Oracle Utilities Opower Energy Efficiency Cloud Service

Product Overview

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Getting Started

The Energy Efficiency Cloud Service includes analytical insights and digital products that are designed to educate customers with personalized information about their energy use and help them lower their energy costs. The following components are available in this service:

- Home Energy Reports
- Home Energy Reports v3
- Email Home Energy Reports
- Email Home Energy Reports v3
- Energy Efficiency Web Portal
- Energy Efficiency Web Portal v3
- Video Home Energy Reports
- Inside Opower
- <u>Customer Service Interface Program Management</u>

For an overview of all cloud services available from Oracle Utilities, see the *Oracle Energy* and Water Cloud Service Descriptions online at <u>Oracle Contracts - Cloud Services Service</u> <u>Descriptions</u>.

Home Energy Reports

Home Energy Reports are user-friendly print communications that provide personalized information to customers about their energy use. The reports can include a <u>neighbor</u> <u>comparison</u>, <u>energy history information</u>, <u>tips</u>, and <u>marketing modules</u>. The goals of the product are to give customers actionable insights about their energy and motivate them to lower their usage. See <u>Customer Experience Overview</u> for a comprehensive summary of the product, or see <u>Report Modules</u> for individual module descriptions.

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers in the Home Energy Reports program. These requirements must be met in order for a utility and a customer to participate in the program.

Channel Fees

Utilities may purchase a channel fee if they are using any printed rate education communications as part of the Oracle Utilities Opower program. Channels fees are used to add on report generation, printing, mailing, and postage services to a cloud service. There are two types of options: General Availability and Controlled Availability channel fees. The type that is relevant depends on the individual Oracle Utilities Opower program setup. Coordinate with your sales representative if you need help determining which type applies.

A summary of the fees is shown below. For more details about what each channel fee includes and the requirements for using them, see the *Oracle Utilities Opower Channel Fees Cloud Services* guide.

General Availability Channel Fees

The General Availability channel fees are applicable if the utility has a version of the cloud service that includes report generation. These channel fees can be purchased for different regions.

- Report Printing and Mailing: The Report Printing and Mailing channel fee includes the printing of generated report communications through an approved third-party print vendor, as well as services for the proper mailing of the reports. It does not include postage for mailing the reports to customers.
- Postage for Print and Mail: The Postage for Print and Mail channel fee includes postage for the delivery of print communications.

Note: The postage channel fee cannot be purchased alone. It must be purchased in combination with the printing and mailing channel.

Controlled Availability

The Controlled Availability channel fees are applicable if the utility has a version of the cloud service that does not include report generation. A utility may only choose one of the channel fees listed below.

- Report Generation: The Report Generation channel fee includes generating a digital version of print communications. It does not include the printing and mailing of print communications.
- Report Generation and Print: The Report Generation and Print channel fee includes the generation and printing of print communications. It does not include the mailing of print communications.
- Report Generation, Print, and Mail: The Report Generation, Print and Mail channel fee includes the generation, printing, and mailing of print communications.

Utility Requirements and Limitations

- Templates: Oracle Utilities has established standard templates for Home Energy Reports, which the US Postal Service has confirmed are currently eligible for mailing under the USPS Standard Mail classification. A deviation from these templates may cause the mailing of Home Energy Reports to be ineligible for USPS Standard Mail classification. If a utility purchases a print or mail channel, then Oracle Utilities Opower standard Home Energy Report templates will be used for the program. In the event that the utility and Oracle Utilities agree to deviate from such templates, the utility is responsible for any corresponding increase in postage.
- Data Integration: Customer data and energy use data must be sent by the utility to Oracle Utilities in the correct schema and according to the Oracle Utilities Opower data transfer standards.
- Other Data Sources: Oracle Utilities uses third-party reference data, such as weather and parcel data, to learn more about customers and the areas where they live. This information allows Oracle Utilities to identify neighbors, recommend tips, and provide additional energy insights. Moreover, customers can submit information through available Oracle Utilities Opower applications. For example, customers can submit information about their homes in the Energy Efficiency Web Portal.

Customer Requirements and Limitations

- **Billing Frequency**: The customer must be billed monthly, bi-monthly, or quarterly. Billing requirements vary by module. See the module descriptions that follow for details.
- Energy Use Threshold: Customers must meet a minimum energy use threshold to receive Home Energy Reports. This energy use threshold is optimized for each individual program.
- Data History: Each module requires a certain amount of historical data to appear on a customer's report. Backup modules appear for customers who do not have enough data to render a particular module. See the module descriptions that follow for details.
- Fuel Type: Electric-only, gas-only, and dual fuel.

Customer Experience Overview

Home Energy Reports are user-friendly print communications that provide personalized information to customers about their energy use. The reports include two pages of content that consist of <u>modules</u>. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. When printed out, the reports are a single page, with content on the front and back.

Report Front: The front of the report displays customer information at the top, highlights how the customer's energy use compares to their neighbors in the center, and provides an energy-saving tip at the bottom.

UtilityCo		Home Energy Report September 20, 2015		
1515 N. Courthouse Road, Floc Arlington, VA 22201-2909	r 8	Account number 8249865991 We've put together this report to help you understand your energy use and what you can do		
UNLE JOHNS JANE JOHNS 3434 WAVER APT. B SAN FRANCI P 1 -1 -1	x23-C191 - PH&H 732865 AUTO'S-DKHT 12345 CIN LEY ST SCO, CA 94131-1245 [d]h]h][b]b]h]mmn]]hmm]h]hmb]h	to save. Find a list of rebates and energy-saving product and services you can buy. ▶ www.utilityco.com/rebates		
Here's how y	ou compare to neight	oors		
Efficient neighbors	465 kWh	Great		
You	602 kWh	🙂 Good		
Average neighbors	648 kWh	Using more than average		
This is based on 87 similar home neighbors are the 20% who use to See back for details.	is within approx. 4 miles. Efficient he least amount of electricity.	29 [%] more electricity than efficient neighbors		
Neighbor compa	rison over time			
800				
600	000	Over the last 6 months, you used more than your efficient neighbors.		
800 600 400		Over the last 6 months, you used more than your efficient neighbors. \$282 extra cost		
800 600 400 200		Over the last 6 months, you used more than your efficient neighbors. \$282 extra cost		
800 600 400 200 0 KWh		Over the last 6 months, you used more than your efficient neighbors.		
800 600 400 200 0 XWh Feb Mar 60 Mar 60 Mar	Apr May Jun Jul	Over the last 6 months, you used more than your efficient neighbors.		
eoo 400 200 0 kWh Feb Mar 0 You • Average neighbor Tips from effic Raise your the Save up to \$20	Ar May Jun Jul • D'Efficient neighbors rimostat a few degrees in the per year	Over the last 6 months, you used more than your dificient heighbors. \$282 extra cost		

Report Back: The back of the report provides an in-depth look at the customer's energy use over time, contains utility contact information, and provides answers to frequently asked questions. The standard layout includes one large tip or marketing module. A layout option to include a second marketing module is available.

So far this year, you used 6	% less than la	ist year.					
800 600 200 0 kWh Jun Feb Mar Apr 2014 2015	Mey Ju	in Jul	Aug	Sep	Oct	Nov	Dec
Save on your next bill							
В	uy ENERGY S	TAR® appli	iances a	nd elect	ronics		
	he ENERGY STAR	label can be fo	ound on effi	icient mod	els of ma	any produ	cts.
a s	eruited models offi aan conventional m ave up to \$30 pe	en run more qu todels. Visit ww r year	iietly, last lo /w.energysl	nger, and tar.gov for	are more details.	convenie	nt to u
Frequently asked questions	ertified models offi	en run more qu todels. Visit ww r year We're here	ietly, last lo w.energyst	nger, and tar.gov for	are more details.	convenie	nt to u
Frequently asked questions Mara sWM Aldowst hou dWM is a wy to mesure electric	ertified models offi aan conventional m ave up to \$30 pe	en run more qu iodels. Visit ww r year We're here ▶ www.utility	ietly, last lo w.energyst e to help yco.com/re	nger, and tar.gov for eports	are more details.	convenie	nt to u
Frequently asked questions Marka twin Alkowst how (dW) is a way to messure electric to-write third work of the raw to the card. Marka twine (dW) is a way to messare electric to-write third transformed calded at	ernited models ofti an conventional m ave up to \$30 pe	en run more qui loodels. Visit www r year We're here > www.utility > reports@ut	e to help yco.com/re tilityco.cor	nger, and tar.gov for eports n	are more details.	convenie	nt to u
Frequently asked questions Frequently asked questions Frequently asked questions Marka unit Marka	ertined models offur an conventional in ave up to \$30 pe ity use. A lar size, building information at ing our state	We're here > www.utility > reports@ut > 1-888-888- Find more > www.utility	e to help yco.com/rr 8888 energy yco.com/r	nger, and tar.gov for eports n saving p rebates	are more details.	ses	nt to u
Set	ertime models of the and conventional in ave up to \$30 pe ity use. A the size, building information at	We're here > www.utility > reports@ut > tas88888 Find more > www.utility	e to help yco.com/rd lilityco.cor 8888 e energy yco.com/r	eports n saving p ebates	are more details.	ses	nt to u
The second se	etritios modoles otri ano conventicional ave up to \$30 pe hy use. A der sten building nformation at	en run more qu oodels. Visit ww r year We're herr > www.utility > reports@ut > 1-888-888- Find more > www.utility	e to help yco.com/r tilityco.cor 8888 energy yco.com/r	eports n saving p rebates	are more details.	ses	

Report Editions

During program launch, each customer is assigned to a report edition or experience. Typically, all customers in the program receive a similar report experience. In some instances, there may be multiple report experiences to which customer segments are assigned based on program goals. This allows for A/B testing and accommodates utilities that have both electric and gas customers. See Report Editions for more information.

Report Modules

Each section of a report is referred to as a module. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Because reports are dynamic, different modules can appear in each slot over time. Certain modules may be more relevant to customers at a specific time of year. Only a subset of available modules described will appear on any individual report. See "Report Modules" on page 16 for more information.

Report Layouts

Every report is delivered in a utility-branded envelope and has a particular layout containing "slots" in which modules are placed. Modules must be placed in the appropriately sized slot on the report. See "Report Layouts" on page 42 for more information.

Similar Homes Terminology

Depending on each utility's setup and configuration, customers may see "similar homes" terminology in the user interface instead of "neighbor comparison" terminology. Utilities can choose to use one type of terminology or the other based on how they think their customers will react to Oracle Utilities Opower products.

These variations are not extensive and only appear in a few places. If you are not sure which variation is used by your utility, check with your supervisor.

Report Tips

Home Energy Reports contain tips to help customers lower their energy use. Tips are selected from a library of energy saving recommendations crafted by Oracle Utilities Opower energy efficiency analysts and are approved by the utility during the launch of the program. These tips can be configured to include information on related utility programs when applicable. See "Intelligent Tip Targeting" on page 43 for more information about the tip selection process. You can also see the *Oracle Utilities Inside Opower Product Overview* to learn about tip content editing options that may be available to your utility.

