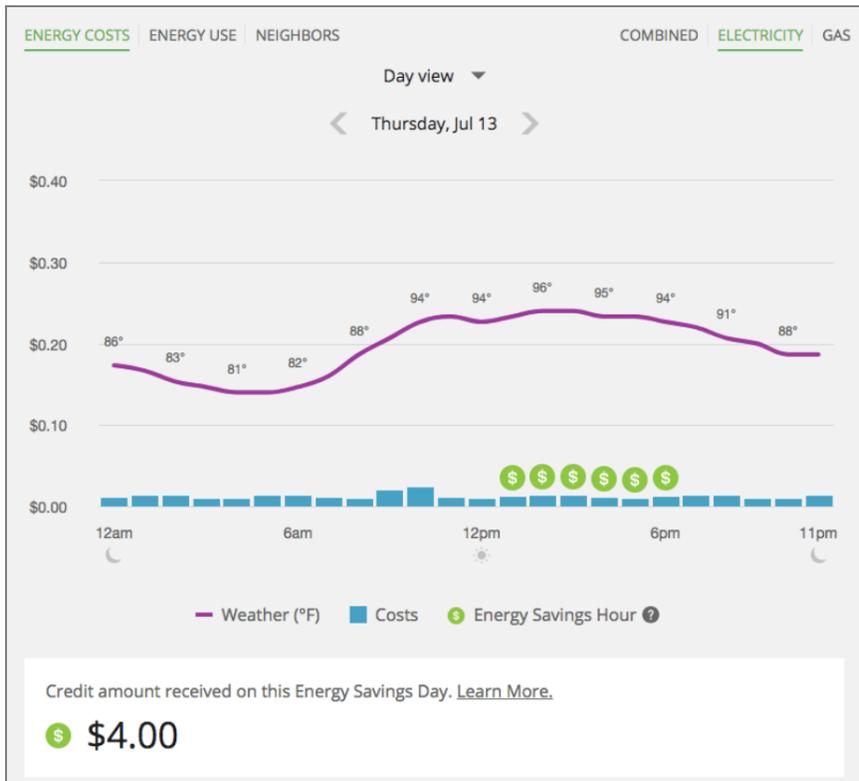
Peak Time Rebates Experience

Customers who participate in a Peak Time Rebates program can view information about credits earned during a peak event. This information can be viewed in the Bill or Day views.

Bill View: An icon displays above the days when a customer had an opportunity to receive a peak time rebate. You can click on the icon to view the tooltip, which displays the amount of any credits earned.



Day View: An icon displays above the hours when a customer had an opportunity to receive a peak time rebate. You can click on the icon to display a tooltip with details about that hour. Additionally, you can see any credits earned during that day below the graph.



Requirements:

- The [Peak Time Rebates](#) cloud service must be purchased.
- Peak time rebates data (such as the day and time of the peak event, as well as rebate amounts) is required.
- Daily or subdaily AMI data is required.

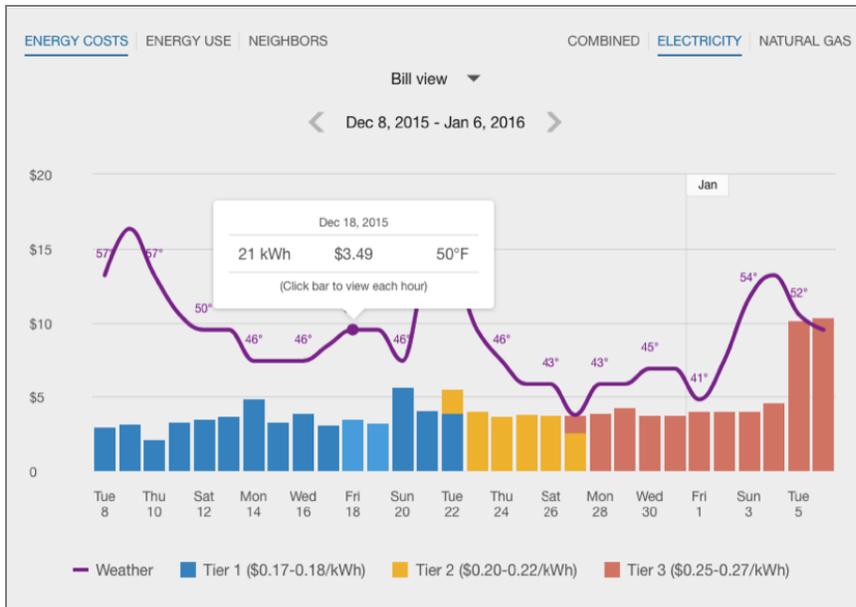
Rates Experience

Rates or cost information be displayed in the daily and subdaily views of the Energy Costs view. Different types of rate plans are supported. The Rates Engagement cloud service must be purchased and [rates must be modeled](#). [Contact your Delivery Team](#) for more information. [Contact your Delivery Team](#) for more information.

Tiered Rate Plans

In a tiered rate plan, the cost of energy depends on the amount of energy used in the current billing period. For example, the first 500 kilowatt hours (kWh) might be billed at \$0.06 per kWh, while the next 500 kWh would be billed at a higher rate. Each tier is listed in the graph legend and a customer's energy costs or use for each tier are depicted in the graph, as shown in the image below.

Note: The Data Browser can display a maximum of four rate tiers.

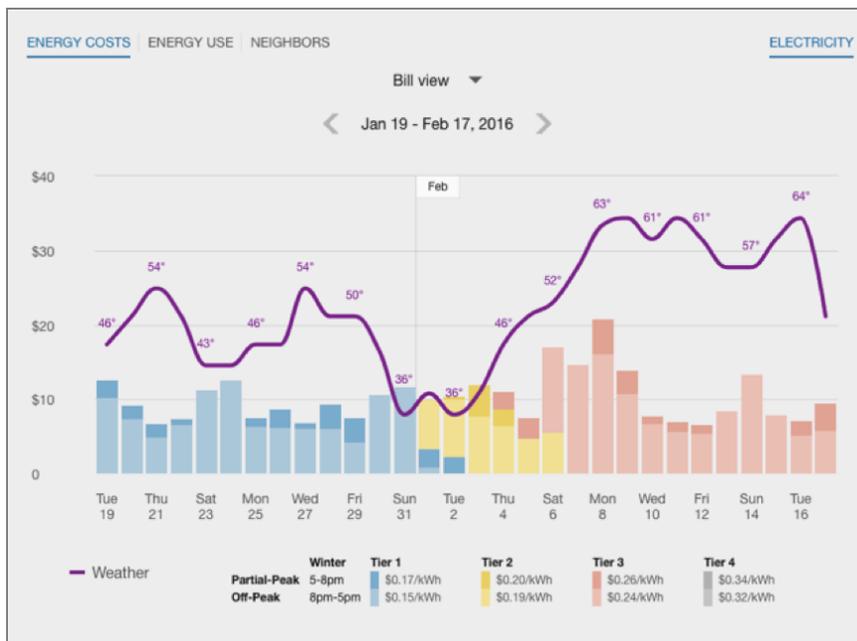


The legend in this case only displays tiers that are found in the chart. For example, the legend shows a rate plan that includes three tiers. But the third tier may be hidden from the legend if data is only available for two tiers.

The legend can account for the prices that are displayed for each tier. For a given tier, if a customer is charged multiple different prices on the graph, the tier is listed as a price range in the legend.

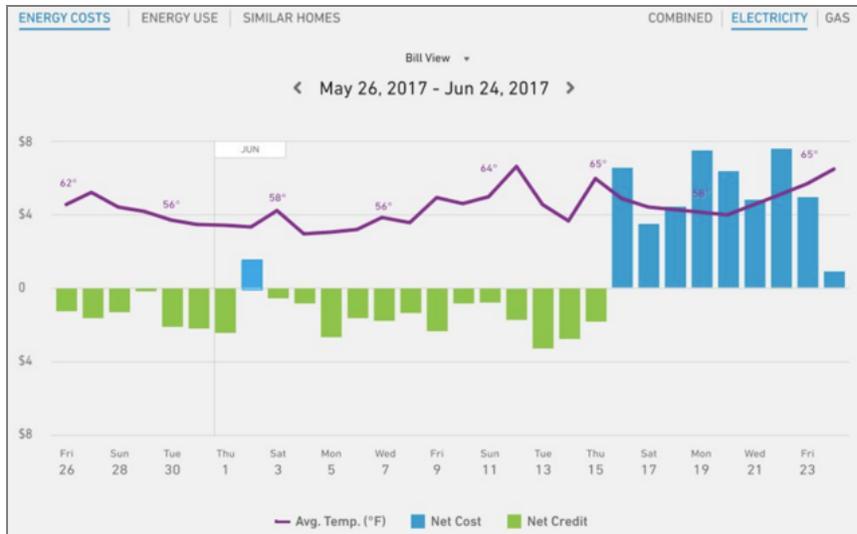
Time of Use Plans

In a Time of Use plan, the cost of energy depends on the time of day and how the utility defines "on-peak" versus "off-peak" hours. For example, peak hours for a utility can be defined as weekdays between 1:00 PM to 7:00 PM from May through September. The example below uses a tiered rate plan in addition to a Time of Use rate plan.



The legend shows pricing for different tiers and peak periods. All the available rate tiers are displayed regardless of which tiers have data represented on the graph.

For customers with both Net Energy Metering (that is, solar power) *and* Time of Use plans, the display on the Bill view is simplified. For each day that includes a time-of-use period with negative cost, a net positive or net negative energy use is displayed for the entire day and removes the distinction between the different time-of-use periods.



Peak Days

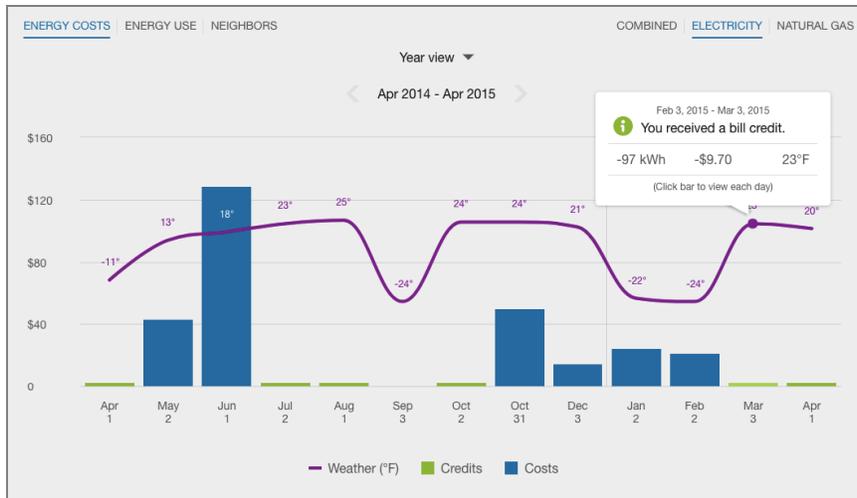
In rate plans that use peak day events, energy costs more money during peak days due to higher demand. The peak day event pricing is listed in the graph legend and a customer's energy costs or use for each event are depicted in the graph.

Rates Not Modeled

For customers who have AMI data but do not yet have their rate plan modeled in the system, there is not enough information to determine specific costs at a level more granular than the bill. In this case, the Data Browser will show an error message in the Bill or Day View for costs.

Solar Customers

If a customer has solar power and generates more energy than they consume, the Energy Costs view will show the customer's energy use as a credit. The example below shows short green bars for negative values. Additionally, a tooltip denotes the negative cost value. This default experience can be configured to display in different ways. Utilities must coordinate with their Delivery Team to determine which display to use.



Additional solar insights and messaging can be displayed if the utility has purchased the Oracle Utilities Opower Distributed Energy Resources cloud service. See [Solar Insights for the Data Browser](#) for more information.

One-Day Bill Period

In some cases, customers may see a one-day bill period. This can occur when a customer is on their first day of the bill period, and Oracle Utilities Opower has received interval usage data for that day but has not yet received billing data for the bill period's end date. When this happens, a single bar is displayed in the Bill view, centered on the graph, for the single day. The weather data line graph is disabled.

Energy Use View

The Energy Use view of the [Data Browser](#) displays how much energy a customer consumed over specific periods of time. Customers can view energy usage for each bill over a 13-month period. If the required data is available, the customer can also view daily and subdaily data.

Requirements

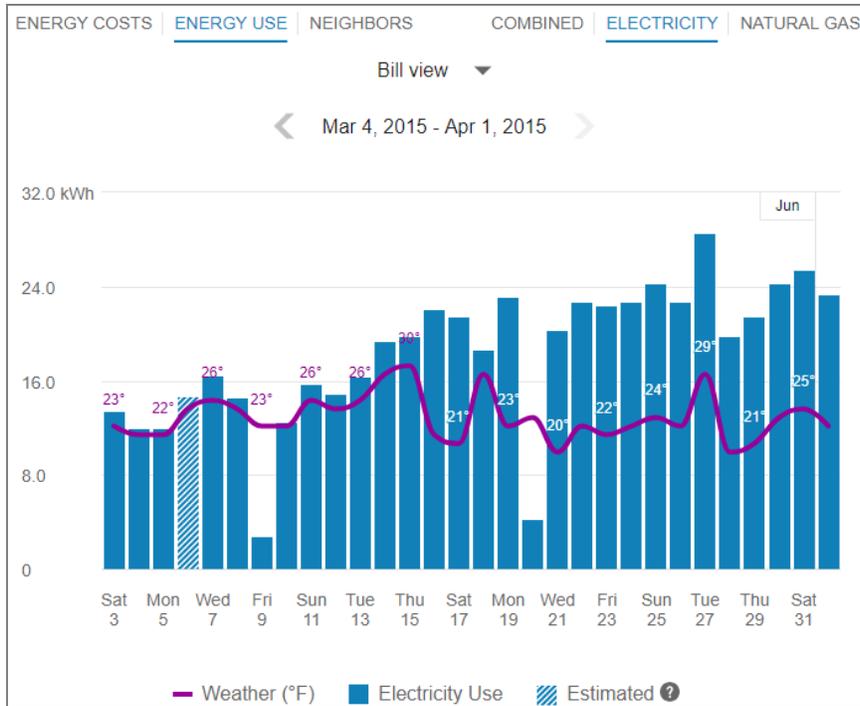
Same as listed in [Data Browser](#). Additional data and cloud service requirements may apply depending on the types of insights (such as solar insights) that the utility chooses to display. See the feature descriptions and [User Experience Variations](#) below for details.

Limitations

Same as listed in [Data Browser](#).