Report Types

There are different types of reports based on the fuels that customers receive from their utility. The following report types are supported:

- Single Fuel Electric: Reports for customers who only have electricity. The energy units are displayed as kilowatt-hours (kWh).
- Single Fuel Natural Gas: Reports for customers who only have natural gas. The energy units are displayed as therms, CCF, or m³.
- Dual Fuel Electric and Natural Gas: Reports for customers who have both electricity and natural gas. The energy units are displayed using an Energy Index (units), which combines electricity usage (kWh) and natural gas usage (therms, CCF, or m³) into a single measurement.

The Energy Index used in Dual Fuel reports is a price-weighted index. Because electricity is usually more expensive per unit of energy than natural gas, Oracle Utilities adjusts for price before combining them into one unit. This keeps the proportional contributions to the overall combined unit roughly in line with customer expectations from their bills. The calculation uses electricity and gas sales numbers for the residential segment to arrive at the price-weighted index.

Report Editions

Customers receive multiple reports over a set period, and each report is part of a specific *report edition*. Report editions are report sequences that change dynamically over time to provide customers with a collection of <u>modules</u> focused on a theme, such as a seasonal change or joining the Oracle UtilitiesOpower program. The editions available include:

- Welcome Edition
- Progress Report Edition
- Summer Edition
- Winter Edition
- New Movers Edition
- Know It Show It
- Electric Vehicle Edition

For example, the <u>Winter Edition</u> contains modules, tips, and promotions focused on helping customers save energy in the winter months. Such report variations increase customer engagement by providing timely and relevant information to customers throughout the year.

Oracle Utilities and the utility decide how many print reports a customer receives throughout the year and which report editions they get.

Welcome Edition

The Welcome edition is a type of report that introduces customers to the Home Energy Report program. The report includes a welcome module below the header on the front page of the report. This module explains the program and provides information about its purpose so that customers are oriented to the program.

Example of a Welcome Edition



Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details about the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition. For information about module placement, see "Report Layouts" on page 42.

- Front Footer
- Header
- Investment Tip
- Marketing Modules
- Neighbor Comparison
- Personal Tracker
- Reminder Tips
- Utility Info

Progress Report Edition

The Progress Report edition is a sequence of reports focused on general energy efficiency and money saving goals. It is considered the default report edition, and it includes a normative comparison, historical energy use insights, tips, and promotions to help customers save energy.

Example of a Progress Report Edition

UtilityCo	Home Energy Report July 21, 2013 Account number 1000001	This billing period, you used 83% less than last billing period	1.
Alington, VA 22201-2909	We've put together this report to help you understand your energy use and what you can do to save.	6,000	
	Find a list of relates and energy-saving products and services you can buy.	4,000 2,000 0.W/h Bep Oct Nov Dec Jan Feb Mar	Apr May Jun Jul Aug
Here's how you compare to neigh	bors	Save on your next bill	
Total 0.02 km/h University 3.000 km/h Hange 5.300 km/h Jun 20, 2010 - Jul 21, 2013 5.300 km/h	Great Good Good Uang mon than average 74 ^{-%} tess electricity than efficient religibors	Lorem (psum dolor all a model of the state o	met sectetur adpiscing elit, sed do elusmod tempor genaliqua. Lit enim ad minim veniam, quis nostru ut. met
Neighbor comparison over time			
4.000	In the last 6 months, you used more than your neighbors. $2^{\frac{16}{3}}$ more electricity	Frequently asked questions We're h Wart's welf > wrws.op And memory tax contained on devicing (MM) and natural gings > 868-550 Now is my comparison calculated? > B68-550 Your way us compared to thome with a smiler lass, building type. Eind motion	ere to help www.com -0000 re energy saving purchases
2,000 0 KWh		and having register. Nou can view your hornow information at https://wilk.apower.com Why dase UBH / Company and these reports? When categories are empry, and closer to meeting our state energy efficiency gass. It good for everyone. More the last energies resume?	ower.com/rebates
Tips from efficient neighbors Lorem ipsum dolor sit amet Lorem ipsum dolo \$200 sit amet	Lorem ipsum dolor sit amet Lorem ipsum dolo \$200 eit amet	Car 889-465-000	UtilityCo
		A Printed on 10% cost-consumer enviried paper using water-based inter-	0 With Dataset & colds and and

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details about the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition. For information about module placement, see "Report Layouts" on page 42.

- Front Footer
- Header
- Investment Tip
- Marketing Modules
- Neighbor Comparison
- Neighbor Trend
- Personal Tracker
- Reminder Tips
- Utility Info

Summer Edition

The Summer Edition is a sequence of reports that provides customers with thematic insights and advice focused on saving energy during the summer months. Customers can receive normative comparisons about their cooling-related energy use, as well as static content about energy efficiency myths, ideal thermostat setpoints, and seasonally-relevant tips and program promotions.

Example of a Summer Edition



Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details about the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition. For information about module placement, see "Report Layouts" on page 42.

- Cooling Analysis Pie Chart
- <u>Cooling Neighbor Comparison</u>
- Front Footer
- Header
- Personal Tracker
- Reminder Tips
- Seasonal Myths Tip
- Seasonal Tip
- Thermostat Tip One Setting
- Thermostat Tip Three Settings
- Utility Info

Winter Edition

The Winter Edition is a sequence of reports that provides customers with thematic insights and advice focused on saving energy during the winter months. Customers can receive normative comparisons about their heating-related energy use, as well as static content about energy efficiency myths, ideal thermostat setpoints, and seasonally-relevant tips and program promotions.

Example of a Winter Edition

UtilityConstant Red. Park Market. National State Constant Market. State Constant State Constant Market State Constant State State Market State State State State State Market State	Writer Energy Report January 20, 2015 Account in nutrient 624/860591 We hap tayling the sport in he you can do be assessed on the sport of the sport of the sport of intelling and only products and services you can be also products and services and services you can be also products and services and s	How you use energy in the winter Heating 41%	You can lower your bills by heating your home efficiently. Your realing cost \$133 fast winter
Heating use: How do you compare	?	Winter heating myths	
236 KWh 154 KWh	You're using more than your neighbors to heat your home.	MYTH #1 "Who house will heat faster if I set my thermostat higher." Fact: Carsing the thermostat to warm up heats your hemo longer, not faster. Stick with an efficient, comfortable softwork in efficient.	MYTH 42 "Replacing my old, drafty windows in the best way to insulate my house." Fact Upgrading to energy-efficient windows will help roduce heat boss, but there are more cost-effective solutions. Ent correlates and on a black or active
Efficient Average Your neighbors neighbors heating Dec 20, 2015 - Jan 20, 2015 This is based on 67 similar homes when approx. 4 miles. Efficient neighbors are the	\$82 extra heating cost	How to heat your home efficiently: Set your thermos you leave, lower the temperature 10-15 degrees to avoit	insulation. tat to a constant temperature, such as 68%. When d wasting heat.
0% while its feasibility details to detail. Avoid high winter bills 680° @ 680° @	National of Energy encommands 60°F area of saving and conduct, choose 60°F when you're and howeing the temperature live degrees helps you	Frequently ackled questions water and the second se	We're here to help > wexualityco.com/sports > reportsbuilityco.com > data data data Find more energy saving purchases > wexualityco.com/rebates
	· · · · · · · · · · · · · · · · · · ·	How do I stop receiving reports? Cal 1:000-999-9999.	
Feeling chilly? Try wearing an extra sweater and slippped Dressing for winter can help you keep you thermostal at an efficient and comfortable temperature.			UtilityCo

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details about the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition. For information about module placement, see "Report Layouts" on page 42.

- Front Footer
- Header
- Neighbor Comparison
- Personal Tracker
- Reminder Tips
- Seasonal Myths Tip
- Seasonal Tip
- Thermostat Tip One Setting

- <u>Thermostat Tip Three Settings</u>
- Utility Info

New Movers Edition

The New Movers edition is a type of report that provides thematic insights and advice for customers who have recently moved into a new home in a utility's service territory. The report includes static marketing messages, program promotions, and tips. Customers can use these features to understand the report program, learn about their energy use patterns, and make their new home more efficient.

Example of a New Movers Edition

VICTOR CONTRACTOR CONT	Home Energy Report April 21, 2015 Account number 8249865091 We're og together thin report to help you to anne. Fred a lation of heletas and energy saving products and annöres you can hoy, • www.etility.cs.com/vetuales	Save on your next bill Figure 100 BIERRYSTAR BIERRYSTAR BIERRYSTAR	2Y 57AR-9 appliances and electrotics garthood (2 Dong) table the diffusion of hospitolic graphics and an theories and the DEF2Y ARIA fact. The program searce Areast mittors of date over your (27X) table can be haved on diffusion models) of many products. Sector and the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the date of the sector of the sector of the sector of the sector of the date of the sector of the date of the sector of the sect
Welcome to the Home Energy	av Report program	Learn more about your report	
	we have, new chance to save cognituation on your movel Start saving amergy and money in your we have with these inclusion to a dyna or time tools. Unit get customical imports the include: they are energy access and the same with highbors Tigs for control and airs get where dyna programs or man it www.tigs.com.havings to access your tools, and read on to an its during to access the same.	Get to the Westware The monit is Go to your	Low your neighbor comparison you how you can concern with home that are nor yours. These shares similar climate, size, and had type. Iomailate you give as in your home profile, the more accanate your with be.
Here's how you compare to neighbo	vrs		
Houre 465 kWh 465 kWh 602 kW	You're using more than your neighbors.	Frequently asked questions What a kWM A klowath our (MMt) is a way to measure electricity use. A 100-wait sightab uses 1 kMt every 10 hours.	Wo're here to help > www.utilityco.com/reports > reports@utilityco.com
You 64 March 21, 2015 - April 21, 2015 Touhr compared with 10 homes while find of you that are a sinfar site 10% of the group. See back for data.	8 We more energy than average neighbors	How is my comparison calculated? There existing uses a comparison calculated? There exists and the second second second second second second second layous contractive results. Why is may diffy used by meriting use that contract Why is may diffy used by meriting use of the down to meeting our diffee energy efforting gains. It is good the energy exist How on the second second second second second second second energy efforting gains. It is good the energy exist 1.1 How on the second seco	► 1-886-886 8888 Find more energy saving purchases ► www.utilityco.com/rebates
Tips from efficient neighbors		Car 1-800 999-9999.	
Unplug electronics when they're not in u Save up to \$75 per year	Replace your inefficient light bulbs Save up to \$30 over the bulb life		UtilityCo
	Turn over →	O Printed on 10% post-consumer recycled paper using water-	cased inka. © 2018 - 2015 Optiver. All rights reserved
18586657-UTUTVCO-20141136-186-0/TUTVCO_000_N/0_STDI-(58N_0000_NO_N	5897)-51A4DARD-1-2-0577 1188-24-05-6008516-001-000862		

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details about the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition. For information about module placement, see "Report Layouts" on page 42.

- Front Footer
- Header
- Investment Tip
- Marketing Modules
- Neighbor Comparison

- Neighbor Trend
- Personal Tracker
- Reminder Tips
- Utility Info

Know It Show It Edition

The Know It Show It edition is a set of reports sent to customers to encourage them to provide their home attributes by completing the What Uses Most Audit in the Energy Efficiency Web Portal or the Home Energy Analysis in the Digital Self Service Energy Efficiency Web Portal If the customer completes their audit during the course of the campaign, the final report will provide them with a summary of how their Home Energy Report is more accurate due to the home attributes that they provided.

Example of a pre-audit report:



Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details on the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition.

- Front Footer
- Header
- Investment Tip
- Marketing Module
- Neighbor Comparison
- Pre-Audit Home Profile
- Post-Audit Home Profile
- Utility Info

Electric Vehicle Edition

The Electric Vehicle Edition is a sequence of reports that provides personalized and relevant information about electric vehicles. The report considers the impact of customer electric vehicle use on customers' overall energy usage, and incorporate additional insights and tips related to electric vehicle ownership.





You're part of a clean-energy future!

Driving an electric vehicle goes a long way

Even though your home energy use has gone up from charging your EV, you've left the higher cost of gas-powered driving behind and lowered your carbon footprint.

Edition Modules

The modules included in the electric vehicle edition change over time as customers become accustomed to the report.

First Report

The first report is designed to welcome the customer to the electric vehicle report program and introduce them to how the report is customized to their user experiences. The first report experience includes the following modules:

- Electric Vehicle Welcome Message
- Electric Vehicle Neighbor Comparison
- Electric Vehicle Breakout
- Electric Vehicle Detection and Disaggregation Explanation
- Investment Tip

Second Report

- Electric Vehicle Neighbor Comparison
- Electric Vehicle Breakout
- Electric Vehicle Detection and Disaggregation Explanation
- Personal Tracker (default) or Data Module
- Electric Vehicle Feel Good

Third Report and Beyond

- Electric Vehicle Neighbor Comparison
- Electric Vehicle Breakout
- Reminder Tips
- Personal Tracker (default) or Data Module
- Electric Vehicle Feel Good

Report Modules

All reports consist of modules. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Report modules can be complex, providing dynamic information about a customer's energy use, or simple, containing a static image and hyperlinks. See each module description for details, or go to "Report Layouts" on page 42 for more information about how modules are organized into slots.

Cooling Analysis Pie Chart

The Cooling Analysis Pie Chart displays the customer's estimated cooling usage last season as a percentage of their total energy consumption. Its purpose is to help customers better understand how they use energy during the cooling season. A brief message indicates their estimated cooling costs. If the customer used less than \$10 in cooling last summer or does not have any costs associated with their usage reads from the previous summer, the total cooling cost will not be shown.



Pie Chart: The pie chart highlights the estimated proportion of the customer's total energy consumption that is attributed to cooling during the past summer. The definition of which months fall in the season are configured for each utility. The default threshold for the cooling percentage is 5%. The module will not display if this threshold is not met.

Insight: The pie chart is paired with an energy efficiency insight and a cost insight.

- Energy Efficiency Insight: All customers receive an energy efficiency insight, which says that they can lower their bills by cooling their home more efficiently.
- Cost Insight: If a customer's total estimated cooling costs are more than \$10, they will also see the estimated amount of money they spent on cooling last summer. However, if this \$10 threshold is not met, the cost insight from last summer will be hidden.

Comparison Information: This section appears below the bar chart and identifies the date range of the data. There is also a brief statement to indicate what data is used to generate the insights, and to assure customers that the information is fair and reliable.

Fuel: Electric-only and dual fuel

AMI Data Required: No

Data History:

- At least 12 bills in last 18 months or at least 6 bills with positive Cooling Degree Days and 6 bills with negative Heating Degree Days.
- Usage data from last summer

Billing Frequency: Monthly or bi-monthly

Cooling Neighbor Comparison

The Cooling Neighbor Comparison compares the customer's estimated cooling usage last cooling season ("Your cooling") to two groups: "Efficient Neighbors" and "Average Neighbors." Its purpose is to encourage energy efficient behavior before or during the upcoming summer. If no bills within the date range have costs associated with them, the module's insight statement will fall back to describing the percent difference between the customer's cooling usage and the cooling usage of the comparison group. Since the first report of the summer would reflect low usage, the comparison from last summer's energy usage and weather data is more likely to motivate customers and set the context for the coming months.



Cooling use: How do you compare?

The results are displayed in a vertical bar graph. An evaluative section on the right indicates whether the customer falls in one of three states: "Great," "Good," or "Using more than average." A brief message indicates how the customer compares to their efficient neighbors. "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. An informational section below the bar graph provides details about the module information. The comparison is always shown in kWh since electricity is the predominant way that customers cool their homes.

This module includes many of the same elements as the Neighbor Comparison module. See "Neighbor Comparison" on page 31.for detailed descriptions of each element.

Fuel: Electric-only and dual fuel

AMI Data Required: No

Data History:

- At least 12 bills in last 18 months or at least 6 bills with positive Cooling Degree Days (CDD) and 6 bills with negative Heating Degree Days (HDD)
- Usage data from last summer

Billing Frequency: Monthly or bi-monthly

Daily Peak

The Daily Peak module displays a customer's average daily peak usage for the last month, so that customers can see which hours of the day they are using the most energy. The module includes one graph that shows peak use on the weekdays and another that shows use on the weekends. The messaging indicates if the customer has one peak, two peaks, or no peaks. If customers receive a monthly bill, the month covers the entire billing period. If customers receive bills on a bi-monthly or quarterly basis, then the last 30 days of the billing period is considered the last month. If customers have access to the Energy Efficiency Web Portal, a message and URL are included to drive them to the web.



Bar Charts: The module includes two bar charts that show the customer's average electricity consumption for each hour of the day. One bar chart shows the hourly energy use on weekdays and the other shows use on weekends. Two charts are provided since customers usually consume energy differently during the week than on weekends.

Insight Statement: An insight statement appears below each bar chart to summarize the customer's peak usage. The messaging indicates if the customer uses the most energy in the morning, afternoon, evening, or night.

Graph and Insight Statement Variations: Different components of the daily peak module– such as the messaging and highlights in the bar chart–can take on different states depending on the customer's usage patterns. For example, if the chart shows a single peak in the morning, the message will say the customer is a morning user. If the chart shows more than two peaks in the day, the message will say the customer is a day user.

Fuel: Electric-only and dual fuel

AMI Data Required: Yes

Data History: Minimum of 200 non-zero hourly data points from the appropriate 30-day period

Billing Frequency: Monthly, bi-monthly, or quarterly

Electric Vehicle Breakout

The electric vehicle breakout module provides customers with a more detailed look at how their electric vehicle charging impacts their energy as single bar-chart. The chart explains and visualizes how a customer's electric vehicle charging impacts their overall energy use and encourages them to save energy.

How EV charging at home affects energy use	
590 units	Charging your EV at home used about 153 units
153 units	
General home energy use /// EV charging at home	
Jul 7, 2019 - Aug 9, 2019	

- Insight: The heading reminds customers that their electric vehicle changing impacts their overall energy use and prepares them for a more detailed view of their electric vehicle use.
- Horizontal bar: The horizontal bar provides an isolated view of the customer's usage. The bar indicates three usage states: total usage, general home energy usage, and electric vehicle usage. The bar matches the data presented in the <u>Electric Vehicle</u> <u>Neighbor Comparison</u>.

Normative Messaging/Insight: A box to the right of the horizontal bar contains a brief message indicating how much of the customer's usage was EV charging. For example, "Charging your EV at home used about 153 kWh."

Detection and Disaggregation Disclaimer - Third report and beyond (not depicted): From the third report onward, the module includes a short detection and disaggregation disclaimer that describes the data sources used to create the electric vehicle usage estimate. For example, "We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves." In the first two reports, this information appears as the EV Detection and Dissagregation module.

Fuel: Electric-only and dual fuel.

AMI Data Required: Hourly AMI and Appliance Detection and Disaggregation,

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Electric Vehicle Detection and Disaggregation Explanation

The electric vehicle detection and disaggregation explanation module describes how electric vehicle usage is calculated in the electric vehicle edition of the report. This information appears as a distinct module for the first two reports. From the third report onward, this information appears as part of the breakout module.

How is your EV charging calculated?

This estimate combines your home's details with energy use data from your smart meter. These estimates will improve as the technology evolves.



- Heading: The heading draws the customer's attention to how their charging is calculated.
- Explanation: The explanation includes a short disclaimer that describes the data sources used to create the electric vehicle usage estimate, and tells the customer that the estimates become more accurate over time.

Fuel: Electric and dual fuel.

AMI Data Required: Hourly AMI, and Appliance Detection and Disaggregation.

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Feel Good

The electric vehicle feel good module is a static message that reminds customers of the positive impact of their electric vehicle use despite higher home energy use. This module appears in every electric vehicle edition Home Energy Report v2. In the first report, the module aims to deliver a reassuring "feel good" message to electric vehicle drivers who have seen a significant uptick in energy use from charging an electric vehicle at home. After the second report, this module slot can be replaced with utility-specific content or marketing modules.

You're part of a clean-energy future!

Driving an electric vehicle goes a long way

Even though your home energy use has gone up from charging your EV, you've left the higher cost of gas-powered driving behind and lowered your carbon footprint.

Most EVs refuel for as little as a dollar per equivalent of gasoline. Plus, EV owners avoid most of the repetitive costs of maintaining a car engine.

So, charge up, feel good, and go!

- Heading: The module heading is positive and supportive of the customer's electric vehicle use.
- Feel good message: The module message includes a reminder that while the electric vehicle customer's home energy use may be higher than it used to be, they are making a positive impact on their overall energy use.

Fuel: Electric and dual fuel.

AMI Data Required: Hourly AMI, and Appliance Detection and Disaggregation.

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Neighbor Comparison

The Neighbor Comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors. It compares the customer ("You") to two groups: "Efficient Neighbors" and "Average Neighbors." The results are displayed in a horizontal bar graph. The "You" bar displays general home use and indicates what percentage of the home use was due to electric vehicle charging. A brief message indicates how the customer compares to their efficient neighbors. "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. An informational section below the bar graph provides details about the module information.



Note: This module may use "similar homes" language instead of "neighbor comparison" language. See <u>Similar Homes Terminology</u> for more information.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically, the bar with the smallest value is on top and the bar with the largest value is on the bottom.

• You: This bar indicates how the customer is doing. The bar displays general home use and indicates what percentage of the home use was due to electric vehicle charging.

- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value—the 20th percentile neighbor—is used to determine the efficient neighbors value. Efficient neighbors are not chosen in advance.

Normative Message / Insight Statement: The normative message appears below and to the right of the bar chart and provides an insight (for example, "29% more electricity than efficient neighbors") about why the bar chart appears the way it does. Specifically, it displays a percentage for either how much more or less the customer used compared to their "efficient neighbors," or how much more or less the customer used compared to "neighbors" (that is, all neighbors, including efficient neighbors).

Neighbors or Similar Homes Description: The neighbor comparison module in reports displays a neighbor description that summarizes the characteristics of the neighbors that the customer is being compared to. This information helps assure customers that the comparison is fair and accurate. The information is dynamic and varies automatically based on how the customer's neighbors were selected. One or more of the following elements may be included:

 Number of Neighbors: The actual number of neighbors the customer is compared against. The number of neighbors is targeted at 100, but if not enough qualified neighbors exist a smaller number may be used. Reports are only generated for households with a minimum number of qualified neighbors.

Note: Neighbors are defined by site rather than by occupant. For example, if an occupant of a neighbor home relocates over the course of the program and another resident moves in, the comparison will subsequently be to the new occupant of the same home. Neighbor sites are nearby homes that have characteristics that typically lead to similar energy needs such as home size, heating source, and weather. They only include homes that appear to be occupied at the time of the comparison. Note that they are not necessarily homes on the same street.

 Proximity: The geographic proximity of the neighbors' homes. This number is rounded to the nearest whole unit to simplify the information and to assure customers that they are being compared against homes that are nearby.

- Home Size: The average home square footage.
- Heat Type: The heating type of the neighbors, such as gas or electric heating.

Customer Bill Alignment: Occasionally, the customer's previous bills do not coincide exactly in time with the previous bills of the customer's neighbors. In order to arrive at the neighbor averages, it is necessary to align the neighbor energy use amounts with the customer's energy use amounts. In these scenarios, the application pro-rates, or "time-shifts," the neighbor bills to align with the customer bills by determining and adjusting for the amount of overlap. The time-shifted neighbor bills are then used to determine the neighbor averages.

Fuel: Electric-only and dual fuel.

AMI Data Required: Hourly AMI and Appliance Detection and Disaggregation.

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly.

Electric Vehicle Welcome Message

The Electric Vehicle Welcome Message is included in the first Electric Vehicle Home Energy Reports. It appears at the top of the report and introduces customers to the Electric Vehicle program. This module explains the program and provides information about its purpose so that customers are oriented to the program.

Thank you for driving an electric vehicle



Here's a special report made for EV drivers like you

Starting today, you'll receive a report every few months showing how charging your electric vehicle (EV) impacts your energy bill. We'll also include personalized tips for energy efficiency, so you can reduce your use in other areas.

Enjoy your new report!

Fuel: Electric and dual fuel.

AMI Data Required: Hourly AMI and Appliance Detection and Disaggregation.

Data History: N/A.

Billing Frequency: N/A.

Front Footer

The front footer is included at the bottom of the front page of the report and contains a message and an arrow icon, prompting users to turn over the report. This module appears in all Home Energy Reports. The front footer is different than the <u>Utility Info</u> module, which appears in the footer on the back of the report.

Header

The report header is composed of a report image (logo), customer address block, and Johnson Box.

Logo: The logo appears in the top-left corner of the front page of the report, and the utility's address appears underneath it. The logo also appears in the lower-right corner of the report back in the "Utility Info" on page 41 module.

Customer Address Report Block: The customer address always appears in the top-left corner of the report, in the space beneath the logo and utility's address. This is the proper space for it to display in the envelope window. The report template has a blank area set aside for the address to be stamped on by the print vendor.

Johnson Box: The Johnson Box is the section that appears in the top-right corner of the front page of the report. The top of the Johnson Box includes the report title. The standard title is "Home Energy Report." Other elements include the report date, account number, and so on.

- Report Date: The report date indicates the end date of the most recent billing period covered in the report. The goal is to inform the customer of the latest date for which we have data. This date does not correspond to the actual date that the report was generated.
- Account Number: The account number is unique to each customer and should match the number they see on their utility bill.
- Service Location: The Service Location field displays the service address for which the report applies. This helps customers who receive reports for multiple service addresses distinguish between their reports. The Service Location field is displayed on all reports, including for customers who do not have multiple service locations.
- Introductory Paragraph: The introductory paragraph explains to customers what the report is and why it is being provided to customers.
- Web Portal URL: At the bottom of the Johnson Box, a brief paragraph introduces a website address associated with the Home Energy Report program. If the utility does not provide a Web Portal or web tool to customers, this section may be removed.
- Report Edition Variations: There may be minor variations in the Johnson Box depending on which report edition is being used. For example, a small text alert and illustration may appear at the bottom of the Johnson Box to orient the customer to the transition or to highlight a specific report edition's theme, such as summer or winter. See Report Editions for more information.

Fuel: N/A

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Heating Analysis Pie Chart

The Heating Analysis Pie Chart displays the customer's estimated heating-related energy consumption from last season as a percentage of their total energy consumption. It is paired with a brief message that indicates their estimated heating costs. The goal of this module is to help customers better understand how they use energy during the hearing season.



Fuel Type: Electric-only, gas-only, and dual fuel

AMI Data Required: N/A.

Data History:

- At least 12 bills in the last 18 months or at least 6 bills with negative Cooling Degree Days and 6 bills with positive Heating Degree Days.
- Usage data from the previous winter is required.

Billing Frequency: Monthly, bimonthly.

Heating Neighbor Comparison

The Heating Neighbor Comparison module shows the customer's estimated heating usage from last winter compared to that of their "Efficient Neighbors" and "Average Neighbors." The purpose of this module is to encourage energy efficiency behavior leading up to and during the winter season. The heating usage is calculated based on energy use and weather data from the previous winter. The data is displayed in a vertical bar graph and is paired with an insight about how the customer compared to their neighbors.

Heating use: How do you compare?

Module Title: The title focuses on a neighbor comparison specifically related to heating energy use.

Bar Chart: The bar chart shows how much energy the customer used on average to heat or cool their home during a given season, and then compares this amount to that of their neighbors from the same season. The color of the "Your <heating/cooling>" bar matches the color of the "You" bar in the neighbor comparison. The order of the bars is from lowest to highest usage.

You: This bar indicates how the customer is doing.

Average Neighbors: This bar indicates how all the customer's neighbors are doing.

Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. It is green because green is the color commonly associated with energy efficiency. Note that the efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value of the 20th percentile neighbor is used to determine the efficient neighbors value.

Comparison Icons: This graphic highlights whether the customer is doing "Great," "Good," or "Using more than average," which represents a summary of the five different states of the normative message. There are different states for this graphic depending on various factors, including a different icon and text for when the customer is using more than their neighbors. See Neighbor Comparison States below for more information.

Normative Message: The normative message appears to the right of the bar chart and provides an insight about why the bar chart appears the way it does. Specifically, it displays the estimated dollar amount for either how much more or less the customer used compared to their "efficient neighbors" or how much more or less the customer used compared to all neighbors, including efficient neighbors.

Comparison Information: This section appears below the bar chart and identifies the date range of the data and the characteristics of the neighbors used in the comparison. This section includes the following:

- The customer's actual number of neighbors (usually 100, but does not need to be)
- The geographic proximity of the neighbors' homes

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History

- At least 12 bills in the last 18 months or at least 6 bills with negative Cooling Degree Days and 6 bills with positive Heating Degree Days.
- Usage data from the previous winter is required.

Billing Frequency: Monthly or bi-monthly.

Investment Tip

The Investment Tip module displays an energy saving tip that may require an investment of time or money from the customer to implement. The tip content contains actionable information, links to resources, and an estimate of how much money the customer could save by taking the suggested action.

lace your old refrigerator

Save on your next bill



iopiaco you ola ionigorato.
four refrigerator is on 24 hours a day, seven days a week. As a result, it uses more lectricity than any other appliance.
fou could save up to 40% on your refrigerator's energy costs when you replace a nodel manufactured before the year 2001 with an efficient ENERGY STAR [®] unit.
Remember that models with a freezer on the top are generally more efficient than ide-by-side models.
Save up to \$45 per year

Placement: This module is usually placed on the back of the report. For more information about module placement, see "Report Layouts" on page 42.

Module Title: The module title typically uses language that is focused on the future to encourage the customer to take action that will save money or energy in the long term.

Tip Content: The tip contains an illustration relevant to the tip and sections of text describing an investment the customer can take to save energy in the future. A savings statement is included at the bottom of the content. The tip is personalized using <u>Intelligent Tip Targeting</u>, which means they are automatically selected and prioritized based on each individual customer's attributes.

Program Promotion: Utilities may opt to include a program promotion field in the tip module. The program promotion field contains custom content that can inform customers if a tip is related to a utility program or rebate offer. The content usually provides information about what is required to take advantage of the promotion, and includes a link to a utility URL where customers can find more information. Fuel: N/A AMI Data Required: N/A Data History: N/A Billing Frequency: N/A

Last Winter Neighbor Comparison

The Last Winter neighbor comparison shows the customer's energy use during the previous year's winter, and compares their energy use to that of their neighbors. It is the primary normative comparison for gas-only and electric customers who are receiving their first report of the winter. This module is useful because the standard neighbor comparison is not as compelling at the start of winter when gas consumption is typically very low. A last winter comparison therefore has a higher likelihood of motivating customers to do better in the months ahead.

Here's how you compare to neighbors



Bar Chart: The bar chart displays how much energy each group in the comparison used.

- You: Indicates how the customer is doing.
- All Neighbors: This bar indicates how all the customer's neighbors are doing.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors.

Comparison Information: This section appears below the bar chart and identifies the characteristics of the neighbors used in the comparison.

Normative Message / Insight Statement: The normative message appears next to the graph and provides an insight about why the graph appears the way it does. This message highlights whether the customer did "Great," "Good," or used more than average compared to All neighbors or Efficient neighbors from last winter.

Fuel: Electric, gas-only.

AMI Data Required: N/A.

Data History: Last winter's data.

Billing Frequency: Monthly, bi-monthly, quarterly.

Marketing Modules

Marketing modules contain content designed to highlight a particular business initiative or energy savings program, such as rebates, special offers, and advertisements. These modules come in two sizes, small and large, that provide utilities with robust marketing options on both the front and back of the report. The modules follow the principle of native advertising so that they fit seamlessly into the report. The modules are selected from a library of content that has been tested to optimize conversions and satisfaction. Utilities can make small edits to text and visuals. Additionally, the modules can be customized to be utilityspecific (such as a utility-specific home audit). The images and text are developed by Oracle Utilities in coordination with the utility.

Small Module

Small marketing messages are used to promote a particular energy savings program or product. For example, they have been used to promote rebates and recycling programs. They may also be used to promote an Oracle Utilities Opower product, such as the web portal or Email Home Energy Reports.