User Experience

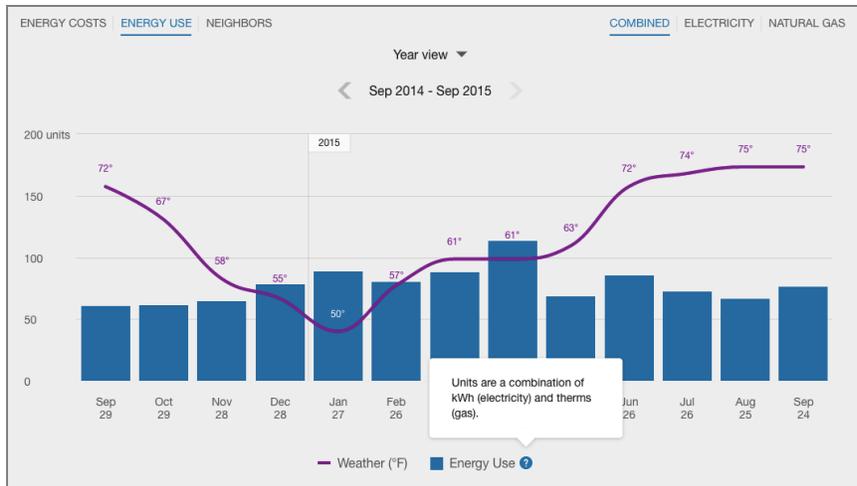
The Energy Use view displays how much energy a customer is using over time. This section describes the user experience for customers who have billing data and daily AMI data.



Fuel Menu

Electricity is displayed by default. Dual fuel customers will see options that allow them to switch between electricity and gas use.

A Combined view can be displayed, which combines electricity and gas costs into a single number using a price-weighted index. When the Combined view is enabled, the data point [tooltips](#) also display combined totals.



Time Menu

Depending on what data is available, the Energy Use view presents different kinds of trends and insights at varying levels of granularity over time:

- **Year view:** Energy use by each bill period in a year. Monthly, bi-monthly, and quarterly bills are supported.
- **Bill view:** Energy use by each day in a bill period. AMI data is required for this view.
- **Day view:** Energy use by each hour of a day (or another interval such as quarter of an hour). AMI data is required for this view.

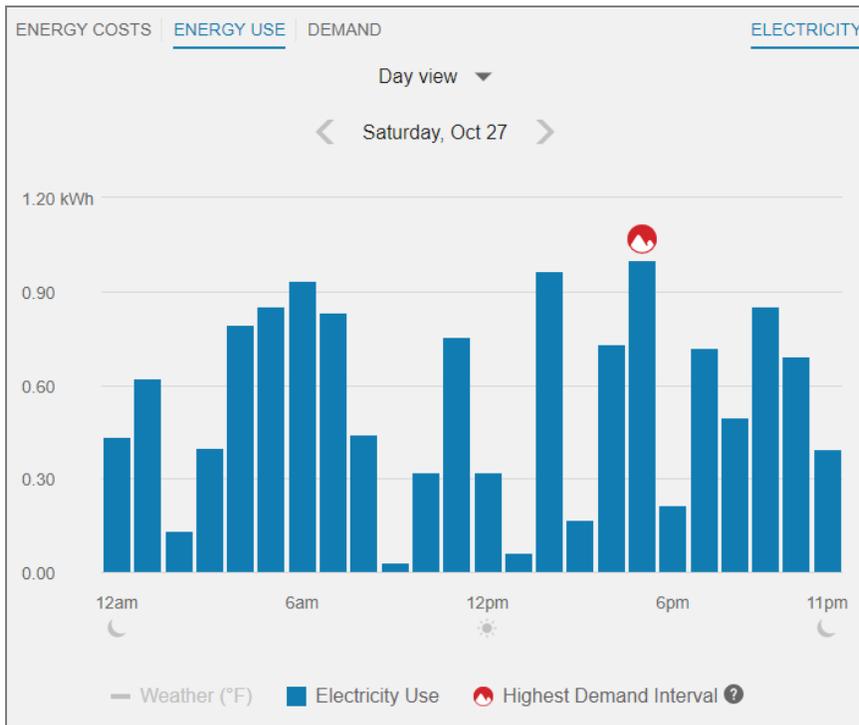
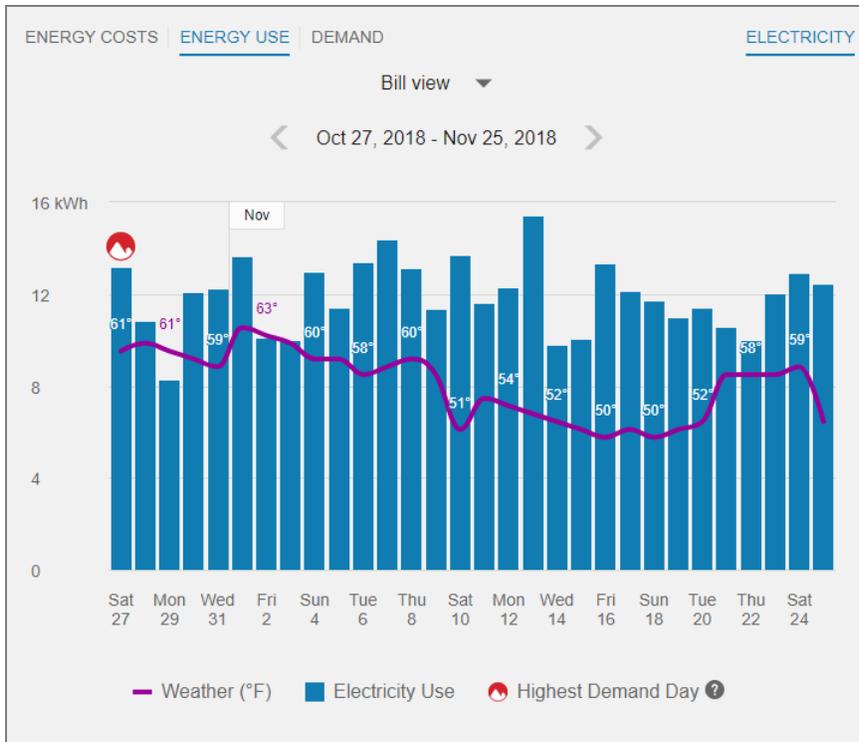
There are also forward and backward buttons that customers can select to display contiguous blocks of time. In the Year view, for example, clicking the forward or backward button displays contiguous 13-month blocks of time for customers on monthly billing.

Bar Graph

The bar graph uses a vertical axis (Y-axis) to show the cost, and a horizontal axis (X-axis) shows the time period. The bars use the "You" color, which is blue by default and commonly changed to the utility's brand color. Lighter bars represent [estimated bills or usage reads](#). See [General Display Rules](#) for details on how the graph behaves and how the data visualization can change depending on which view is selected.

Peak Demand Icon

In the bill and day views, an icon is displayed over the day or the time when demand was at its peak. *Demand* refers to the rate at which a customer consumes electricity, not the actual amount that is consumed. Demand is expressed in kilowatts (kW) rather than kilowatt-hours (kWh). See [Demand Versus Usage](#) for more information about the difference between these units of measure.



The Demand icon can also be shown in the [Demand view](#) of the Data Browser. Additionally, there are cases when [multiple peak demand icons](#) can be displayed.

Weather Data

A line graph representing the average temperature during each time period is overlaid on the bar graph. This allows customers to see how their usage relates to local weather patterns. The weather data is based on data from the airport weather station closest to the location of the customer. See [Weather Data](#) for details on how weather data is retrieved.

Tooltips

Tooltips are displayed when customers interact with a data point on the graph. See [Energy Tooltips](#) for details on what the tooltips may include.

For AMI customers, a message is displayed at the bottom of tooltips for data points for each bill. This messaging acts as a tip for how a customer can quickly view hourly or sub-hourly data for a given bill.

Customers can also view data points for energy use that has not yet been included on a bill. See [Virtual Bills](#) for details.

Disclaimer

Disclaimer messages can be added to the Energy Use view that are specific to the view. For example, a disclaimer message can explain estimated usage. The disclaimer messages can also include links to resources where customers can find more information.

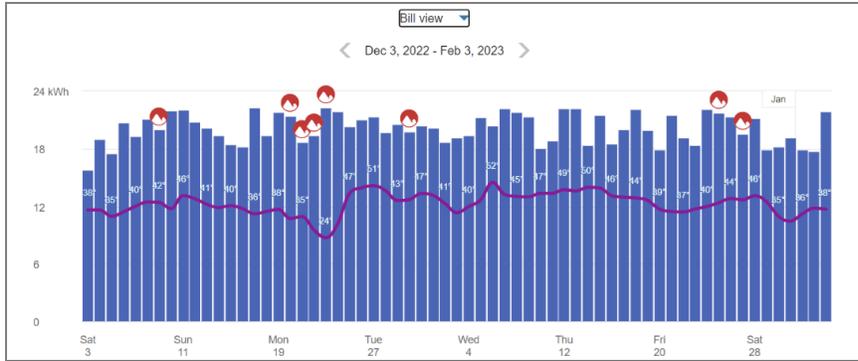
User Experience Variations

Multiple Accounts and Service Points

If a customer has multiple accounts and service points, a drop-down list is displayed above the graph allowing customers to choose one and view data related to it. See [Multiple Accounts](#) and [Multiple Service Points](#) for details.

Multiple Peak Demand Icons

If the demand values for two or more days or subdaily intervals are the same, and these values technically represent the highest demand, then multiple peak demand icons are displayed in the Energy Use view.



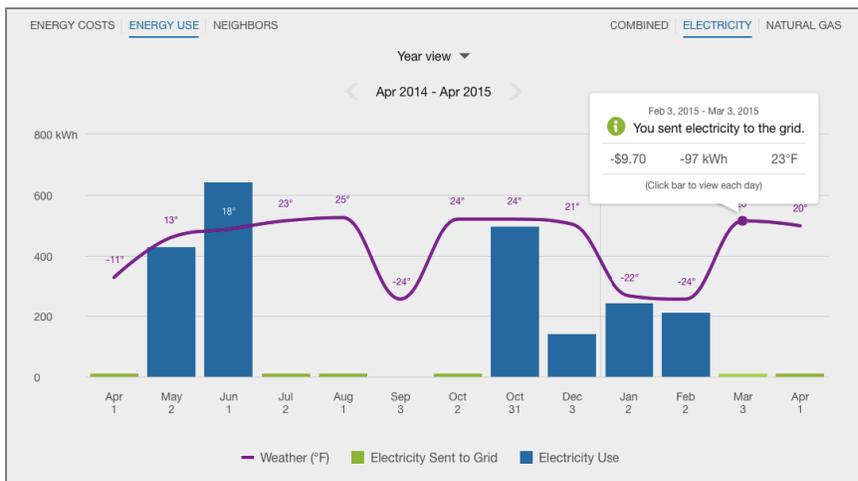
This may be the case, for example, at commercial or industrial locations where a specific set of high-power machinery or equipment needs to be turned on at regular points in time, resulting in a demand spike that consistently reaches the same amount multiple times in the same bill period.

Multiple peak demand icons are displayed in the Energy Use bill or day view under the following conditions:

- **Bill View:** Multiple days in a bill period contain an interval with the same demand value, and this value represents the peak demand for the bill period.
- **Day View:** Multiple intervals in a day have the same demand value, and this value represents the peak demand for the bill period.

Solar Data and Net Energy Metering

If a customer has solar power and generates more energy than they consume, the Energy Use view will show the customer's energy use as being sent to the grid. The example below shows short green bars for negative values. Additionally, a tooltip denotes the negative use value.



This default experience can be configured to display in different ways. Utilities must coordinate with their [Delivery Team](#) to determine which display to use.

Solar Data and Bidirectional Energy Display

The Energy Use view of solar data can be enhanced for customers who have multi-register rather than single-register meters. Single-register meters only provide one data stream that provides total net energy use data (kWh). Multi-register meters can provide more details within an interval, such as the amount that goes from the grid to the house or from the house to the grid due to solar power.

When this view is configured, the Energy Use view can display both energy consumption and production data in the same time interval on the horizontal axis of the graph. Usage data is shown as a positive value and solar data is shown as a negative value, indicating a bidirectional flow of energy. The usage and production data is also reflected in the [Green Button](#) feature. The usage and production data is also reflected in the [Green Button](#) feature.

Solar Bidirectional Enhancement: Year View Example



Solar Bidirectional Enhancement: Bill View Example



Requirements:

- The customer must have multi-register meters.
- [Account](#), [Billing](#), and [Premise](#) data feeds must be established with the utility.
- Some additional configuration is required to enable the view. [Contact your Delivery Team](#) for more information. [Contact your Delivery Team](#) for more information.

Neighbors View

The Neighbors view of the [Data Browser](#) allows residential customers to compare their energy use against their neighbors over each billing period from last year. Three lines are displayed on the graph to compare the energy use of the customer, all neighbors, and efficient neighbors. If there are not enough neighbors for a customer or the customer is ineligible for a neighbor comparison, then an applicable message is displayed in place of the view.

Note: The term **Neighbors** is used in this view by default, but it is often replaced with the term **Similar Homes**. The terminology is configurable for each utility.

Requirements

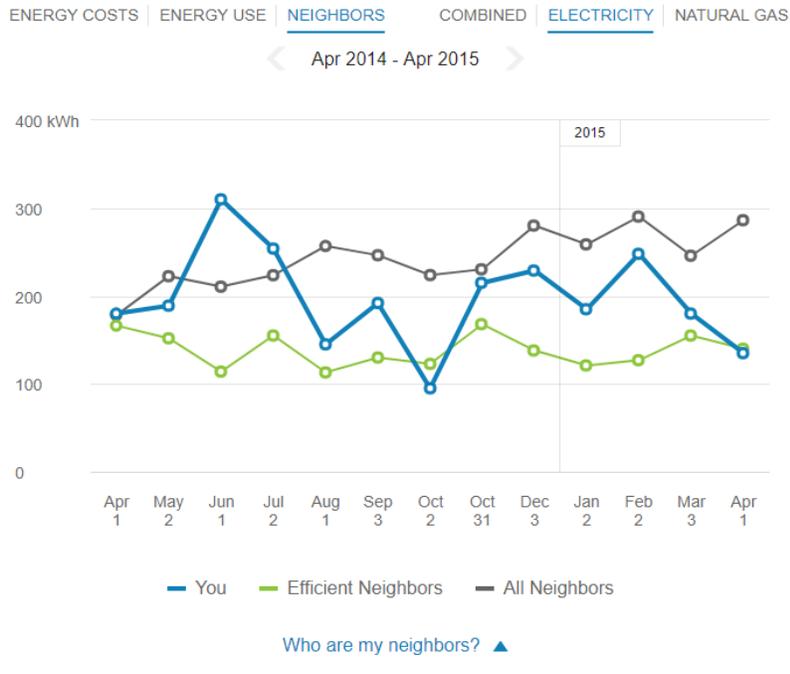
Same as listed in [Data Browser](#). Additionally, the Oracle Utilities Opower Digital Self Service - Energy Management cloud service must be purchased for the Neighbors view to be enabled.

Limitations

Same as listed in [Data Browser](#).

User Experience

The Neighbors view allows customers to compare their energy use against similar homes over each billing period that falls in the last year. This section describes the user experience for customers who have billing data.



Based on what we know about you, we compare you to **100 similar homes** with these characteristics:

- ✓ **Home size:** 1205 ft²
- ✓ **Heating type:** 60% have electric heat
- ✓ **Occupants:** about 3

Efficient neighbors are the 20% who use the least amount of energy. Visit your Home Energy Analysis to update your information and see what uses most.

[SEE HOME ENERGY ANALYSIS](#)

Fuel Menu

Electricity is displayed by default. If the customer is dual fuel, they will see options that allow them to switch between electricity and gas use.

A Combined view can be displayed, which combines electricity and gas costs into a single number using a price-weighted index. When the Combined view is enabled, the data point [tooltips](#) also display combined totals.



Time Menu

Above the data graph are forward and backward buttons that customers can select to display contiguous blocks of time. In the year view, for example, clicking the forward or backward button displays contiguous 13-month blocks of time for customers on monthly billing.

Since the data granularity available for a customer does not always match that of their neighbors, the energy use trends are only shown on the year view. Customers do not have the option of switching to a more granular view of data (such as the bill or day view).

Line Graph

The line graph uses a vertical axis (Y-axis) to represent energy use, and a horizontal axis (X-axis) to represent the time period. Three lines are displayed on the graph:

- **You (the customer):** Uses the "You" color, which is blue by default and commonly changed to the utility's brand color.
- **All Neighbors:** Uses a gray or neutral color.
- **Efficient Neighbors:** Commonly uses a green color because green is associated with energy efficiency.

See [General Display Rules](#) for details on how the graph behaves and how the data visualization can change depending on which view is selected.

Neighbor Details

The Neighbors view includes a section in the legend of the graph that, when clicked, displays a **What homes are compared?** dialog, which shows the characteristics of the homes that the customer is being compared to. The description can be dynamic or static.



The static neighbor description is nearly identical to the dynamic neighbor description, except that it is much shorter and does not dynamically display neighbors' characteristics based on available data. The dynamic description includes a list of comparison characteristics and other information about the comparison, followed by a link to the [Home Energy Analysis](#) survey.

- **Summary Message:** A summary message provides the number of neighbors or similar homes that are included in the comparison.

- **Comparison Characteristics:** A list of characteristics that a customer shares with their neighbors is displayed with a green check mark. If a characteristic is unknown for a customer, it is not included in the comparison and hidden from view.
- **Neighbors or Similar Homes Definition:** A brief line defining neighbors or similar homes as the 20% that use the least amount of energy.
- **Link to Survey:** Clicking this button takes the customer to [Home Energy Analysis](#) survey so that they can provide the latest details about their home and make the neighbor comparison more accurate. **Note:** The neighbor comparison does not get automatically updated in real time based on a customer's updates. This link will still appear even if the user has already visited the Home Energy Analysis.

Tooltips

Tooltips are displayed when customers interact with a data point on the graph. In addition to showing the time period and the customer's energy use, the tooltips in the Neighbors view also show an insight about how the customer compares to their neighbors or similar homes.

Comparison State	Description
Customer is using less than efficient neighbors.	<p>Logic: Customer uses at least 1% less than efficient neighbors.</p> <p>Example Message: "You used n% less than your efficient neighbors."</p> <p>Example Desktop Tooltip:</p> <div data-bbox="805 1276 1183 1482" style="border: 1px solid #ccc; padding: 10px; margin: 10px 0;"> <p style="text-align: center; font-size: small;">Mar 1, 2020 - Mar 31, 2020</p> <p style="text-align: center;">  You used 3% less electricity than your efficient neighbors. </p> <hr style="width: 50%; margin: 0 auto;"/> <p style="text-align: center;">180 kWh</p> </div>
Customer is using the same as efficient neighbors.	<p>Logic: The difference between the customer and efficient neighbors is 0%.</p> <p>Example Message: "You used about the same as your efficient neighbors."</p> <p>Example Desktop Tooltip:</p>

Comparison State	Description
	 <p>Mar 1, 2020 - Mar 31, 2020  You used about the same electricity as your efficient neighbors. <hr/> 180 kWh</p>
<p>Customer is using less than average neighbors, but more than efficient neighbors.</p>	<p>Logic: Customer uses at least 1% or more than efficient neighbors.</p> <p>Example Message: "You used n% more than your efficient neighbors."</p> <p>Example Desktop Tooltip:</p>  <p>Mar 1, 2020 - Mar 31, 2020  You used 8% more electricity than your efficient neighbors. <hr/> 180 kWh</p>
<p>Customer is using about the same as average neighbors.</p>	<p>Logic: The difference between the customer and average neighbors is 0%.</p> <p>Example Message: "You used about the same as your average neighbors."</p> <p>Example Desktop Tooltip:</p>  <p>Mar 1, 2020 - Apr 1, 2020  You used about the same electricity as your neighbors. <hr/> 190 kWh</p>
<p>Customer is using more than average neighbors.</p>	<p>Logic: Customer uses at least 1% or more than average neighbors.</p>

Comparison State	Description
	<p>Example Message: "You used n% more than your average neighbors."</p> <p>Example Desktop Tooltip:</p> 

See [Energy Tooltips](#) for details on what the tooltips may include in other views of the Data Browser.

Disclaimer

Disclaimer messages can be added to the Neighbors view that are specific to the view. For example, the disclaimer in the Neighbor view might provide information about how neighbors are determined. The disclaimer messages can also include links to resources where customers can find more information.

User Experience Variations

Multiple Accounts and Service Points

If a customer has multiple accounts and service points, a drop-down list is displayed above the graph allowing customers to choose one and view data related to it. See [Multiple Accounts](#) and [Multiple Service Points](#) for details.

Demand View

The Demand view of the [Data Browser](#) shows business or commercial and industrial customers their demand (kW) and reactive power (kVAR) over time. *Demand* refers to the rate at which a business consumes electricity, not the actual amount that is consumed. Demand is expressed in kilowatts (kW) rather than kilowatt-hours (kWh). This information allows businesses to see at what point in time they draw the most energy from the grid, and to consider how to lower their demand during those times in the future.

Note: Within the Demand view, data can only be displayed in the Day view. Other resolutions such as Bill view or Year view are not applicable or available.

Requirements

Utility Requirements

Same as listed in [Data Browser](#).

Customer Requirements

Category	Description
Billing Frequency	Same as listed in Data Browser .
Data Delivery Frequency	Same as listed in Data Browser .
Data Requirements	<p>Interval Data: Electric interval data in kWh is required. For information on providing this data, see the Oracle Utilities Opower Interval Data Transfer specification.</p> <p>Premise Data: Premise data for the business is required. See the Oracle Utilities Opower Premise Data Transfer specification for more information.</p> <p>Reactive Power Data: To display reactive power data, an additional input of interval data must be provided in kvarh. An applicable <code>register_id</code> must be defined for this data as described in the Interval Data Transfer specification.</p> <p>Customer Classification: The customer must be classified as a non-residential customer. For information on defining the customer type, refer to the Oracle Utilities Opower Billing Data Transfer specification.</p>
Data History	Same as listed in Data Browser .
Data Coverage	Same as listed in Data Browser .

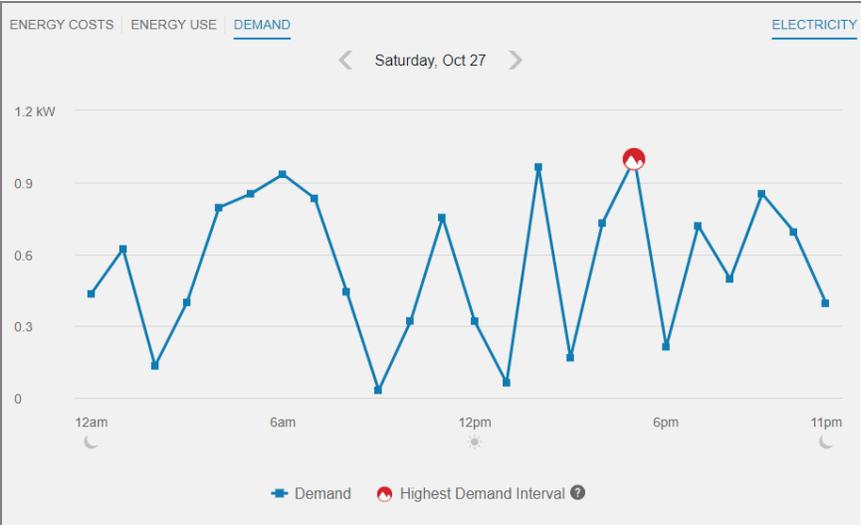
Category	Description
Supported Fuels	Electricity and dual fuel. Demand data for gas cannot be shown.

Limitations

- **Calculated Demand Data:** The Demand view does not use or support demand rates data. Demand data is displayed as kW in hourly intervals. It is calculated based on interval data provided in kWh and is available to all business customers for a utility.
- **Peak Demand Icon:** Any icon highlighting peak demand in the Demand view may not be consistent if a business has other rates that determine peak demand costs for their bill. For example, the Demand view may highlight a particular *hourly interval* as the business customer's highest demand interval, but this may not align with the peak usage indicated on a customer's bill if the business is billed for *30-minute* usage intervals.
- **Neighbors View Disabled:** The [Neighbors](#) view is hidden by default from customers who see the Demand view. This is because the Neighbors view is unlikely to be relevant to commercial and industrial customers with demand data.

User Experience

The Demand view displays a customer's demand for a given day, with [tooltips](#) providing the exact values for each data point. The user experience described in this section is for a business customer with electric demand data and reactive power.



Fuel Menu

Only electricity data can be shown in the Demand view. If the business also receives gas from their utility, then a gas menu may be displayed but it will be grayed out in the Demand view so it cannot be selected.

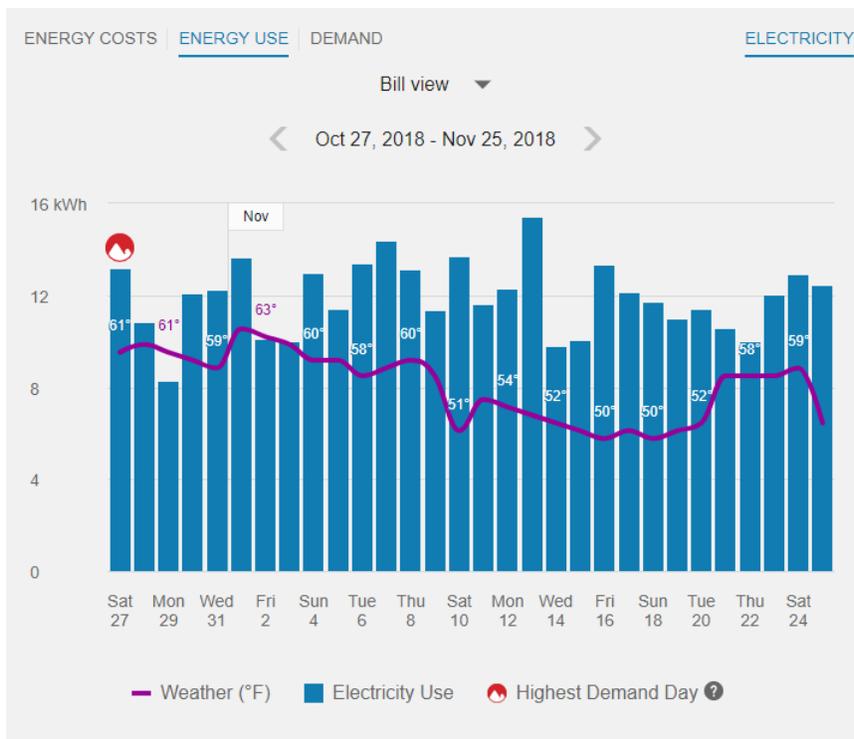
Time Menu

In the Demand view, only subdaily data is shown. The Year view and Bill view are not applicable or available. Customers can use the forward or backward buttons to view data for one 24-hour period at a time.

Line Graph

The line graph uses a vertical axis (Y-axis) to show demand in kilowatts (kW), and a horizontal axis (X-axis) to show time intervals. An icon is displayed over the highest demand interval to indicate when the demand for energy was at its peak. This icon is also shown on the [Energy Use view](#), where business customers can quickly determine which day in a bill period contained the highest demand. The customer can then view that day in the Demand view to see the exact hour when demand was highest.

Example: Icon Showing Highest Demand Day



Example: Icon Showing Highest Demand Interval

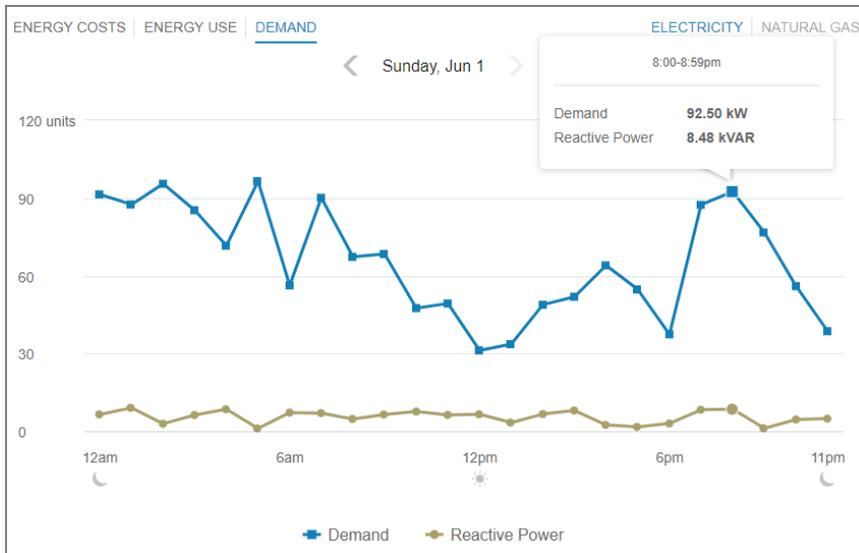


Notes about the Peak Demand icon:

- *Demand* refers to the rate at which a business consumes electricity, not the actual amount consumed. This means that the interval with the peak demand icon may not always be the same as the interval with the highest amount of energy use. See [Demand Versus Usage](#) below for more background details and an illustration.
- The icon is not shown for days in the bill period that do not include the highest demand interval of the bill period. However, an icon is always shown in the Bill view of the [Energy Use](#) view, since that view always displays each day of the bill period.
- There are cases when multiple peak demand icons display within a day. See [Multiple Peak Demand Icons](#) below for details.