Large Module

Large marketing messages are used to promote a particular energy savings program or product. For example, they have been used to promote rebates, special utility offers, and recycling programs. The images and text are developed by Client Design in coordination with the utility.



Common Content and Templates: The content within the modules may be used to promote a utility-specific or Oracle Utilities-specific product or program. For example, the content may include a program or product name, a program or product process, a rebate or payment, the monetary value of projected savings, a call to action (URL, phone number, or both), and any required language (including legal language). There are also different layout templates available that follow the native design theme of the product. The layout templates support most use cases and are flexible to support different kinds of messaging.

Fuel: N/A

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Neighbor Comparison

The Neighbor Comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors. It compares the customer ("You") to two groups: "Efficient Neighbors" and "Average Neighbors." The results are displayed in a horizontal bar graph. An insight statement on the right indicates whether the customer falls in one of three states: "Great," "Good," or "Using more than average." A brief message indicates how the customer compares to their efficient neighbors. "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. An informational section below the bar graph provides details about the module information.

Here's how you compare to neighbors



Note: This module may use "similar homes" language instead of "neighbor comparison" language. See Similar Homes Terminology for more information.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically the bar with the smallest value is on top and the bar with the largest value is on the bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.

Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value—the 20th percentile neighbor—is used to determine the efficient neighbors value. Efficient neighbors are not chosen in advance.

Normative Message / Insight Statement: The normative message appears below and to the right of the bar chart and provides an insight (for example, "29% more electricity than efficient neighbors") about why the bar chart appears the way it does. Specifically, it displays a percentage for either how much more or less the customer used compared to their "efficient neighbors," or how much more or less the customer used compared to "neighbors" (that is, all neighbors, including efficient neighbors).

Neighbors or Similar Homes Description: The neighbor comparison module in reports displays a neighbor description that summarizes the characteristics of the neighbors that the customer is being compared to. This information helps assure customers that the comparison is fair and accurate. The information is dynamic and varies automatically based on how the customer's neighbors were selected. One or more of the following elements may be included:

Number of Neighbors: The actual number of neighbors the customer is compared against. The number of neighbors is targeted at 100, but if not enough qualified neighbors exist a smaller number may be used. Reports are only generated for households with a minimum number of qualified neighbors.

Note: Neighbors are defined by site rather than by occupant. For example, if an occupant of a neighbor home relocates over the course of the program and another resident moves in, the comparison will subsequently be to the new occupant of the same home. Neighbor sites are nearby homes that have characteristics that typically lead to similar energy needs such as home size, heating source, and weather. They only include homes that appear to be occupied at the time of the comparison. Note that they are not necessarily homes on the same street.

- Proximity: The geographic proximity of the neighbors' homes. This number is rounded to the nearest whole unit to simplify the information and to assure customers that they are being compared against homes that are nearby.
- Home Size: The average home square footage.
- Heat Type: The heating type of the neighbors, such as gas or electric heating.

Customer Bill Alignment: Occasionally, the customer's previous bills do not coincide exactly in time with the previous bills of the customer's neighbors. In order to arrive at the neighbor averages, it is necessary to align the neighbor energy use amounts with the customer's energy use amounts. In these scenarios, the application pro-rates, or "time-shifts," the neighbor bills to align with the customer bills by determining and adjusting for the amount of overlap. The time-shifted neighbor bills are then used to determine the neighbor averages.

Variations: Gas-only and dual fuel customers see a variation in the units of energy displayed in the Neighbor Comparison module. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel customers. Furthermore, gas-only and dual fuel customers see a variation in the wording of the insight statement. The word "electricity" is replaced by "natural gas" for gas-only customers and "energy" for dual fuel customers.

Fuel: Electric-only, gas-only, and dual fuel

AMI Data Required: No

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Neighbor Trend

The Neighbor Trend compares the customer ("You") to two groups: "Efficient Neighbors" and "Average Neighbors." The module displays data from up to a maximum of six historical bills on a line graph, with one line each for "You," "Efficient Neighbors," and "Average Neighbors." An evaluative statement compares the customer to one of the other neighbor groups for the period displayed in the chart. If the customer does not have any cost data for the period covered by the module, the normative message focuses on differences in usage instead of cost.

Line Chart: The line chart plots the customer's energy use data points and those of their neighbors on an x- and y-axis. The colors of the lines match the colors of the bars in the <u>Neighbor Comparison</u> module. The information is broken down into months instead of billing periods because customers are more accustomed to thinking of their usage in terms of calendar months. A maximum of six bills or 12 months of data is shown in the chart, regardless of frequency (monthly, bi-monthly, or quarterly).

Normative Message / Insight Statement: The normative message has a performance message and a percentage difference message.

- Performance Message: The performance message (for example, "In the last 6 months, you used less than your efficient neighbors") indicates whether the customer is using more or less electricity compared to their neighbors.
- Percentage Difference Message: The percentage difference message (for example, "X% less electricity" or "X% more electricity") indicates how much more or less electricity
the customer used, depending on how well they are doing compared to the two neighbor groups.

Variations: For gas-only customers, the electricity unit "kWh" is replaced by "therms" for gasonly customers. For dual fuel customers, two line charts (one for electricity and one for gas) are displayed in the module side by side. The information displayed in these charts is similar to the information displayed for single fuel customers. The evaluative statement appears at the bottom of the module instead of to the right as in the single fuel modules.

Fuel: Electric-only, gas-only, and dual fuel

AMI Data Required: No

Data History: A minimum of three historical bills

Billing Frequency: Monthly, bi-monthly, or quarterly

Personal Tracker

The Personal Tracker provides a historical view of the customer's energy use-to-date with the goal of comparing the current year to the previous year. The Personal Tracker can show as few as three historical bills or as many as two years of historical bills. A message appears above the chart comparing the customer's recent use to their historical use. Gas-only and dual fuel customers see a variation in the units of energy displayed. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel customers.



Insight Statement: An insight message displays above the chart to explain the customer's energy use. The message varies depending on how much data is available. For example, if less than 13 bills are available for the customer, but at least three bills are available, the message compares energy use in the current bill period to that of the previous bill period (as opposed to energy use from the same bill period in the previous *year*).

Bar Chart: The bar chart displays the customer's bills over time and provides a comparison to previous energy use if enough data is available. When 13 or more historical bills are available, a double bar chart compares the customer's energy use on each bill in the current year to their energy use on each corresponding bill from the previous year. If less than 13

bills are available, but at least three bills are available, a bar chart shows the customer's energy use on each available bill.

Negative Usage or Missing Bills: In cases where there is negative energy use or a bill is missing, an asterisk appears next to the corresponding y-axis label, and a message at the bottom of the module explains the possible reasons for the missing data. In the image below, there was negative energy use for the May 17th bill in the current year, and a comparable bill for February of 2016 could not be found.

Fuel: Electric-only, gas-only, and dual fuel

AMI Data Required: No

Data History: A minimum of three historical bills

Billing Frequency: Monthly, bi-monthly, or quarterly

Pre-Audit Home Profile

The Pre-Audit Home Profile can be included in Home Energy Reports for a customer who has not yet completed the <u>Home Energy Analysis</u>. It is designed to show customers which of their home attributes are unknown, and to encourage them to provide these attributes to receive a more personalized report.



Fuel: Electric-only, gas-only, and dual fuel

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Post-Audit Home Profile

The Post-Audit Home Profile can be included on the next Home Energy Report a customer receives after completing the <u>Home Energy Analysis</u> in the Energy Efficiency Web Portal. It introduces customers to their more personalized report by providing a summary of their responses to the audit, and informing customers that both their report and tips have been updated based on their home attributes.

Title and Explanation: The title seeks to capture customers' attention with a focus on how they have improved their reports. A brief explanation appears below the title to reiterate the benefits of having updated the home profile. The messaging is aimed at encouraging customers to use their reports to save energy.

List of Attributes: The module includes a list of all the home attributes. Each attribute that is known for the customer has a green check next to it, and each unknown attribute has a grey question mark logo next to it. Information about which attributes are known and unknown is derived from the customer's responses to the Home Energy Analysis.

Percent Complete Wheel: A wheel shows the percentage of the customer's home profile that is completed. For example, if 75% of all home attributes are known for the customer, then 75% of the wheel would be colored in and the text "75% complete" would appear in the center of the wheel.

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History: N/A.

Billing Frequency: N/A.

Reminder Tips

The Reminder Tips module contains tips customers can follow to reduce their energy use. Two actionable energy saving tips are displayed side-by-side in the module. The tips are comprised of an icon related to the tip, a suggested action the customer can take to save energy, and an estimate of how much money the customer could save by taking the suggested action.

Tips from efficient neighbors

Unplug electronics when they're not in use Save up to \$75 per year

Replace your inefficient light bulbs Save up to \$30 over the bulb life

Placement: This module only appears on the front of the report in the slot designed for this module. For more information about module placement, see "Report Layouts" on page 42.

Module Title: The module title emphasizes that the tips are commonly used by energy efficient households, and are a reliable way of saving energy in the long term.

Tip Content: Each tip contains an illustration relevant to the tip and a small section of text describing an action the customer can take to save energy. Savings statements are included at the bottom of each tip. The tips are personalized using <u>Intelligent Tip Targeting</u>, which means they are automatically selected and prioritized based on each customer's attributes.

Fuel: N/A

AMI Data Required: N/A Data History: N/A Billing Frequency: N/A

Seasonal Myths Tip

with.

The Seasonal Myths Tip module contains seasonally relevant myths and facts that educate the customer about the best way to save energy while maintaining comfort. The module is comprised of a title, two myths (each with an accompanying illustration and fact that dispels the myth), and a tip across the bottom giving the customer actionable information.

Summer AC myths



MYTH #1 "My house cools faster if I set my thermostat to a lower temperature." Fact: A lower temperature doesn't cool your house faster—it only cools your house longer. It's best to stick with an efficient setting that you're comfortable MYTH #2 "It's more efficient to keep my AC on all day. Switching it on and off uses extra energy." Fact: It's actually more efficient to turn your AC off when you leave. Keeping it on all day wastes energy and can wear out your AC unit.

How to use your AC efficiently: Set your thermostat to a constant temperature, such as 78°F. When you leave, turn off your AC or raise the temperature 10-15 degrees.

Placement: This module is usually placed on the back of the report. For more information about module placement, see "Report Layouts" on page 42.

Module Title: The default module title uses language that is focused on energy myths in order to engage customer interest.

Tip Content: The tip module presents to the customer seasonally relevant myths and facts that educate the customer about the best way to save energy while maintaining comfort. The module is comprised of a title, two myths (each with an accompanying illustration and fact that dispels the myth), and a tip across the bottom giving the customer actionable information to balance savings and comfort in their home.