Reactive Power

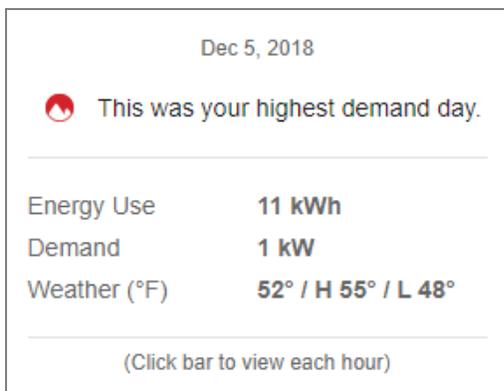
Customers with reactive power data can visualize their reactive power in the Demand view. Reactive power refers to power that is used for the storage and retrieval of energy rather than the consumption of energy, and so it is typically very low compared to the line representing energy demand. The reactive power data is shown as a separate line, and it contains applicable information in [tooltips](#).



When reactive power is shown, the label for the Y-axis of the line graph changes. This is because reactive power and demand data use different units of measure, and so a more generic label ("units") is used.

Tooltips

Tooltips are displayed when customers interact with a data point on the graph. In the Demand view, the tooltip provides the specific units of measure for each type of power: kilowatts (kW) for demand data, and reactive power (kVAR) for reactive power data (if available). Tooltips also display the demand use and a peak demand highlight for the day or interval with the highest demand of the bill period, as shown below.



See [Energy Tooltips](#) for details on what the tooltips may include in other views of the Data Browser.

Disclaimer

Disclaimer messages can be added to the Demand view that are specific to the view. For example, a disclaimer message can explain demand and reactive power charges. The disclaimer messages can also include links to resources where business customers can find more information.

Demand Versus Energy Use

Whereas demand is expressed in kilowatts (kW), energy use is expressed in kilowatt-hours (kWh). Demand can be thought of as the *rate* at which energy is drawn from the grid, rather than how much energy was consumed.

To use a metaphor, imagine that energy is water flowing through a pipe. The pipe itself, however, can only let so much water through at a time. The pipe is like "demand": its size determines how fast the water flows through to meet the need for water.

To give a more concrete example, consider two business customers, Mary and Bob. Mary's utility tracks her business's energy use every hour. This means she has one interval of data per hour. Now imagine that from 4-5 p.m. on March 1st, Mary's business consumed 100 kilowatts of electricity. This means that for the entire hour of 4-5 p.m., Mary's demand was 100 kilowatts, and her business consumed 100 kilowatt-hours.

Meanwhile, Bob's utility tracks his business's energy use every *half an hour*. This means he has two intervals of data per hour. Now imagine that from 4-4:30 p.m. on March 1st, Bob's business consumed 200 kilowatts of electricity. But then from 4:30-5, he did not consume any more electricity. This means that for the entire hour of 4-5 p.m., Bob's *demand* was 200 kilowatts, and yet he only consumed 100 kilowatt-hours, since he did not consume any electricity in the second half of the hour.

The important thing to note is that the *rate* or *demand* of Bob's electricity consumption was twice as high as the *demand* of Mary's consumption—even though they both consumed the same amount of energy over a single hour in the end.

User Experience Variations

Multiple Peak Demand Icons

If the demand values for two or more intervals are the same, and these values technically represent the highest demand of the bill period, then multiple peak demand icons are displayed within the same day in the Demand view.

This may be the case, for example, at commercial or industrial locations where a specific set of high-power machinery or equipment needs to be turned on at regular points in time, resulting in a demand spike that consistently reaches the same amount multiple times in a day, or on multiple days in a bill period.

This behavior can also occur in the Energy Use view. See [Energy Use View - Multiple Peak Demand Icons](#) for details.

Water and Wastewater Views

The Water and Wastewater views of the [Data Browser](#) display how much water or wastewater a customer has consumed over time. Customers can view water or wastewater usage or costs for each bill over a 13-month period. If the required data is available, the customer can also view daily and subdaily data.

Requirements

Same as listed in [Data Browser](#). Additionally, note that the default unit of measure used in the Data Browser for water and wastewater is kilogallons (kgal). This value can be modified for locales or utilities that display water and wastewater use for their customers in different units of measure. It is recommended that the unit of measure displayed is consistent with the unit of measure customers see on their water and wastewater bills, and that this unit of measure is sent to Oracle Utilities Opower in the required data files.

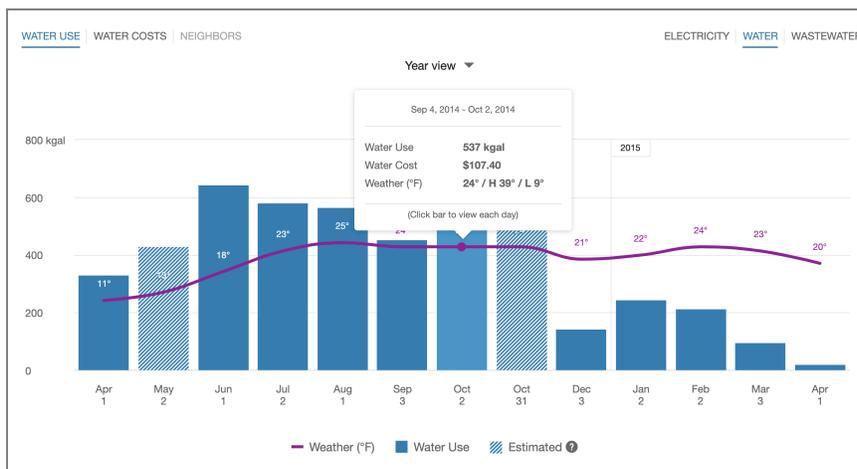
Limitations

Same as listed in [Data Browser](#).

User Experience

The Water and Wastewater views display how much water or wastewater customers are using over time, or how much money they are spending on water or wastewater. This section describes the user experience for customers who have both water and wastewater resources, as well as billing data and weather data.

Water Use Example



Water Costs Example



Wastewater Use Example



Resource Menu

Water is displayed by default. Customers who have multiple fuels or who have both water and wastewater will see options to switch between each resource type and view associated usage or cost information.

Time Menu

Depending on what data is available, the Water and Wastewater views present different kinds of trends and insights at varying levels of granularity over time:

- **Year view:** Water use or cost by each bill period in a year. Monthly, bi-monthly, and quarterly bills are supported.
- **Bill view:** Water use or cost by each day in a bill period. AMI data is required for this view.

- **Day view:** Water use or cost by each hour of a day (or another interval such as quarter of an hour). AMI data is required for this view.

There are also forward and backward buttons that customers can select to display contiguous blocks of time. In the Year view, for example, clicking the forward or backward button displays contiguous 13-month blocks of time for customers on monthly billing.

Bar Graph

The bar graph uses a vertical axis (Y-axis) to show water or wastewater usage or cost, and a horizontal axis (X-axis) shows the time period. The bars use the "You" color, which is blue by default and commonly changed to the utility's brand color.

Cost Information: The bar graph displays how much a customer was billed for water or wastewater use based on the cost value sent to Oracle Utilities in the [billing data transfer specification](#). The Rates Engagement Cloud Service and [rates modeling](#) are required to display cost values in lower resolutions such as the Bill and Day views.

Usage Information: The bar graph displays how much water or wastewater a customer used, based on the water or wastewater usage value sent to Oracle Utilities in the billing data transfer specification. AMI data is required to display usage values in lower resolutions such as the Bill and Day views.

Lighter bars represent [estimated bills or usage reads](#). See [General Display Rules](#) for details on how the graph behaves and how the data visualization can change depending on which view is selected.

Weather Data

A line graph representing the average temperature during each time period is overlaid on the bar graph. This allows customers to see how their usage relates to local weather patterns. The weather data is based on data from the airport weather station closest to the customer's location. See [Weather Data](#) for details on how weather data is retrieved.

Tooltips

Tooltips are displayed when customers interact with a data point on the graph. See [Energy Tooltips](#) for details on what the tooltips may include.

For AMI customers, a message is displayed at the bottom of tooltips for data points for each bill. This messaging acts as a tip for how a customer can quickly view hourly or sub-hourly data for a given bill.

Customers can also view data points for water usage or costs that have not yet been included on a bill. By default, up to 30 days of in-progress billing data can be displayed to a customer, which can be configured to align with the length of a customer's billing cycle. See [Virtual Bills](#) for details.

Disclaimer

Disclaimer messages can be added to the Water or Wastewater views that are specific to the view. The disclaimers can also include links to resources where customers can find more information.

Green Button - Exporting Billing and AMI Data

The Green Button is a feature that allows customers to export their billing and energy use data. It is often located beneath the [Data Browser](#), but it can be embedded in other locations as well. Customers can export their data to CSV or XML formats by clicking **Green Button Download My Data**, which displays several download options.

All Bill Totals: The total bill costs for all available bills.

Bill Period Use: Energy or resource use for a bill period. A bill period can be selected from a drop-down list. Customers can also select **Since your last bill** to view costs and use that has not yet been included on a bill. By default, up to 30 days of in-progress billing data can be downloaded, which can be configured to align with the length of a customer's billing cycle.

Day Range Use: Energy or resource use for a range of days. A start and end date can be selected to define the range of days.

Download my data CLOSE

Time Period

Export all bill totals

Export usage for a bill period

Since your last bill: Dec 01, 2010 ▾

Export usage for a range of days

From: 11/30/2010 To: 12/31/2010

Format

CSV

XML

Downloaded File Contents: The data within the downloaded file includes the fuel or resource type, applicable dates, energy use and costs, energy units, and any applicable notes for each data point.

Note: Green Button supports the download of data in units of measure that are applicable for the customer's resource types. For information on the units of

measure supported by Oracle Utilities, see the [Oracle Utilities Opower Premise Data Transfer specification](#).

Solar Data and Multi-Register Meters: The downloaded spreadsheet may have additional columns for customers with multi-register meters and solar technology. In such cases, the downloaded spreadsheet displays columns for IMPORT (energy consumed from the grid) and EXPORT (energy sent back to the grid).

Estimated Reads: If a customer has estimated reads, then this is indicated in the file that is downloaded. An estimated read is an approximate energy or resource use amount calculated based on what a customer has consumed in the past, rather than what the customer has consumed in the present billing period. The Notes column indicates any applicable estimates. Otherwise, the Notes column is left blank.

Data Requirements and Limitations

- **Billing Frequency:** The customer must be billed monthly, bi-monthly, or quarterly.
- **Data History:** A customer must have one day's worth of AMI data. Non-AMI customers must have one historical bill.
- **Non-AMI Customers:** Non-AMI customers can download all bill totals, but are not provided the option to define a date range.
- **Other Requirements:** The Green Button is part of the Digital Self Service - Energy Management Cloud Service. See the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) for all applicable data requirements and limitations.

Your Utility Use

Digital Self Service - Energy Management features can be included to educate customers on their utility service usage and self-serve account actions. These features are highlighted directly as part of a customer's Your Utility Use tools or are included throughout the Digital Self Service - Transactions web portal, as described below. The following Digital Self Service - Energy Management components can be included as optional add-ons:

- **Bill Comparison,** which allows customers who are viewing their electricity, gas, water, or wastewater costs on the Overview dashboard and the Billing and Payment options to compare their costs to previous bills. This feature is highlighted as a "Billing and Payment" on page 8 tool.
- **Bill Forecast, or Projected Bill,** which shows customers their applicable, current electricity, gas, water, and wastewater use or cost so far in the billing period along

with their projected use or cost for the billing period. A comparison to their typical use or cost for the period is also provided. This feature is highlighted as a "Billing and Payment" on page 8 tool.

- Energy Use Overview, which displays the most recent bill period's use in comparison to that of a bill from the same bill period for the previous year. This feature is hidden from the Your Utility Use tools by default, since it provides a similar user experience as the "Usage and Bill Trends " on page 7. To display this feature as a Your Utility Use tool, refer to the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- Frequently Asked Questions, which provides a list of questions and answers that customers often ask about their account and utility service.
- Highest Energy Use Days, which displays a calendar that highlights the top five days of the month in which a customer used the most energy for electric and gas. This insight helps customers identify patterns in their energy use. This feature is listed as a Your Utility Use tool.
- Home Energy Analysis, which guides customers through a survey to determine their home attributes and usage habits for electricity and gas use. This information is used to provide customers with a better understanding of how they use energy. This feature is listed as a Your Utility Use tool.
- Neighbor Comparison, compares residential customers to two groups based on their electricity and gas use: "Efficient Neighbors" and "Average Neighbors." The results are displayed in a horizontal bar graph. This feature is listed as a Your Utility Use tool.
- Next Best Action, which provides dynamic and actionable web banners that can be shared with all customers or targeted to specific customer groups. The web banners guide customers to the most valuable opportunities or solutions available and helpful tools to help them manage energy use and cost. This feature is highlighted on the "Overview Dashboard" on page 5.
- Rate Compare, which allows customers to see an overview of rate plans for which they are eligible, estimated cost information, and details about each rate plan option. This feature is highlighted as a "Billing and Payment" on page 8 tool.
- Tips Light, which guides customers on the Overview dashboard to the Ways to Save costs saving tips. This feature is listed as a Your Utility Use tool and is also highlighted on the "Overview Dashboard" on page 5.
- Ways to Save, which presents costs saving tips for the customer to review and complete. This feature is listed as a Your Utility Use tool. In addition to the standard energy savings tips available with Digital Self Service - Energy Management Ways to Save, Digital Self Service - Transactions can include:
 - Water and wastewater savings tips for both indoor and outdoor water use, which are available for water and wastewater customers.

- Energy savings tips that are applicable to commercial customers. All residential energy savings tips are also hidden for commercial customers.

In addition to these features, the Data Browser provides in-depth analysis of a customer's costs and use, and Green Button allows customers to export their billing data. These features are available directly with Digital Self Service - Transactions Cloud Service and are listed in the Your Utility Use tools as Usage Insights. For more information on these feature, see "Data Browser" on page 39 and "Green Button - Exporting Billing and AMI Data" on page 81.

See the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) for more information.

Personalized Navigation

Personalized navigation ensures that a customer only sees the Digital Self Service - Energy Management features that relate to their services. For example, the Home Energy Analysis is hidden for customers who only receive water and wastewater service.

Outages

Customers have resources available to them when outages occur. Digital Self Service - Transactions provides self-service options to view and report outages, and review an Outage Map. These features include:

Requirements

Utility Requirements

- **Oracle Version Requirements:** Outage features require Customer to Meter 2.9.0.1.0 or higher or Customer Cloud Service 22C or higher.

Customer Requirements

Category	Description
Billing Frequency	Not applicable.
Data Delivery Frequency	Not applicable.

Category	Description
Data Requirements	Not applicable.
Data History	Not applicable.
Data Coverage	Not applicable.
Supported Fuels	Electricity or gas. Customers with two fuels can only view outages for the singular fuel type configured for Outages by the Utility.

My Outages

The Digital Self Service - Transactions My Outages feature provides customers with personalized information about the outages affecting their service addresses. Customers are presented with a comprehensive view of the outage events that have a direct impact on them. This view provides critical information about the incident such as what caused the outage, work crews status, estimated restoration time, and when the outage was first reported.

When multiple service addresses are affected at once, detailed information is available for each outage impacting the customer.

My outages

See details of outages affecting your premises. To view all active outages, go to [Outage Map](#).

2 premise(s) with an outage.



7489-A Demo St.
CA 94501
3655460977

Estimated restoration	Status	Cause	First reported
Nov 17th, 01:42PM PST	New unacknowledged event	Trouble Call	Nov 1st, 02:18AM PDT



7489-A Demo St.
CA 94501
3655460977

Estimated restoration	Status	Cause	First reported
Nov 17th, 12:36PM PST	New unacknowledged event	Non-outage	Nov 16th, 05:45AM PST

Don't see your outage? [Report outage](#)

In addition to reviewing applicable outages, customers can select options to "Report Outages" on page 86 or view the [Outage Map](#).

Report Outages

Self-service options are available to the customer to report a problem or outage with their utility service. The service reporting options walk the customer through the process and collect information needed by utilities to efficiently troubleshoot outages.

What is the problem?



Outage at my serviced location



Outage in my community

Identifying an emergency

Do you smell gas, see downed power lines or suspect another emergency situation?

Leave the area immediately & call 911 or call UtilityCo at 1-800-UTIL-COS.

NEXT

Data Requirements and Limitations

- **Questions:** Utilities define the available questions using the Oracle Utilities Customer Information System and Outage Management system integration. This includes determining the outage group codes and characteristic types.

Reporting an Issue for Individual Service

Existing customers can report an issue that they are experiencing at their property or with the service they directly have with their utility. Customers can report their issue using the general workflow described below:

1. **Access Site:** Customers access the report issue process through the utility website and select the option to report an issue for their service. By default, customers are prompted to log in to their self-service web account or determine their utility account by a combination of configurable identifiers such as a primary phone number and social security number. This authentication ensures an outage is connected to the applicable account.
2. **Outage Details:** After a customer is authenticated, the customer provides the following information to report their issue:
 - **Service Address:** The account number and premise address are populated for the customer based on their account. If a customer has multiple premises associated with their account, an option is displayed to select the premises that

are experiencing the problem. If a customer attempts to report an issue for a premise that has an active issue reported, the existing issue is displayed to modify or cancel as described in "Modifying an Issue for Individual Service" on page 91.

- **Service Point:** If a customer has multiple service points associated with a premise, an option is displayed to select the service points that are experiencing the problem.
 - **Outage Information:** A list of inputs are presented to collect additional details from the customer about the outage. Inputs to explain the cause, description, and additional comments are displayed by default based on the Customer Information System or Network Management System integration.
 - **Troubleshooting Guide:** If configured, a troubleshooting guide is displayed to users when they try to report certain types of issues. For example, if the utility does not want to intake issues for partial power outages or blinking lights, the troubleshooting guide can be displayed when the customer selects these problem types. Troubleshooting steps can be provided to the customer for these types of outages. Customers cannot proceed with reporting the issue for the selected issue types when the troubleshooting guide is displayed.
3. **Contact Details:** Contact details are populated for the customer based on their account information. Customers can replace the pre-populated values with different information if, for example, they want the utility to call them back at a number that is not stored as a contact method on the account.
 4. **Review and Submit:** All information provided by the customer is displayed for review. Customers can return to previous pages to edit any information that is incorrect. An example of this screen is shown below.
 5. **Confirmation Notification:** Customers can also receive an email notification including the information they submitted to the utility as confirmation of their reporting the issue. To receive this notification, the customer must enter an email address in the Contact Details step. If no email is provided, no email is sent.

A Service Task is created upon successful submission and is linked to the account automatically.

Review the information you provided

Outage Details

Outage Type	Property outage
Premise	800 Clement St, CA 94103 Electric Residential - 1656639964
Problem Description	Area out
Cause Of Problem	Tree Limb on Wire
Description	Sagging Wire
Additional Information	N/A

Contact Information

Name	Maria
Callback Number	(555) 145-1445
Email	mariavilla@mymail.com

[BACK](#)[SUBMIT](#)

Enroll in Future Outage Notifications

When enabled, customers completing a personal outage issue can enroll in notifications related to outages. For example, customers can get estimated time of restoration notifications from their utility through email or SMS.



We received your outage report

Thanks for letting us know. We'll do our best to resolve the issue as quickly as possible.

Reference ID: 55971194336804

[ENROLL IN FUTURE OUTAGE ALERTS](#)

Customers are presented with email and SMS contact methods for receiving these notifications. The default values are based on the customer's account. A customer can choose to enter new contact information if, for example, they want to use a different SMS number for outage notifications.

Enroll in Future outage alerts

Receive future outage alerts

Notifications about planned and unplanned outages will include:

- Outage start time
- Estimated time to resolve
- Power restored

How would you like to receive alerts?

- SMS (cellular service plan rates apply)
- Email

Mobile Phone

(555) 145-1445

ENROLL

CANCEL

After customers complete their enrollment, a preference is set within the Customer Information System on the notification type configured. Customers can modify their enrollment in these notifications at any time by modifying the applicable billing communication preference, which are described in "Account Notifications" on page 99.

Note: This enrollment option is only displayed to customers who are not yet enrolled in the respective notification type.

Modifying an Issue for Individual Service

When a customer attempts to report an outage for a location has an active issue already reported, the system populates the form with the information that was previously submitted for the outage. If the power has been restored, the customer has the option to cancel the reported outage. Customers also have the option to edit information of the previously reported outage and resubmit the form.

Customers can also view existing outages from "My Outages" on page 85.

Reporting an Outage for a Community

When enabled, a publicly accessible option to report an outage for a community is available. For example, a concerned citizen can report a street light outage. No account details are collected or stored for this outage reporting:

1. **Access Site:** Customers or other users access the report issue process through the utility website and select the option to report an outage in the community.
2. **Issue Details:** After selecting to report a community issue, the user must provide the following information to report the community issue:
 - **Location:** The location fields including street, cross street, city, state, and zip help utilities locate where the problem is. The user's web browser prompts the user to allow detection of their location to include pertinent location information for them. If a user does not allow location detection, they can manually enter the location details while reporting the issue.
 - **Outage Information:** A list of inputs are presented to collect additional details from the user about the outage. Inputs to explain the cause, description, and additional comments are displayed by default based on the Customer Information System or Network Management System integration.
3. **Contact Details:** Users may provide their contact information in case the utility needs additional details about their issue or to provide an update.
4. **Review and Submit:** All information provided by the customer is displayed for review. Customers can choose to edit any information that is incorrect by navigating backwards in the flow.

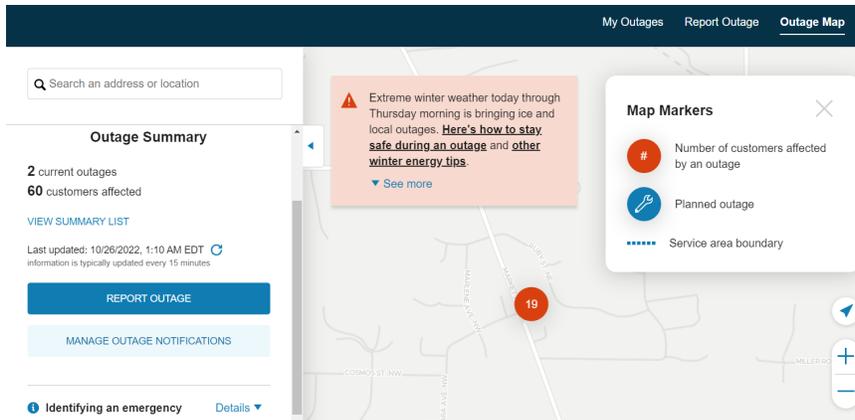
A Service Task is created upon successful submission. These service tasks are not tied to an account since they can be reported by customers or other users who do not have an account with the Utility.

Outage Map

The Outage Map provides information on all outage events affecting the service territory. The outage information is depicted in different ways to attend to all the customer needs:

- Individual Outage Details
- Service Territory aggregated view
- County or City aggregated view

The Outage Map is publicly accessible and does not require viewers to have an account with the utility. A web portal account is required for a customer to use the outage map to verify if there is an outage affecting one of their properties.



Data Requirements and Limitations

- Outage Map Integration:** The utility must configure and integrate an outage management system with their customer integrated system to provide issue information to the Outage Map. Oracle Utilities recommends integrating with Oracle Utilities Network Management System to support the Outage Map.

Outage Summary

The outage summary view allows customers to quickly assess how their service territory is affected. Customers can view the total number of outages for the territory, the number of customers affected, and the date and time the data displayed on the map was last updated. From this view, customers can report an outage and manage outage notifications. From this view, customers can view to list of outages or select a specific outage to view more details about the particular outage.

Outage Details

When a customer selects an outage on the map, additional detailed information about the outage is displayed. This information can include the estimated restoration time for the outage, the status of the outage, the root cause, and when the outage was first reported. An option for customers to report an outage is also available within this view.

Outage List

Customers can review an aggregated list of outages by county or zip code, along with the number of customers impacted in each area. This provides high-level information related to current outages.

Alert Banners

Alert banners provide customers with important information during critical events. By displaying an attention-grabbing banner on the outage map, customers can quickly

access important messages related to the weather conditions, safety precautions, and restoration progress. Customers can benefit from easy access to additional materials, such as safety guides, preparedness tips, or instructional videos. An example alert banner which can be displayed as an overlay on the outage map is shown in the outage map example above.

Notifications

Customers can review and modify their notifications, alerts, and communications for their account, as well as define the contact methods for each applicable communication. Digital Self Service - Transactions supports a wide variety of notifications that can be viewed by a customer when they sign in to their account or sent to contacts that the customer creates.

Note: Customers can select their account using the **Current account** drop-down list. For more information, see "Account Selector" on page 6.

Requirements

Utility Requirements

- **Required Cloud Service:** Preference options for Energy Use Communications are displayed for features that are applicable to the customer. Home Energy Reports are available through the Oracle Utilities Energy Efficiency Cloud Service. See the [Oracle Utilities Opower Energy Efficiency Cloud Service Product Overview](#) for more information. Weekly Energy Updates and High Bill Alerts are available through the Oracle Utilities Proactive Alerts Cloud Service. See the [Oracle Utilities Opower Proactive Alerts Cloud Service Product Overview](#) for more information.
- **Scale:** No applicable scale requirements.
- **Configuring Alerts and Notifications:** You must complete alert and notification configuration in your applicable Customer Care and Billing or Customer to Meter system. For information on configuring alerts and notifications, see [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- **Billing Communication Options:** The preference options displayed for billing and payment communication types and channels are defined in a utility's Oracle Utilities Customer Care and Billing system. Digital Self Service - Transactions does not include the configuration or delivery of the communications.
- **Outbound Notifications:** The utility must configure and integrate an external system with their customer integrated system to deliver outbound notifications for the defined Account Notifications. Oracle recommends integrating with Oracle Responsys and Oracle Integration Cloud to support outbound notification delivery. For additional

information on configuring outbound notifications, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

- **Utility Account Preferences:** All preferences are applicable to a utility account and not directly to the web login. Customers with multiple accounts can use the account drop-down list to access and modify settings for each of their accounts.
- **Outage Notification Integration:** Outage notification integration can be supported in one of the following ways:
 - Oracle Utilities recommends Customer Care and Billing notification preferences for outbound notification integration. For additional information on configuring outbound notifications, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
 - Third-party integration with Kubra's Notifi Alerts and Preferences Management solution. When this third-party integration is enabled, customers can manage their outage notification and alert preferences directly from Digital Self Service - Transactions, and Kubra supports the delivery of outage communications to customers. Additionally, you must work with your Oracle Utilities Delivery Team to provide applicable security keys and URL paths for your Kubra system.

Customer Requirements

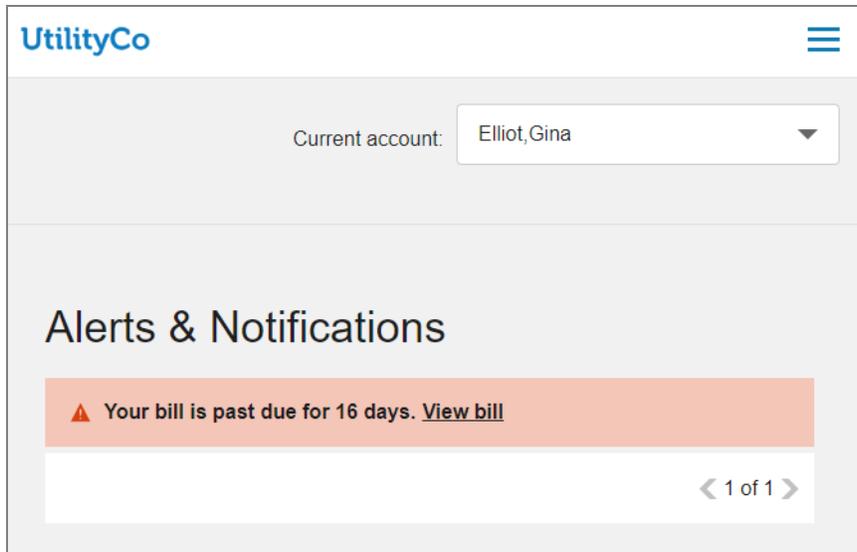
- **Billing Frequency:** No applicable billing frequency requirements.
- **Data Delivery Frequency:** Data is delivered real time for transactional tasks such as retrieving a customer's balance due, payment submission, program enrollment, account details, and account notifications.
- **Data Requirements:** Program participation data to determine enrollment in plans such as budget billing, partial payments, and so on.
- **Data History:** No applicable data history frequency requirements.
- **Data Coverage:** No applicable data coverage requirements.
- **Supported Resource Types:** Gas, electricity, water, and wastewater.