Fuel: N/A

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Seasonal Tip

The Seasonal Tip module displays a seasonally relevant, actionable energy savings tip. The tip is comprised of illustrations related to the tip and a suggested action the customer can take to save energy.

Feeling too warm? Use fans along with your AC. Fans use much less energy than ACs and make you feel 3-5 degrees cooler.



Placement: This module can only be placed on the front of the report in the slot designed for this module. For more information about module placement, see "Report Layouts" on page 42.

Title: The module title uses language that is actionable and pertinent to the season.

Tip Content: The module contains a combination of text and illustrations that are consistent with the tip's seasonal theme.

- **Tip Icon**: A green icon with the word "Tip" in it to clearly identify the purpose of the content.
- **Tip Title**: A brief statement that catches attention and presents the tip. Example: "Feeling too warm? Use fans along with you AC."
- Tip Explanation: A brief statement about why the tip is useful and how it saves energy.
- **Tip Illustrations**: A set of user-friendly images that encapsulate the seasonal theme of the tip.

Fuel: N/A

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Time of Use Daily Peak

For customers with electric time of us rate plans, load-shaping insights can be included in the Home Energy Report using the Time of Use Daily Peak module. This module is designed to educate utility customers about their time of use rate plan and to encourage them to shift energy use to off-peak hours.

This module displays a customer's peak and off-peak usage during weekdays and weekends. Typically, a utility's peak time rates are different on weekdays and weekends.

This module should replace the <u>Daily Peak module</u> in the Home Energy Report v2 for customers who are on a time of use rate plan.

Your usage durir	ng peak hours	
0n weekdays, e	electricity is 1.5x more exper	nsive from 4-9pm. On weekends, there are no peak hours.
Weekdays		Weekends
3		3
2		2
1		1
kWh		0 kWh
12am	4pm 9pm11pm	12am 6am Noon 6pm 11pm

Header: The header statement calls the reader's attention to the fact that this module will show them how they used energy during peak hours. The default header reads "Your usage during peak hours".

Information Icon: A small graphic appears before the insight statement to identify the statement as important information.

Insight Statement: The insight statement describes the reader's time of use plan, including details about when peak times are and how much more expensive electricity is during those times. For example, the insight statement might read "On weekdays, electricity is 1.5x more expensive from 4-9pm. On weekends, there are no peak hours."

Hourly Usage Bar Chart: The module displays two charts showing the customer's average hourly electricity costs during the previous week. The Weekdays chart is displayed first, followed by the Weekends chart. The charts highlight peak hours to draw attention to how the customer's average electricity costs during peak hours compare to their average electricity costs during off-peak hours.

The chart can also display partial-peak periods and multiple peak periods, as needed.

Footer: A statement below the chart identifies the time period used to determine the hourly average usage. For example, the footer statement might read, "This is based on your average daily use in the last billing period."

Graph and Insight Statement Variations: Different components of the Time of Use Daily Peak module, such as the highlights in the bar chart and the insight statement, can take on different states depending on the utility's rate plan. For example, if the time of use rate plan has partial-peak or multiple peak periods, the chart shows these different periods and adjusts the insight statement accordingly. Similarly, the insight statement can change depending on whether the rates are the same during weekdays and weekends.

Fuel: Electric-only and dual fuel

AMI Data Required: Yes

Data History: Minimum of 200 non-zero hourly data points from the appropriate 30-day period

Billing Frequency: Monthly or bi-monthly

Configuration Options:

- Peak Period Names: Peak period names identify each period during the day that has a specific rate. You can specify the names of the peak, off-peak, and partial-peak periods. By default the names are Peak and Off-peak.
- Peak Time Price Ratio in Insight Statement: The insight statement identifies how much more expensive electricity is during peak hours. For example, electricity might be 1.5x more expensive during peak hours. By default, the value is automatically calculated based on the rate plan details we get from the client. However, this value can be manually entered here.
- Peak Time Colors: The bars in the graph can use the utility's color palette, and should be configured to use the same peak colors as the modules in the Time of Use Coach emails, if both features are implemented. Partial-peak colors can also be configured.

Thermostat Tip - One Setting

The Thermostat Tip - One Setting module suggests to the customer a single temperature that their thermostat should be set to for energy savings. The tip is comprised of a title, a thermostat illustration displaying the suggested thermostat temperature setting, and a section of text describing how the temperature setting balances savings and comfort.



Placement: This module is usually placed on the front of the report. For more information about module placement, see "Report Layouts" on page 42.

Title: The module title focuses on future savings to motivate the customer to take action.

Tip Content: The tip contains an illustration of a thermostat displaying the suggested thermostat temperature setting and a small section of text. The text describes how the temperature setting balances savings and comfort, and mentions a third-party authority to assure customers that the information is reliable.

Fuel: N/A AMI Data Required: N/A Data History: N/A Billing Frequency: N/A

Thermostat Tip - Three Settings

The Thermostat Tip - Three Settings module suggests to the customer a range of three temperatures that their thermostat could be set to for energy savings. The tip is comprised of a title, thermostat illustrations displaying the range of suggested thermostat temperature settings, and sections of text describing each temperature's effect on savings and comfort.



Placement: This module is usually placed on the front of the report. For more information about module placement, see "Report Layouts" on page 42.

Title: The module title focuses on future savings to motivate the customer to take action.

Tip Content: The tip contains an illustration of a thermostat displaying the suggested thermostat temperature setting and a small section of text. The text describes how the temperature setting balances savings and comfort, and mentions a third-party authority to assure customers that the information is reliable.

Fuel: N/A AMI Data Required: N/A Data History: N/A Billing Frequency: N/A

Utility Info

The Utility Info module appears at the bottom of the back page of every report. The module contains sections for frequently asked questions, utility contact information, legal disclaimers, and additional resources.

Frequently asked questions	We're here to help
What's a kWh?	www.utilityco.com/reports
lightbulb uses 1 kWh every 10 hours.	▶ reports@utilityco.com
How is my comparison calculated? Your electricity use is compared to homes with a similar size, building type,	▶ 1-888-888-8888
www.utilityco.com/homeprofile.	Find more energy saving purchases
Why is my utility sending me this report? We want to help you make smart energy decisions and cut back on your bills.	▶ www.utilityco.com/rebates
How do I stop receiving reports? Call 1-800-999-9999.	
	UtilityCo
Printed on 10% post-consumer recycled paper using water-based inks	© 2010 - 2015 Opower. All rights reserved.

- Frequently asked questions: By default, four standard FAQs are provided in this section about the customer's energy type and the report content.
- We're here to help: This section contains utility customer service contact information, such as the phone number, email, or website where customers can get support.
- Find more energy saving purchases: This section provides a website address associated with the Home Energy Report program. The language in this section is similar to the language in the Johnson Box of the <u>Header</u> module that is required to receive preferred postage rates.
- Phone Opt-Out: A phone number is provided for customers to call to opt-out of receiving reports. Opting out of reports using this method is permanent. Customers cannot opt-in to receive reports at a later time. This functionality is operated by Oracle Utilities Opower.

The content of this module can be customized for individual utilities and different fuel types.

Fuel: N/A

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Report Layouts

Every report has a particular layout containing "slots" in which <u>report modules</u> are placed. All report layouts are designed on a standard US letter paper size (8.5 x 11 inches, or 612 x 792 points).

There are five slots on the front of a report and three slots on the back of a standard report. Oracle Utilities uses these report slots to guide where certain modules should appear in a report, as user testing has shown that certain modules yield better results in specific locations. For example, normative comparisons, such as the <u>Neighbor Comparison</u> module, usually yield higher engagement results when featured on the front.

Slot Size

Slots vary in size depending on the type of modules they are designed to contain. Report modules can be categorized by their size as either flexible or stationary.

- Flexible Modules: These modules are designed to fit in multiple report slots and adhere to a standard height of 192 pt.
- Stationary Modules: These modules are designed for a specific position in the report and vary in height. Stationary modules can only be placed in the report slot for which they were designed.

Report Layout Example

Report layouts may differ by <u>report edition</u>. The example below is for the <u>Progress Report</u> <u>edition</u> and includes typical slot numbering and sizing information.

	Front	Top and bottom margins – 27pt		Back	Top and bottom margins – 27pt
	Slot 1 Type: Stationary			Slot 6 Type: Flexible	
208			192		
			24		
16	Slot 2 Type: Flexible			Slot 7 Type: Flexible	
192			192		
			24		
	Slot 3 Type: Flexible			Slot 8 Type: Stationary	
192					
			306		
78	Slot 4 Type: Stationary				
18	Slot 5, Type: Station	ary			

Intelligent Tip Targeting

Intelligent Tip Targeting is a programmatic process used in the Oracle Utilities Opower products to select and display relevant energy efficiency tips for customers. For example, in Home Energy Reports, tips are selected for a customer and displayed on the front and back of the report to encourage the customer to perform specific energy efficient actions. In other Oracle Utilities Opower products, such as the Weekly Energy Update email, tips are often selected to provide customers with actionable information after they have seen their energy use insights.



Oracle Utilities Opower maintains a large and diverse library of energy tips from which to select. The Intelligent Tip Targeting algorithm uses tip filters, a tip scoring formula (also called "tip prioritization"), and tip selection criteria to select and display tips that are relevant to a customer's household at different points in time.

Tip Filtering

Tips are filtered out based upon the characteristics of each customer in the program. For example, if the customer only uses electricity, then the algorithm would filter out any tips related to gas. Other tips are only relevant in a certain context, such as when a utility is encouraging customers to use less energy during specific hours of the day.

Tip Prioritization

The remaining tips are assigned a prioritization score. The Intelligent Tip Targeting algorithm uses several sources of information for this score, such as a customer's profile information and the results of the <u>Home Energy Analysis</u> feature. Using this logic, tips are prioritized according to usefulness for the customer, if the customer has previously seen the tip, and whether or not the customer is likely to use the tip to reduce energy use.

Tip Selection

Logic is applied to the prioritized tips to select which tips to display in the product. In general, customers should not receive a tip that was displayed in a recent report or digital communication. Moreover, they should not receive more than one tip about a particular topic

or a tip that requires similar up-front costs as any other tips that are shown in the same communication.

Note: Tip selection logic step is only used for outbound Oracle Utilities Opower products like emails and paper reports. It is not used in web products, since the web products can display the full range of available tips.

Enrollment

Home Energy Reports are an opt-out program. In an opt-out program, customers are automatically enrolled in Home Energy Reports as long as they meet the eligibility criteria. Customers can unsubscribe from Home Energy Reports later at any time.

Delivery

Delivery refers to how Oracle Utilities sends Home Energy Reports to customers. The delivery information in this section is only applicable if the utility purchases an Oracle Utilities channel fee that includes printing or mailing of Home Energy Reports. See See "Channel Fees" on page 2. for more information.