User Experience

Alerts and Notifications

Customers are presented with important alerts and notifications about their account in the Overview Dashboard and the Notification Center. Critical information, referred to as alerts, are displayed directly on the Overview Dashboard, and customers can scroll through all critical alerts. The Overview Dashboard also displays a single item for non-critical notifications. Customers with more than one non-critical notification see a summary of notifications on the Overview Dashboard with the total number of non-critical notifications, along with a link to the Notification Center to view all alerts and notifications.

All active alerts and notifications are available to customers in the Notification Center. Alerts and notifications cover areas such as payments, billing information, account status updates, and guest user invitations. A message is displayed for customers that have no active alerts or notifications.



Payment Status Alerts and Notifications

Customers receive alerts and notifications for status updates to recent payments, including:

- Payment received
- Payment scheduled
- Payment failed
- Payment rejected
- Scheduled payment canceled
- Payment submitted
- Automatic payment received
- Automatic payment failed
- Automatic payment rejected
- Automatic payment submitted

Bill Due Alerts and Notifications

Customers receive alerts and notifications for their bills, including:

- Bill past due
- Bill due in future
- Bill due today

Account Status Alerts

Customers receive alerts for critical account status updates, commonly as a result of unpaid bills, including:

- Service will be suspended
- Service suspended
- Service restored

Guest User Invitations

Customers receive notifications when there is a pending guest user invitation waiting for the guest user to accept.

General Announcements

General announcements are vital messages presented to customers directly on the portal's Overview Dashboard. These messages can encompass a wide range of information, from critical notifications such as widespread power outages or impending severe weather conditions, to informative updates about scheduled maintenance on the portal or exciting new rebate and promotion programs. Urgent alerts, such as emergency situations, are given top priority and appear prominently at the beginning of the notifications list, ensuring that customers stay informed about essential information directly within the portal. More informative general announcements can be defined as non-urgent and displayed alongside other notifications without heightened priority. The image below provides an example of urgent and non-urgent general announcement banners.

Note: For information on configuring general announcements, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#)

 We are currently experiencing higher than normal call volumes. For a quicker response you can try [contacting us online](#)

 Connect to our latest updates and offers. [Explore how we can serve you better](#)

Hello Sabela Williams Current account: Home

No payment due
\$0.00

You have a scheduled payment of \$2.00 for Apr 25. [View details](#)

[VIEW BILL](#) [MAKE ADDITIONAL PAYMENT](#)

Your account #3581063386
123 Pine St, San Francisco, CA

Paperless Billing	<input type="checkbox"/> Not enrolled
Auto Pay	<input type="checkbox"/> Not enrolled
Budget Billing	<input type="checkbox"/> Not enrolled
Payment Arrangement	<input type="checkbox"/> Not enrolled

Alert and Notification Priority and Display Duration

Alerts and notifications are prioritized using priority and severity. Priority is used to determine the order in which the alerts and notifications are displayed to a customer. Severity determines which critical alerts are shown on the [Overview Dashboard](#) in addition to the Notification Center. The general rules and requirements are as follows:

- Payment scheduled and scheduled payment canceled notifications are shown until the scheduled date is reached. For example, if a payment is scheduled for March 20, and then subsequently canceled, the cancellation notification is shown until March 20.
- Payment submitted, received, rejected, and failed alerts and notifications are displayed for the initial customer login once the alert has been triggered. This is determined based on the customer's last login date.
- All bill due alerts and notifications are displayed until the total due amount is \$0 or less.
- Account status alerts are defined in the master configuration to use the `CUT-NONPAY` severance process event by default, which is used to trigger the account suspension process. This severance process is required to support alerts that relate to account suspension actions.
- Service restored alerts are displayed for seven days after the service is restored.
- Critical alerts with high priority are displayed on the Overview Dashboard. Defining a critical alert with medium or low severity excludes the alert from the Overview Dashboard and they are only displayed in the Notification Center. Severity does not affect the display of non-critical notifications.
- Critical alerts include:
 - Service will be suspended
 - Service suspended

- Service restored
- Bill past due
- Automatic payment failed
- Automatic payment rejected
- Payment failed
- Payment rejected

Account Notifications

The members of a utility account with the required permissions can set their account notification preferences, including:

- "Contact Methods" on page 100
- "Bill Delivery" on page 101
- "Notification Preferences" on page 101

Note: All modifications are made for the utility account and not the web login. Customers can have different settings for each of their accounts by selecting the account they want to modify from the account drop down list.

Alerts and notifications **Manage Account Notifications** Energy Use

Manage account notifications

Contact methods

🏠 (322) 543-6545 Primary	Remove Edit
✉ test@test.com Primary	Remove Edit
📱 (111) 111-1111	Remove Edit

[+ Add contact method](#)

Bill Delivery

Mailing Address	500 Guerrero St 45 San Francisco CA, 94103	Edit
-----------------	--	----------------------

[Enroll in paperless billing](#)

Notification preferences

Manage how you would like to receive alerts and notifications. Standard notifications require at least one contact.

- Service Advisory
- Bill Due**
 DAYS BEFORE

 Send to (111) 111-1111 [Remove](#)
[Add another contact method](#)
- Bill Ready
- Bill Routing Email
- Late Payment

Contact Methods

Contact methods provide delivery methods for outbound account notifications. A minimum of one primary contact method is required for each contact type that a customer has saved for their account. For example, if a customer includes phone number contacts for their utility account, one phone number must be defined as the primary phone contact. The primary contact methods cannot be deleted but can be modified.

Customers can add or delete contact methods from the contact list at any time. When deleting a contact method, any notification preferences assigned to a specific contact are also removed. If the deleted contact method was the only contact method set to receive

the utility bill through email, the bill is automatically sent to the primary email for the account.

Bill Delivery

Customers can choose to receive their bill through standard mail or through email. When a customer enrolls in paperless billing, the email address being used for delivery is shown, along with a link to unenroll. When the customer is sent bills through standard mail, a link is shown to allow customers to enroll in paperless billing. A customer's mailing address can be used for various utility communications in addition to bills and therefore a customer can update their mailing address regardless of their enrollment in paperless billing.

Notification Preferences

Notification preferences, as defined by the utility, can subscribe customers to account notifications. These preferences are used to enroll a customer in outbound notifications, which are sent directly to the contacts the customer selects for the respective notification. These notifications can complement the "Notifications" on page 94 that are displayed in the Notification Center. Common notifications can include:

- Bill is ready
- Bill is due
- Programs and offers
- Bill is past due
- Payment received
- Budget billing changes

Energy Use Communications

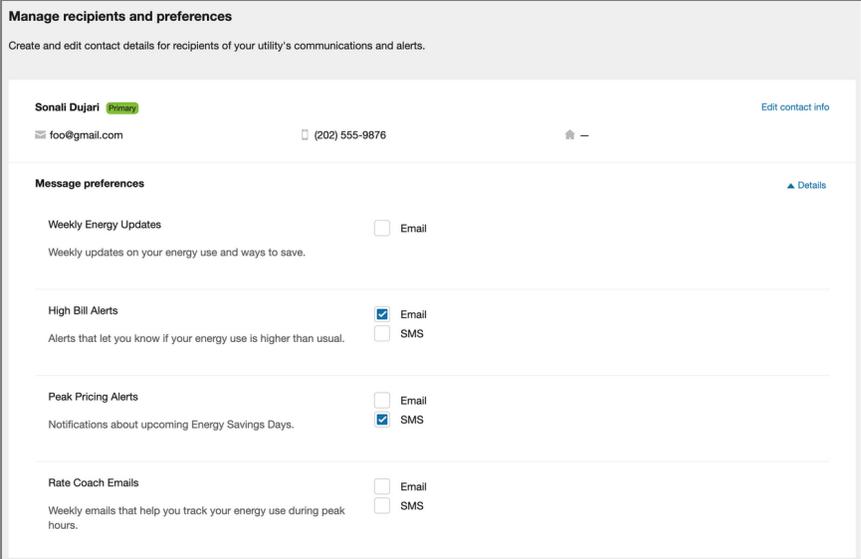
The account manager for a utility account can set their energy use communications and alerts using the following options:

Note: Energy use communications are part of the Digital Self Service - Energy Management features, and are an optional add-on, available through the Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service. For additional information on the Digital Self Service - Energy Management feature functionality and requirements see the [Oracle Utilities Opower Digital Self Service - Energy Management Cloud Service Product Overview](#) .

- "Energy Use Communication Recipients" on page 102
- "Home Energy Reports" on page 103
- "Weekly Energy Updates" on page 103

- "High Usage Alerts" on page 103
- "Peak Pricing Alerts" on page 104

Note: All modifications are made at the utility account and not the web login. Customers can have different settings for each of their accounts by selecting the account they want to modify from the account drop down list.



Energy Use Communication Recipients

Energy use communications can be sent to any recipient. The Message Preferences section is displayed once for each recipient on the account, and provides a list of the available communications and alerts that the recipient can receive. This section of the widget can be expanded or collapsed by clicking Details.

The products and channels that are displayed for each recipient depend on:

- The products and reports that are available from the utility.
- The communication types included for the recipient. For example, do they have both an email and a phone number?
- Whether the recipient is the primary recipient on the account.

Each applicable channel can then be selected or cleared for each recipient of a product. Printed reports can be sent only to the mailing address for the primary account recipient. Additional recipients cannot select printed reports.

Note: Recipients are different than the contact methods used for billing communications. If the same contact information should be used for both billing and energy use communications, an applicable contact method and recipient must both be created.

Behavioral Load Shaping

This section, which might also be called Rate Coach Emails, controls whether a customer receives Behavioral Load Shaping email communications. Behavioral Load Shaping communications are only available for the email channel. For more information, see the [Oracle Utilities Opower Behavioral Load Shaping Cloud Service Product Overview](#).

Home Energy Reports

Home Energy Reports are user-friendly communications that provide personalized information to customers about their energy use. Customers can choose to receive HERs through standard mail or email. Home Energy Reports sent through standard mail can only be sent to the primary mailing address for the utility account. For more information on Home Energy Reports, see the [Oracle Utilities Opower Energy Efficiency Cloud Service Product Overview](#).

Weekly Energy Updates

Weekly Energy Updates are email notifications that compare the energy use for a premise to that of similar neighbors. For more information on Weekly Energy Updates, see the [Oracle Utilities Opower Proactive Alerts Cloud Service Product Overview](#).

High Usage Alerts

High usage alerts are digital communications sent through email, SMS, and voice to inform customers when they are expected to receive a higher energy bill.

A personalized alert threshold is available to customers who have High Bill Alerts AMI. For information on the applicable Cloud Service, see the [Oracle Utilities Opower Proactive Alerts Cloud Service Product Overview](#). Depending on the characteristics of a customer's accounts, the customer is provided one of the following options to define an alert threshold:

- **Cost threshold:** The cost threshold allows customers to specify a dollar amount as their personalized threshold. When the cost threshold is set, the customer will only receive a high bill alert when their cost exceeds the cost threshold. All active utility accounts for a customer must have modeled rates and are not defined as budget

billing accounts for the customer to define a cost-based threshold.

If a customer does not set their personalized threshold, they will only receive high bill alerts when they exceed the combined usage and cost threshold set by the utility. The recommended combined threshold is 30 percent.

- **Usage threshold:** The usage threshold allows the customer to set a percentage-based personalized threshold. When the usage threshold is set, the customer will only receive an alert when their energy use exceeds that threshold for the same billing period the previous year. The default usage threshold is 30 percent. The usage-based threshold is available to customers who are ineligible to define a cost-based threshold. This applies to customers with at least one active account without modeled rates or defined as a budget billing account.

Peak Pricing Alerts

Peak pricing alerts are digital communications sent through email, SMS, and voice to inform customers of peak pricing events. Customers can receive either Peak Time Rebate or Behavioral Demand Response communications. For more information on the applicable Cloud Services, see the [Oracle Utilities Opower Behavioral Demand Response Cloud Service Product Overview](#) and the [Oracle Utilities Opower Peak Time Rebates Cloud Service Product Overview](#).

Outage

Outages are a main reason for customers to log in to their utility account or contact their utility's customer service. Depending on the implementation, customers are presented with information and options to receive outage notifications.

Integration with Customer Care and Billing

Using the Customer Care and Billing outage notification integration presents outage notifications along with other notification preferences:

Notification preferences

Manage how you would like to receive alerts and notifications. Standard notifications require at least one contact.



Service Advisory

Send to (111) 111-1111 [Edit](#)

[Add another contact method](#)



This notification is standard and requires at least one contact.



Bill Due

DAYS BEFORE

Send to (111) 111-1111 [Remove](#)

[Add another contact method](#)



Bill Ready



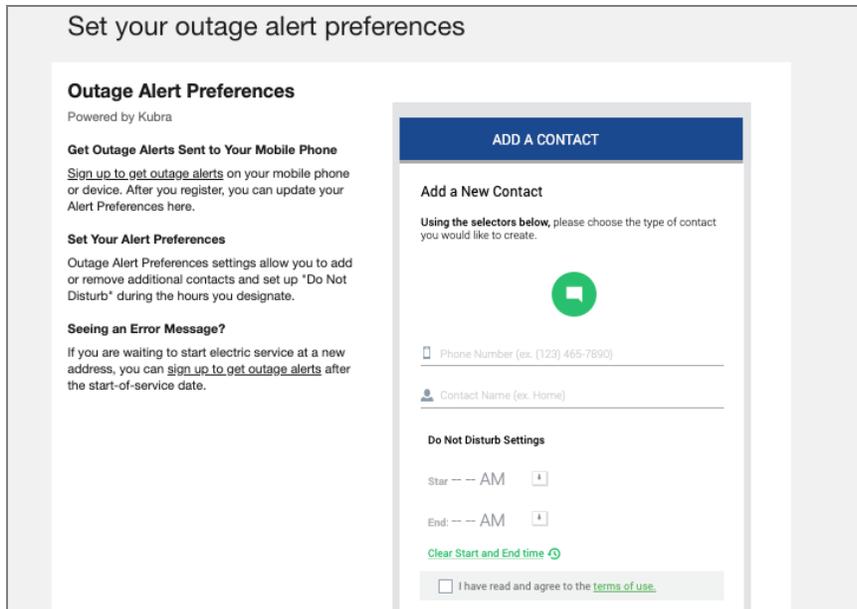
Bill Routing Email



Late Payment

Third-party Integration with Kubra

Customers can select the channels to receive outage alerts, such as mobile push alerts, text messages, email, or automated phone calls. Contact information for each channel must be provided. Using Kubra's Notifi Alerts and Preferences Management integration presents outage notifications in a dedicated set of outage notification preferences:



User Experience Variations

Customers Enrolled in Payment Extensions

Alerts related to the due date of a customer's bill are impacted when a customer enrolls in payment extensions. When a customer enrolls in payment extensions, past due notifications are hidden for the customer. Alerts that relate to the due date such as Bill due today and Bill due in future are modified to reflect the due date of the payment extension.

Help Center

The help center provides customers with options to answer questions they have about their utility bill or service. Customers can also act on common customer tasks.

Ask a Question

Customers can ask questions to receive information and guidance on their specific needs. Categories are available to guide customers to provide the required information for their questions. Attachments can be included with a customer's question to provide additional information, such as a picture of a broken meter or an image of an issue they are having with their online utility account. Supported attachment file types and file size limits are defined by the utility. Attachments are accessible by Customer Service Representatives from the service task that is created when a customer submits a question and attachment.

A customer's full question history, including any responses from the utility, is available from the help center. Customers can view their resolved questions and respond to any of their pending questions with follow up information.

Ask us a question

Select a topic ▼

Enter your question. If this is about a specific account or property, please include the account number or address.

[+ Attach file or photo](#)

[View your question history.](#)

Do it Yourself Online

Customers looking to complete certain tasks can review the available actions they can do online. This list highlights features available with Digital Self Service - Transactions that customers can complete themselves. The highlighted actions include common tasks such as enrolling in billing programs including autopay and paperless billing, starting or stopping service, updating account information, or viewing and reporting service outages.

Do it yourself online

Billing & Payments	Service & Accounts
Sign up for Auto-Pay	Start, stop, or transfer service
Sign up for Paperless Billing	Update your contact info
Sign up for Balanced Bills	Update your password
Set up a Payment Arrangement	

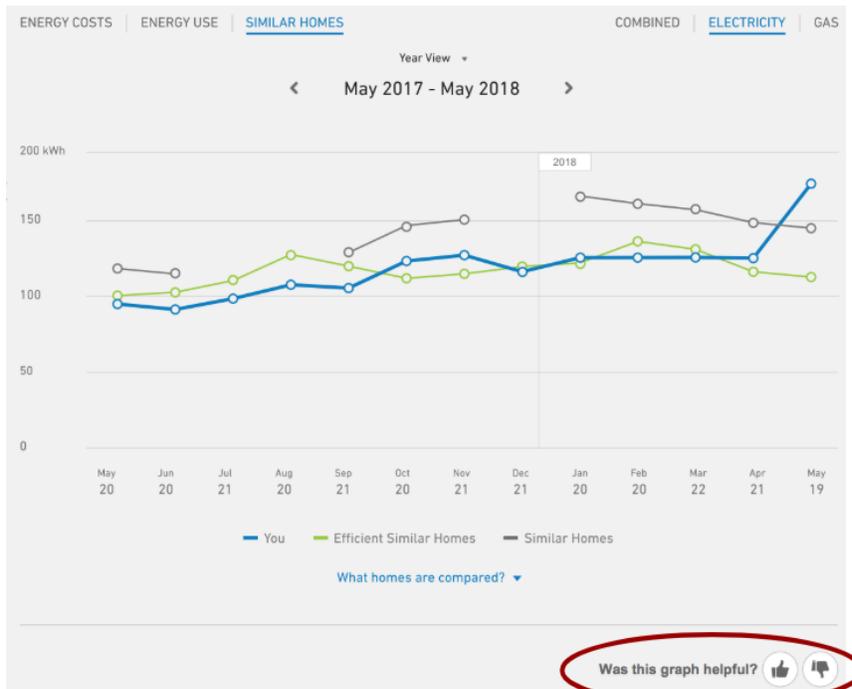
Contact Support

Applicable phone, email, and mail support contact information is available to customers.

Customer Feedback

The Customer Feedback module can be added to certain widgets to gather input from users and support product improvements. Typically this module is displayed at the bottom

of a widget.



Supported Widgets: The module can be displayed on supported widgets. Supported widgets include the [Data Browser](#), [Bill Comparison](#), [Bill or Usage Forecast](#), and [Home Energy Analysis](#). Depending on each utility's setup and configuration, some of these widgets may or may not be available. Contact your Oracle Utilities Opower [Delivery Team](#) if you need more information.

The Customer Feedback module is displayed by default on each supported widget except for the Data Browser. In order to enable the module on the Data Browser, utilities must coordinate with their Delivery Team.

Icons and Statement: The module displays icons and a statement such as, "Was this information helpful?" The exact wording will vary based on the content of the widget and each utility's configuration. For example, the module may include statements like the ones below:

- Did this graph have what you're looking for?
- Did you understand this graph?
- Did this graph have accurate information?
- Did this graph help you understand your energy use?
- Did this graph help you understand your energy costs?
- Was this graph useful?
- Did you get any helpful insight from this graph?
- Was this information helpful?

Customers can select one of the available icons to respond to the statement. The customer's choice is logged, and the module displays a message thanking the customer for their feedback. This message is displayed for a short period of time before being hidden from view. The feedback module is then hidden for that widget, and for the customer who provided their feedback.

Module Display: The local storage of a customer's browser is used to determine if the feedback module is displayed in a given widget. If a cookie exists for a customer's feedback for a widget, then the feedback module is hidden from view for the customer for that widget. However, the module is displayed if a cookie is not present in the customer's browser, which can occur in situations such as:

- The browser storage has been cleared and the applicable cookie is removed.
- The customer uses a different browser on the same device which does not yet have a feedback module cookie.
- The customer uses a different device which does not yet have feedback module cookies for its browsers.

These scenarios allow customers to provide feedback for a widget multiple times. Clearing browser storage could be used by a customer to provide new feedback on a widget after an updated version of a widget is provided, which may change a customer's experience and satisfaction with a widget.

Chat for Customer Support

Chat services can be integrated with Digital Self Service - Transactions to allow customers and utilities to communicate in real time in a chat channel. This feature helps utilities adapt their customer service in order to meet their customer's expectations, and brings additional benefits including increased customer satisfaction and revenue.

Genesys chat service is a third-party service that requires a separate service agreement and contracting. Digital Self Service - Transactions can seamlessly work with Genesys and provide clients the option to offer their customers chat services.

 **Live Chat** — ×

First Name	<input type="text" value="Carlos"/>
Last Name	<input type="text" value="Salazar"/>
Email	<input type="text" value="carlos.salazarcoffee20@gmail.com"/>
Account #	<input type="text" value="0729463461"/>
Service Type	<input type="text" value="Commercial"/> ▼
Language	<input type="text" value="English"/> ▼

Powered by  GENESYS

Third-Party Applications

A utility's online portal can require that authenticated web applications are available to their customers alongside Digital Self Service - Transactions to maintain a single, integrated experience for their customers. For example, a utility can link to a customer rewards program and website directly from Digital Self Service - Transactions, redirecting the customer without requiring them to log in again.

Oracle Utilities supports two authentication methods for this type of third-party application access from Digital Self Service - Transactions:

- If SAML is used to implement authentication for Digital Self Service - Transactions, the third-party application must be integrated using SAML.
- If Oracle Identity Cloud Service is used to implement authentication to Digital Self Service - Transactions, this implementation may be extended to integrate third party applications. For more information on this implementation, refer to the [Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide](#).

Providing Customer Support

Customer Service Representatives (CSRs) with the proper permissions can use their Oracle Utilities product, such as Customer Care and Billing, to access the Digital Self Service - Transactions Web Portal. If you are unsure if your account has been granted the proper permissions to perform the support activities listed in this documentation, contact your supervisor.

A CSR can log in to their Oracle Utilities product and search for a specific customer as well as search for accounts associated with a web user. These searches can be done based on name and address, account ID, person contact, person ID type or value, and geographical type or value such as street name. The Web User Summary zone allows CSRs to review and manage web users of Digital Self Service - Transactions that are linked to a customer's account, including the following tasks:

- Unlink web users from accounts and remove the associated account-person relationships.
- Use the Self-Service Task Query to view a self-service task and take additional action on any open or non-final self-service tasks.

The available information in the Web User Summary zone includes summary information for accounts linked to web users, a list of financially responsible web users, a web user's role for an account, and a summary of open and non-final self-service tasks for web users.

A CSR can also log in to their Oracle Utilities product to search for a customer and then view the Digital Self Service - Transactions Web Portal as that customer. If a customer has a question about the Digital Self Service - Transactions Web Portal or their energy use, this allows the CSR to reference what the customer can see. This process is also referred to as masquerading. Additionally, CSRs can administer the customer's account, including making modifications to their preferences and account information.

The CSR user accounts must be configured for the appropriate level of access, as described in the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Masquerading

Masquerading can be enabled for CSR users to allow CSR users to access and view Digital Self Service - Transactions as a customer. Masquerading provides access to the following features and tasks:

- **Web User Summary Zone:** The Web User Summary zone provides a link for CSRs to masquerade as the web user.

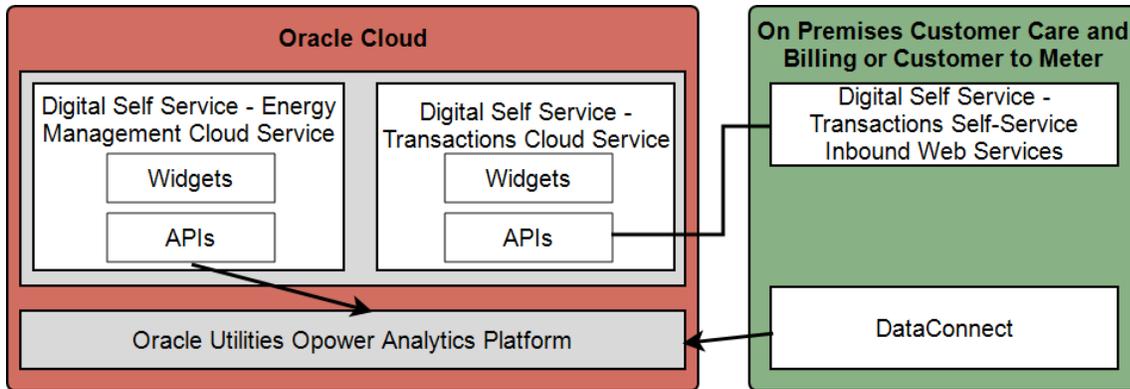
- **Masquerade Acknowledgement Prompt:** The masquerade acknowledgement prompt requires a CSR to confirm that they want to proceed prior to masquerading as the customer. This is to ensure that a CSR fully understands that any changes made to the account during a masquerade session affect the customer's account. For information on configuring the message for this prompt, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- **CSR Banner:** The CSR masquerade banner is a visual indicator displayed at the top of the Digital Self Service - Transactions Web Portal during the masquerade session. This banner confirms to CSRs that they are masquerading as a customer rather than logged into their own account. For information on configuring the message for this banner, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- **Entitlements:** Entitlements allow utilities to enable or disable CSR access to sensitive tasks such as making a credit card payment or making a change in the identity management system. By default, CSRs cannot access third-party systems during a masquerade session. For information on enabling entitlements, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).
- **Self-Service Task Logging:** When a CSR makes a change on behalf of the customer while masquerading as that customer, all self-service tasks are logged with the CSR's information instead of the customer's information. This allows easy identification of self-service tasks that are completed by CSRs. The following table lists the self-service task information differences when comparing self-service tasks created by a customer and by a CSR:

Self-Service Task Details Field	Created By Customer	Created By CSR
Web User ID	The <code>webUserName</code> for the customer account.	The <code>csrID</code> for the CSR account.
Email Address	The <code>emailAddress</code> for the customer account.	Not applicable
IP Address	The applicable IP address for the customer's system.	The applicable IP address for the CSR's system.
Self-Service User ID	The <code>webUserID</code> for the customer account.	The <code>webUserID</code> for the customer account.

Deployment Topology

The deployment topology below describes the runtime components of the Oracle Utilities Digital Self Service - Transactions Cloud Service, dependent product integrations, and the owner of the product maintenance and operations. Your Customer Care and Billing or Customer to Meter administrator is responsible for patch installations for your on-premises Oracle Utilities products.

- Your Oracle Cloud product operations and maintenance are managed by Oracle Utilities and can include:
 - Digital Self Service - Transactions Cloud Service is a mandatory component. It includes Digital Self Service - Transactions features which are supported with an underlying set of Digital Self Service - Transactions APIs. These APIs facilitate communication with the Digital Self Service - Transactions Self-Service APIs that provide inbound web services within your Customer Care and Billing or Customer to Meter environment.
 - Digital Self Service - Energy Management Cloud Service is an optional add on. It includes Digital Self Service - Energy Management features which are supported with an underlying set of Digital Self Service - Energy Management APIs. These APIs can send data to the Oracle Utilities Opower Utility Analytics Platform to support data processing and insights.
 - Oracle Utilities Opower Analytics Platform is an optional component that supports data processing and insights for Digital Self Service - Energy Management add ons. It retrieves data from Digital Self Service - Energy Management APIs and from DataConnect components that support your on premises Customer Care and Billing or Customer to Meter products.
- Your on premises Oracle Utilities Customer Care and Billing or Customer to Meter product operations and maintenance are managed by you the utility and can include:
 - Digital Self Service - Transactions Self-Service APIs are mandatory components that provide inbound web services that facilitate communication with your Digital Self Service - Transactions Cloud Service.
 - DataConnect is a component of Customer Care and Billing or Customer to Meter that can optionally send data to Oracle Utilities Opower Analytics Platform to support data processing and insights.



Embedded SDK

The Digital Self Service - Transactions embedded SDK enables utilities to embed individual widgets onto their existing websites in a standardized way. In this setup, the utility owns and maintains the web portal, the layout of pages, and can determine the exact locations where they would like to place Digital Self Service - Transactions widgets. The embedded SDK provides the utility's website with the required methods for authorization, event handling, and access to critical user details. For example, when a Digital Self Service - Transactions widget like the account selector is used by a customer to switch accounts, the new account selection event is broadcast and the utility's own widgets and web portal pages can respond accordingly. This deployment method allows for utilities and partners to maintain control of the web portal and deliver custom features for their customers. To implement the Digital Self Service - Transactions embedded SDK, [contact your Delivery Team](#).