If the utility purchases the appropriate channel fee, Oracle Utilities and the utility mutually agree upon a report frequency for Home Energy Reports. Customers cannot adjust their own frequency, and utilities cannot adjust the frequency for individual customers. Reports are generated using data from the latest utility bill for each report recipient. This means that the point at which the customer receives the report is dependent on the customer's individual billing dates. When customers receive a new bill, and a sufficient period of time has elapsed since the last report was generated, they become eligible to receive another report.

It is also possible to vary the frequency of reports for groups of customers over time. For example, customers with monthly billing data could be set up to receive a report every month for the first three months of the program and then shift to bi-monthly reports thereafter.

Reports are sent only to customers who use a minimum amount of energy. This minimum energy use threshold is optimized for each Home Energy Report program.

Providing Customer Support

Customer Service Representatives (CSRs) can perform common support tasks in the Oracle Utilities Opower Customer Service Interface (CSI):

- Find and opening a customer's account
- Access a customer's web portal account

- View sent Home Energy Reports
- Manage a customer's report preferences
- Update information about a customer's home

See the <u>Oracle Utilities Opower Customer Service Interface - Program Management</u> <u>Product Overview</u> for details.

Home Energy Reports v3

Home Energy Reports are user-friendly print communications that provide personalized information to customers about their energy use. Home Energy Reports v3 provide a new, modernized experience with bold colors, a varied layout, and data-driven insights targeted to specific customer attributes. It includes new and enhanced features such as the Efficiency Zone normative comparison, the Energy Use Benchmark performance summary, and energy disaggregation-based insights and tips about the customer's major energy end-use categories, such as heating, cooling, and appliances.

The goals of the product are to give customers actionable insights about their energy and motivate them to lower their usage.

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers in the Home Energy Reports program. These requirements must be met in order for a utility and a customer to participate in the program.

Channel Fees

Utilities may purchase a channel fee if they are using any printed rate education communications as part of the Oracle Utilities Opower program. Channels fees are used to add on report generation, printing, mailing, and postage services to a cloud service. There are two types of options: General Availability and Controlled Availability channel fees. The type that is relevant depends on the individual Oracle Utilities Opower program setup. Coordinate with your sales representative if you need help determining which type applies.

A summary of the fees is shown below. For more details about what each channel fee includes and the requirements for using them, see the *Oracle Utilities Opower Channel Fees Cloud Services* guide.

General Availability Channel Fees

The General Availability channel fees are applicable if the utility has a version of the cloud service that includes report generation. These channel fees can be purchased for different regions.

- Report Printing and Mailing: The Report Printing and Mailing channel fee includes the printing of generated report communications through an approved third-party print vendor, as well as services for the proper mailing of the reports. It does not include postage for mailing the reports to customers.
- Postage for Print and Mail: The Postage for Print and Mail channel fee includes postage for the delivery of print communications.

Note: The postage channel fee cannot be purchased alone. It must be purchased in combination with the printing and mailing channel.

Controlled Availability

The Controlled Availability channel fees are applicable if the utility has a version of the cloud service that does not include report generation. A utility may only choose one of the channel fees listed below.

- Report Generation: The Report Generation channel fee includes generating a digital version of print communications. It does not include the printing and mailing of print communications.
- Report Generation and Print: The Report Generation and Print channel fee includes the generation and printing of print communications. It does not include the mailing of print communications.
- Report Generation, Print, and Mail: The Report Generation, Print and Mail channel fee includes the generation, printing, and mailing of print communications.

Utility Requirements and Limitations

- Templates: Oracle Utilities has established standard templates for Home Energy Reports, which the US Postal Service has confirmed are currently eligible for mailing under the USPS Standard Mail classification. A deviation from these templates may cause the mailing of Home Energy Reports to be ineligible for USPS Standard Mail classification. If a utility purchases a print or mail channel, then Oracle Utilities Opower standard Home Energy Report templates will be used for the program. In the event that the utility and Oracle Utilities agree to deviate from such templates, the utility is responsible for any corresponding increase in postage.
- Data Integration: Customer data and energy use data must be sent by the utility to Oracle Utilities in the correct schema and according to the Oracle Utilities Opower data transfer standards.
- Other Data Sources: Oracle Utilities uses third-party reference data, such as weather and parcel data, to learn more about customers and the areas where they live. This

information allows Oracle Utilities to identify neighbors, recommend tips, and provide additional energy insights. Moreover, customers can submit information through available Oracle Utilities Opower applications. For example, customers can submit information about their homes in the Energy Efficiency Web Portal.

Customer Requirements and Limitations

- **Billing Frequency**: The customer must be billed monthly, bi-monthly, or quarterly. Billing requirements vary by module. See the module descriptions that follow for details.
- Energy Use Threshold: Customers must meet a minimum energy use threshold to receive Home Energy Reports. This energy use threshold is optimized for each individual program.
- Data History: Each module requires a certain amount of historical data to appear on a customer's report. Backup modules appear for customers who do not have enough data to render a particular module. See the module descriptions that follow for details.
- Fuel Type: Electric-only, gas-only, and dual fuel.

Customer Experience Overview

Home Energy Reports v3 are user-friendly print communications that provide personalized information to customers about their energy use. The reports include two pages of content that consist of modules. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. When printed out, the reports are a single page, with content on the front and back.

- Report Types
- Report Modules

Report Types

Home Energy Reports v3 implement several report types with different layouts and modules that vary throughout the year to provide customers with a dynamic experience. The report types are designed to construct a story for the customer to follow as they learn about their energy use. Some report modules are common to all report types, while others only appear in a specific report type. The available report types include:

- Electric Vehicle Report
- Limited Income Report
- Peak Focused Report
- Progress Report
- Promotion Report
- Seasonal Report
- Solar Report

- Time of Use Report
- Welcome and Announcement Report

Electric Vehicle Report

The Electric Vehicle Home Energy Report v3 provides electric vehicle customers with a Home Energy Reports v3 experience that takes into account the unique priorities of electric vehicle customers, and the impact that electric vehicle charging has on their energy use. The report includes insights and explanations that are specific to the electric vehicle customer experience, and encourages customers to further enhance their report by completing the Home Energy Survey.

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Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	No limitations.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly. See module-specific requirements.
Data Requirements	 Hourly AMI data and insights. Electric vehicle confirmation. Contact your Delivery Team for more information.
Data History	See module-specific requirements.

Category	Description
Data Coverage	See module-specific requirements.
Supported Fuels	Electric-only and dual fuel.

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Limitations

- Electric Vehicle Disaggregation Data: There are additional data requirements to show advanced insights such as Electric Vehicle disaggregation. Contact your Delivery Team for more information.
- Normative Comparison: The <u>Efficiency Zone</u> module is not available for this report type. A <u>Three-bar Neighbor Comparison</u> must be used for the normative comparison.

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User Experience

This section describes the Electric Vehicle Report. The report is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals.

This image is an example of the Electric Vehicle Report user experience for an electric-only fuel customer. Go to the individual module page for more details about the user experience.



The following modules are on the front of the report:

- Header
- Introduction
- <u>Three-bar Neighbor Comparison</u>
- Explainer
- Page Turn

The following modules are on the back of the report:

- What Uses Most
- Marketing Module
- Utility Info

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Limited Income Report

The Limited Income Report educates limited income customers about ways to be more energy efficient and presents opportunities for them to reduce their immediate and future bills. While the overall goal is to encourage energy efficiency, the report includes features

that acknowledge the unique circumstances and needs of limited income customers. There are two types of reports:

- Limited Income Welcome Report
- Limited Income Progress Report

Limited Income Welcome Report

The Limited Income Welcome Report is the first report a new or legacy limited income customer receives as part of their Home Energy Report v3 program experience.

Utility Coo	You First Home Dengy Heport Merce 32 (2017 Advanced 12) (2017 Advanced 12) (2017) (201	A first look at how you compare to others
Welcome to your Home Energy Report These reports are designed to help you save energy and money, so your energy, bit can be on least help to worry about. So, in addition to your would bit, where example, the provide the state of the you ensemble would be also be able to be able to the state of the state		The Effectives Zane securate the DSA of initial hows in part of comparison to an fail with the proved. The most input we have the DSA of Storage briefly there are proved to an initial heading sources on secure holds. A write a continued measurement of identity (MP) and gas thermal aux. You use to an rear-ommendiand wantes to sauce
what you can expect from the Home Energy Report program	Get personalized advice to belo you save	Edited on your errort meter data, your energy use was highest in heating and refrigeration.
Your Efficiency Zone graph will be in most reports your readve, and will show you how much energy you used and how officient you were that period.	Tips incluided in your reports are chosen specifically for your home. You'll also see why they were chosen to you know you're getting relevant savings advice.	Where an determine the experiment of the ex
Receive tailored insights that change over time	Save more with energy savings programs	To find more ways to save, go to utilityco.com/welcometipguide.
Since energy use changes throughout the year, your import will too. You'l get different types of reports and insights to help you reach your goals.	You'll learn about energy efficiency programs that can help you reduce your bill, as well as assistance programs you may qualify for.	We're here to help I -888-809 0000 C internativative count of the second homeonegraphic of thomeonegraphic of thomeonegraphic of the
Turn over to explore your new energy-saving insights	→	Univolution that the subscription counts and the subscription of t

Legacy customers: Customers that have received Home Energy Reports in the past are considered legacy customers. The Welcome Report acknowledges how the report experience has changed.

New customers: Customers that have never received a Home Energy Report are considered new customers. The Welcome Report introduces new customers to their report insights.

Note: Customers who move from one audience segment to another are not considered new customers.

See the <u>individual report modules</u> for more information about how the experience varies by module.

Limited Income Progress Report

The Limited Income Progress Report is focused on general energy efficiency and money saving goals for limited income customers.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Limited Income Report Modules

The Limited Income Report type is built with a predefined mix of dynamic and static modules that have been carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details about the user experience.

Limited Income Welcome Report Module

The following modules are included on the front of the report:

- Header
- Introduction
- Announcement
- Quadrant
- Page Turn

The following modules are included on the back of the report:

- <u>Efficiency Zone</u> or <u>Neighbor Comparison</u>
- Limited Income Tips
- Utility Info

Limited Income Progress Report Modules

The following modules are included on the front of the report:

- Header
- Energy Use Benchmark
- <u>Efficiency Zone</u> or <u>Neighbor Comparison</u>
- Explainer Module
- Page Turn

The following modules are included on the back of the report:

- What Uses Most
- Marketing Module
- Utility Info

Peak Focused Report

The Peak Focused Report informs customers about their electricity usage, with a focus on peak periods under their Time of Use rate plan. The report includes modules designed to encourage customers to be aware of electricity costs, and guide customers towards making energy use conscious behaviors during peak cost periods. There are two types of Peak Focused Home Energy reports:

Peak Focused Welcome Report: The welcome version of the report is designed to introduce new customers and legacy customers who are new to the Home Energy Report experience with a focus on peak energy use. It is the first report sent to new customers, and is structured to facilitate change management, equip customers with actionable tools and

information, enhance overall customer satisfaction, and promote energy savings.