Automatic Maintenance Mode

Digital Self Service - Transactions can automatically display a maintenance page when Oracle Utilities Customer Care and Billing is unavailable and automatically resumes normal operation when Oracle Utilities Customer to Meter becomes available again. When enabled, the maintenance page content can be configured to display a custom message. For information on enabling automatic maintenance mode, see the [Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide](#).

Release Model

The Oracle Utilities Delivery Team work with utility customers to ensure that scheduled releases are managed in a coordinated manner. Each release is driven from a communicated schedule which provides advanced notification. Review the following materials for important release information related to Digital Self Service - Transactions:

- For New Feature Summaries and What's New information of major releases, refer to the [Digital Self Service - Transactions Release Readiness information](#).
- For information on Oracle Utilities release schedules and core system maintenance, refer to the [Oracle Utilities Release Schedule](#).
- For Oracle Utilities Cloud Services Maintenance Pack notes on [My Oracle Support](#), refer to [Oracle Utilities Cloud Services - Maintenance Packs](#).

Release Processes

Updates to your Digital Self Service - Transactions system are applied to your environments on a predefined schedule. Updates are applied to non-production environments for testing purposes and then the updates can be applied to production environments as soon as two weeks later. You have up to four months to apply the update, complete any required testing, and identify and report any issues before the updates are applied to your production environment.

Testing and Production Environments

The following testing and production environments are used to deploy major and maintenance pack releases as applicable:

- Implementation (IMP): The IMP environment is used for initial feature testing and troubleshooting.
- User Acceptance Testing (UAT): The UAT environment is used to perform additional testing of feature updates. User requirements and scenarios must be tested using this environment prior to updates being applied to the production environment.
- Production (PROD): The PROD environment is the environment that utility customers use and access. Release updates must be tested using the other two environments before deploying the updates to PROD.

Major Release Updates

Major Release updates must be scheduled with your Oracle Utilities Delivery Team to coordinate the required downtime for Digital Self Service - Transactions Self-Service API patch installations to your Customer Care and Billing or Customer to Meter system.

Major release updates are mandatory, as they are required to ensure that you have all required patches and security updates. When each new update is made available, the previous release version is assigned an end of life (EOL) date, typically 4 months after GA date of the new update. The general schedule for a Major Release update is:

- IMP: Two weeks after a Major Release date
- UAT: 4 weeks after a Major Release date
- PROD: 6 weeks after a Major Release date

Delivery Approach

Major Release updates are deployed to your non-production environments. After successful testing, the release is deployed to your production environment. The major steps in the process are:

Pre-Release Planning: Release materials are supplied in advance of major releases, which are highlighted in [Release Model](#) above. You must work with your Oracle Utilities Delivery Team to discuss feature and functionality questions and schedule the major release activities. You must schedule the deployment date by creating a service request in [My Oracle Support](#).

Testing Updates: You must work with your Oracle Utilities Delivery Team to coordinate the deployment of Digital Self Service - Transactions Self-Service API patches to your Customer Care and Billing or Customer to Meter system. You must also coordinate the deployment of Digital Self Service - Transactions Cloud Service, which includes updating widget versions and the customer service representative web portal. After deployment is complete, you must conduct regression testing to confirm successful deployment. This process is first completed with the IMP environment and repeated for the UAT environment. Additional user acceptance testing is conducted with the UAT environment.

Production Update: At a coordinated time with your Oracle Utilities Delivery Team, Digital Self Service - Transactions is deployed to PROD and the applicable Customer Care and Billing or Customer to Meter patch is deployed to your applicable system. You must conduct regression test to confirm successful deployment.

Maintenance Window

You must work with your Oracle Utilities Delivery Team to schedule deployment of Major Releases. You must create a service request in [My Oracle Support](#) to schedule the upgrade across all environments. Oracle Utilities can support deployment windows Monday through Saturday from 7 am ET to 11 pm ET.

Maintenance Pack Updates

Maintenance Pack updates include fixes for reported issues and Digital Self Service - Transactions Self-Service API changes. Maintenance Packs are cumulative and all Maintenance Pack updates are included in a following Major Release update. The major steps to deploy Maintenance Pack updates are:

Pre-Release Planning: You must schedule the deployment date by creating a service request in [My Oracle Support](#). Be aware that Digital Self Service - Transactions Self-Service API Maintenance Pack updates are optional. Maintenance Pack updates for these APIs are included in their applicable Major Release updates.

Testing Updates: You must work with your Oracle Utilities Delivery Team to coordinate the deployment of Digital Self Service - Transactions Self-Service API patches to your Customer Care and Billing or Customer to Meter system. You must also coordinate the deployment of Digital Self Service - Transactions Cloud Service, which includes updating widget versions and the customer service representative web portal. After deployment is complete, you must conduct regression testing to confirm successful deployment. This process is first completed with the IMP environment and repeated for the UAT environment. Additional user acceptance testing is conducted with the UAT environment.

Production Update: At a coordinated time with your Oracle Utilities Delivery Team, Digital Self Service - Transactions is deployed to PROD and the applicable Customer Care and Billing or Customer to Meter patch is deployed to your applicable system. You must conduct regression test to confirm successful deployment.

Maintenance Window

You must work with your Oracle Utilities Delivery Team to schedule deployment of Maintenance Pack updates. You must create a service request in [My Oracle Support](#) to schedule the upgrade across all environments. Oracle Utilities can support deployment windows Monday through Saturday from 7 am ET to 11 pm ET.

Release Updates Frequently Asked Questions

This section provides a list of questions and answers to some of the most common inquiries utilities have about release updates for Digital Self Service - Transactions.

Why can't I skip the Major Release updates?

We need to ensure that all customers have the latest critical code updates and features. Therefore, Major Release updates are mandatory. Please see your [Cloud Service Pillar Document](#) for more details on the requirements to maintain version currency.

How can I tell what month I'll receive my Major Release update?

We'll send a notification to let you know when you will receive your update.

How do I know what is included in the Major Release updates to create a testing plan?

Review the release readiness documents and work with your Oracle Utilities Delivery Team if you have questions. For more information on the release readiness documentation, see "Release Model" on page 114. After you install a major release to your implementation environment, you will have time to test the new features and refine your testing approach.

What do I do if an update does not address my reported issue?

Update the applicable service request in [My Oracle Support](#), indicating that the issue was not resolved after installing the update. Provide details of any changes in error messages or symptoms, as well as screenshots of the issue as appropriate.

High-Level Roles and Responsibilities

This section outlines high-level roles and responsibilities involved in the deployment, configuration, and maintenance of Oracle Utilities Cloud Services in support of Digital Self Service - Transactions. The Owner column in the tables below indicates the party responsible for each role and responsibility.

Hardware, Storage, Technology, and Application Software

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Provide, deploy, run, and monitor all required technology such as containers, operating systems, databases, clustering, monitoring, and tracing	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Provide, deploy, run, and monitor all Oracle Utilities Digital Self Service - Transactions application components	Oracle Utilities
Customer Care and Billing or Customer to Meter	Provide, deploy, and monitor hardware, storage, containers, operating system, databases, clustering, monitoring, tracing, and application components	Utility

Security

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Monitor Cloud Service infrastructure security	Oracle Utilities

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Administer Oracle network security	Oracle Utilities
Customer Care and Billing or Customer to Meter	Configure and maintain identity management solution	Utility
Customer Care and Billing or Customer to Meter	Administer customer network security, including integrating with the Oracle networks	Utility
Customer Care and Billing or Customer to Meter	Integrate with Oracle networks	Utility

Databases

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Database administration and monitoring	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Backup, restore, and backup retention	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Data replication for Disaster Recovery where applicable	Oracle Utilities
Customer Care and Billing or Customer to Meter	Database administration and monitoring	Utility
Customer Care and Billing or Customer to Meter	Backup, restore, and backup retention	Utility
Customer Care and Billing or	Disaster Recovery	Utility

Component	Role and Responsibility	Owner
Customer to Meter		
Customer Care and Billing or Customer to Meter	Refresh of non-production instances from production	Utility
Customer Care and Billing or Customer to Meter	Information Lifecycle Management	Utility

Implementation, Configuration, and Extensions

For information on implementation support services for your Oracle Utilities products, refer to [Oracle Contracts - Cloud Services Service Descriptions](#)

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	<p>Configure interface text and messages based on inputs provided as described in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide</p> <div style="border: 1px solid black; padding: 10px; margin: 10px 0;"> <p>Note: Self-service master configurations listed in the Configuration Guide are owned by the utility.</p> </div>	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure the theme and branding of Digital Self Service - Transactions based on inputs provided as described in the Oracle Utilities Opower Digital Self Service - Transactions SSO Seamless Integration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure the single sign-on integration service as described in the Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide	Oracle Utilities

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Configure the bill download integration service as described in the Oracle Utilities Opower Digital Self Service - Transactions Bill Download Integration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure the payment processor integration service as described in the applicable Technical Integration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure the document management integration service as described in the applicable Technical Integration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure a secure connection with Oracle networks as described in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Configure the Secure File Transfer Protocol (SFTP) and setup file routing to enable the regular transfer of data files required for synchronizing data to the Oracle Utilities Opower Platform as described in the Oracle Utilities Opower Billing Data Transfer specification	Oracle Utilities
Customer Care and Billing or Customer to Meter	Implement the configurations outlined in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide	Utility
Web Content Management System	Administer customer network security, including integrating with the Oracle networks	Utility
Identity Management	Configure your identity management solution to:	Utility

Component	Role and Responsibility	Owner
System	<ul style="list-style-type: none"> ▪ Enable single sign-on with third-party Identity Management as described in the Oracle Utilities Opower Digital Self Service - Transactions Authentication Configuration Guide ▪ Enable web users to register, authenticate, and manage passwords using a publicly accessible user interface ▪ Provide customer transactional notifications as necessary for web user management transactions 	
Bill Download System	Develop or configure a bill download web service as described in the Oracle Utilities Opower Digital Self Service - Transactions Bill Download Integration Guide , if required	Utility
Payment Processing System	Develop or configure your payment processing solution to integrate with Digital Self Service - Transactions and Customer Care and Billing or Customer to Meter as described in the third-party payment processing instructions of the <i>Customer Care and Billing Business User Guide</i>	Utility
Document Management System	Develop or configure your document management solution to integrate with Digital Self Service - Transactions as described in the applicable Technical Integration Guide, if required	Utility
Customer Care and Billing or Customer to Meter Infrastructure	Configure your network to establish a secure connection with Oracle networks as described in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide	Utility
File Transfer	Transfer data files regularly from Customer Care and Billing or Customer to Meter to Digital Self	Utility

Component	Role and Responsibility	Owner
	Service - Transactions using SFTP as described in the Oracle Utilities Opower Billing Data Transfer specification	
All	Plan and carry out implementation	Utility
All	Perform configuration of enterprise software features and functions	Utility
All	Run functional, system, load, and performance testing of configuration and extensions	Utility
All	Ensure operational readiness	Utility
All	Schedule all gate review services	Utility

Patching and Upgrading

Digital Self Service - Transactions patch information is available on [My Oracle Support](#) with the [Oracle Utilities Digital Self Service Transactions Cloud Service Maintenance Pack Document](#).

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Patch and upgrade underlying infrastructure software	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Digital Self Service - Transactions patch and upgrade Oracle Utilities base application software	Oracle Utilities
Customer Care and Billing or Customer to Meter	Patch and upgrade underlying infrastructure software	Utility
Customer Care and	Oracle patch and upgrade Oracle Utilities	Utility

Component	Role and Responsibility	Owner
Billing or Customer to Meter	base application software	
Customer Care and Billing or Customer to Meter	Define the Cloud Service upgrade schedule within prescribed limits with Oracle Utilities	Utility
Customer Care and Billing or Customer to Meter	Trigger environment upgrades for all testing and production tiers	Utility
All	Perform regression testing of configurations and extensions after patching and upgrades are applied	Utility

Batch Processing

Batch processing is used to calculate insights that are displayed in Digital Self Service - Energy Management features that can be included as add ons to Digital Self Service - Transactions.

Component	Role and Responsibility	Owner
Customer Care and Billing or Customer to Meter	Monitor underlying batch infrastructure	Utility
Customer Care and Billing or Customer to Meter	Provide infrastructure logs for batch incidents to Oracle Utilities for troubleshooting and resolution	Utility
Customer Care and Billing or Customer to Meter	Resolve infrastructure batch issues	Utility
Customer Care and Billing or Customer to	Determine the batch processing schedule	Utility

Component	Role and Responsibility	Owner
Meter		
Customer Care and Billing or Customer to Meter	Monitor batch job completion	Utility
Customer Care and Billing or Customer to Meter	Perform first level investigation of batch issues	Utility

Support

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Triage, analyze, and resolve issues with the Cloud Service	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Manage Digital Self Service - Transactions configurations as described in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide	Oracle Utilities
Digital Self Service - Transactions Cloud Service	Submit applicable configuration changes as service requests using My Oracle Support , as described in the Oracle Utilities Opower Digital Self Service - Transactions Configuration Guide	Utility
Customer Care and Billing or Customer to Meter	Triage, analyze, and resolve issues with configurations and extensions	Utility
Customer Care and Billing or Customer to	Create service requests using My Oracle Support and provide all requested information	Utility

Component	Role and Responsibility	Owner
Meter		

Integrations

Component	Role and Responsibility	Owner
Digital Self Service - Transactions Cloud Service	Monitor Cloud Service infrastructure security	Oracle Utilities
Customer Care and Billing or Customer to Meter	Integrate Oracle Utilities Cloud Services with all other services or applications	Utility

Contacting Your Delivery Team

Your Oracle Utilities Delivery Team is the group responsible for assisting your deployment of Digital Self Service - Transactions. Contact your Delivery Team if you have any questions about your program products and implementation. Open a service request in My Oracle Support to coordinate configuration of Digital Self Service - Transactions features.

To request changes to default product and message configurations:

1. Review the tables provided in this documentation for each feature that has applicable configuration options.
2. Provide any changes to the default product and message configurations listed for each feature by submitting your request through [My Oracle Support](#).
 - a. Go to [My Oracle Support](#). Click **Cloud Support** and log in.
 - b. Click the **Create Service Request** button and follow the prompts to complete the Service Request.