Peak Focused Progress Report: The progress version of the report includes insights designed to inform customers about their electricity usage, with a focus on peak periods under their Time of Use rate plan. It encourages more energy-efficient behaviors and heightened awareness of electricity costs.



Report Modules

Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

Peak Focused Welcome Report

The Peak Focused Welcome Report includes the following modules:

<u>Header</u>
<u>Introduction</u>
<u>Announcement</u>
<u>Welcome Quadrant</u>
<u>Page Turn</u>
Peak Focused Normative Comparison

Time of Use 101

Utility Info

Peak Focused Progress Report

The Peak Focused Progress Report includes the following modules:

<u>Header</u>

Mini Time of Use Reminder

Peak Focused Normative Comparison

Explainer

Page Turn

Time of Day Hourly Insights

Energy Literacy and Tip

Marketing Messages

Utility Info

Progress Report

The Progress Report uses insights and various energy saving tips to motivate customers to maintain or improve their energy efficiency. The design of the report leverages behavioral science techniques such as normative comparison, curiosity, and anchoring to help customers stay engaged with their report experience over time. The Energy Use Benchmark, neighbor comparison, context-aware tips, and marketing module promotion features are designed to help the customer save energy.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Progress Report Modules

The Progress Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details about the user experience.

The following modules are included on the front of the report:

- Header
- Energy Use Benchmark
- <u>Neighbor Comparison</u> or <u>Efficiency Zone</u>
- Explainer
- Page Turn

The following modules are included on the back of the report:

- Self-Comparison
- Progress Report Tips
- Marketing Module
- Utility Info

Promotion Report

The Promotion Report offers customers personalized insights about specific end-uses in their home in order to motivate them to take advantage of a utility-offered promotion. This report type leverages Oracle Utilities Opower disaggregation capabilities to facilitate customer adoption of more efficient devices, appliances, and deep home retrofits.

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Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	No limitations. Customers will receive the Promotion Report Type if they meet the following requirements:
	 Appliance detection and disaggregation, heating & cooling disaggregation or simple disaggregation with Home Energy Analysis completion for that end use.
	 Confirmed presence of the end use through presence discovery or Home Energy Analysis completion. Use more than the regional average for the utility selected end use.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.

Category	Description
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly. See module-specific requirements.
Data Requirements	 Hourly AMI data and insights. Electric vehicle confirmation. Contact your Delivery Team for more information.
Data History	See module-specific requirements.
Data Coverage	See module-specific requirements.
Supported Fuels	Electric-only and dual fuel



The Promotion Report experience is determined by the report state and promotion type selected by the utility. Oracle Utilities Opower works with the utility to select the promotion they wish to run based on available disaggregation insights. Possible report states include:

Customer's Top End Use Category: The utility selects the end use category to focus on for the main insight and promotion for the front of the report. In this case, the selected end use is the customer's largest end use. The end use categories on the back are the customer's second and third largest end uses.

Utility-Preferred End Use Category: The utility selects the end use category to focus on for the main insight and promotion for the front of the report. This is not the customer's largest end use. Instead, the categories on the back are the customer's top end uses excluding the promotion end use.

Heating and Cooling Combined - Top Use Category: Heating and cooling categories are combined and are the focus of the main insight and promotion on the front of the report. These end uses are the customer's largest end uses for last year. Heating and cooling are again shown individually on the back of the report.

Heating and Cooling Combined - Utility Preferred: Heating and cooling categories are combined and are the focus of the main insight and promotion on the front of the report. These end uses are not the customer's largest end uses for the last year. Heating and cooling are again shown individually on the back of the report.

The front of the report includes the following modules: Header, Promotion Introduction, Dissagregation Main Insight, Promotion, and Page Turn. The back of the report includes tips, a marketing module, and Utility Info.

Promotion Report Modules

The Promotion Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use, and to promote specific offerings and tips for them to act upon. Go to the individual module page for more details about the user experience.

The following modules are included on the front of the report:

- Header
- Promotion Introduction
- Disaggregation Main Insight
- Promotion Module
- Page Turn

The following modules are included on the back of the report:

- Promotion Report Tips
- Marketing Module

Utility Info

Seasonal Report

The Seasonal Report motivates customers to reduce their energy use in the lead up to the extreme weather seasons of summer and winter. The report focuses on either heating or cooling instead of general energy use because heating and cooling tend to have the largest impact on a customer's bill during the extreme weather seasons. The reports are sent before the start of the season to help the customer prepare and plan for the season ahead. The report includes specific tips and actions customers can take to lower their heating or cooling use, and a recommended thermostat adjustment that is unique to the seasonal report.

Summer Seasonal Report

The summer version of the Seasonal Report focuses on the impact cooling has on summer utility bills.



Winter Seasonal Report

The winter version of the Seasonal Report focuses on the impact heating has on winter utility bills.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Seasonal Report Modules

The Seasonal Report type is built with a predefined mix of dynamic and static modules that have been carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. The winter and summer versions of the reports include the same seasonally-focused features. Go to the individual module page for more details about the user experience.

The following modules are included on the front of the report:

- Header
- Introduction
- Seasonal Breakout
- <u>Seasonal Normative Comparison</u>
- <u>Thermostat Adjustment</u>
- Page Turn

The following modules are included on the back of the report:

- Seasonal Report Tips
- Marketing Message
- Utility Info

Solar Report

The Solar Report provides solar customers with a personalized report experience that is focused on improving energy savings behaviors and customer satisfaction. The report takes into account the impact of solar on the customer's energy use. There are two types of reports: Solar Welcome Report and Solar Progress Report.

Solar Welcome Report

The Solar Welcome Report is the first report a customer on a solar plan receives. It introduces the solar-only neighbor comparison and tells them what they can expect from subsequent reports.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Solar Progress Report

The Solar Progress Report is focused on general energy efficiency and money saving goals for solar customers.

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Your Home Energy Report April 24, 2022 Account #1234567890 1000 Sunshine Blvd, Apt. B	Your net energy compared to last year	
8014837 0825-0164 -94801-75806 ՏԱՅԱՅ ԱՅՏԱՅՏԱՅՏԱՅ 1000 SUNSINE BLVD AUSTIN, TX 12345-6789 PIII-II-III-III-III-IIII-IIII-IIIIIIIII	Austin, TX 12345-6789 Your net energy at a glance Fair Good Great Use this report to learn about your net energy and how you can save even more.	Mar 20 - Apr 19, 2021 Mar 20 - Apr 19, 2021 Mar 20 - Apr 19, 2021	This bill period, your net energy increased by
		Top recommended tip for you	
How your net energy compares to other nomes with solar	Mar 22 - Apr 21, 2022	Clean your refrigerator coils Dirty or dusty refrigerator coils cause your fridge to work harder and use more energy. Vacuum the coils once a year, and leave three inches of space between your fridge and the wall to allow heat to escape.	This tip can help you start saving now, since it's
ou -10 units	Your solar panels produced more energy than you used	Save up to \$10 per year	
-15 -10 -5 0	1	Don't forget the power of energy efficiency	
et energy is the difference between the amount of electricity your solar panels produce of the amount of gas and electricity you use. Efficient homes with solar are the 20% of omes in your comparison group with the lowest net energy.	Your net energy was higher than similar homes	Solar power, smart homes, electric vehicles — new energy-saving technologies are everywhere. No matter the technology, good energy efficiency habits will ensure you get the most out of your solar investment all year long.	
unit is a combined measurement of electricity (kWh) and gas (therms) use.		Stay mindful of your electricity use-turn off lights, electronics, and powerstrips when they're not in use.	
low does this comparison work?		For tips on becoming even more energy efficient, visit utilityco.com/waystosave.	
We use your home profile to look for 100 single-family homes with solar in your area that have a similar heating source and square footage. If your report seems off, you can take the Home Energy Survey to make it more accurate.		We're here to help 🧳 1-888-999-0000 🞽 efficient@utilityco.com	L utilityco.com/homeenergyreport
You can take the Home Energy Survey now at utilityco.com/homesurvey.	Take the 5-minute Home Energy Survey	Save more with special rebates and energy-efficient products you can buy at utilityco.com/energysavingproducts.	
Save even more. Turn over for more insights and tips.	→	Loren jesum dötor sit anst, consecteture adjetischg elt, sed därn nonurmy nich sukinoci friscikunt ut lasvett dötore magna allgam ett vädutat. Ut viel seim all minim varianr, sakis notapat. Loren beum dösor all anst, consecteture adjetisorig ell, sed daren normung viels hallarend fristant ut tal benet döse magnatikan ett an en disor. Printed on 100% post-consumer moyelet paper uning water based riss. Ø 2012 – 2021 Onzie. At rights reserved.	UtilityCo

See the <u>individual report modules</u> for more information about how the experience varies by module.

Solar Report Modules

The Solar Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details about the user experience.

Solar Welcome Report Modules

The following modules are included on the front of the report:

- Header
- Introduction
- <u>Three-Bar Neighbor Comparison</u>
- Page Turn

The following modules are included on the back of the report:

- Solar Report Tips
- Welcome Quadrant
- Utility Info

Solar Progress Report Modules

The following modules are included on the front of the report:

- Header
- Energy Use Benchmark
- <u>Three-Bar Neighbor Comparison</u>
- Explainer
- Page Turn

The following modules are included on the back of the report:

- Self-Comparison
- Solar Report Tips
- Utility Info

Time of Use Report

The Time of Use Report is a dual-purpose report type that provides customers on a time of use energy plan with a report experience that is focused on overall energy savings and rate education. There are two types of Time of Use Reports: Welcome Report and Progress Report.

Time of Use Welcome Report

The Time of Use Welcome Report is the first report a new or legacy customer on a time of use plan receives as part of their Home Energy Report v3 program experience.

Legacy customers: Customers that have received Home Energy Reports in the past are considered legacy customers. The Welcome Report acknowledges how the report experience has changed.

New customers: Customers that have never received a Home Energy Report are considered new customers. The Welcome Report introduces new customers to their report insights.

Note: A customer who has moved from one segment to another is not considered a new customer. For example, a customer that moves from a standard rate plan to a time of use plan is not considered a new customer.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Time of Use Progress Report

The Time of Use Progress Report is focused on general energy efficiency and money saving goals for customers on time of use plans.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Time of Use Report Modules

The Time of Use Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details about the user experience.

Time of Use Welcome Report Modules

The following modules are included on the front of the report:

- Header
- Introduction
- Announcement
- Quadrant
- Page Turn

The following modules are included on the back of the report:

- <u>Efficiency Zone</u> or <u>Neighbor Comparison</u>
- Time of Use 101
- Utility Info

Time of Use Progress Report Modules

The following modules are included on the front of the report:

- Header
- Benchmark Module
- <u>Efficiency Zone</u> or <u>Neighbor Comparison</u>
- Explainer
- Page Turn

The following modules are included on the back of the report:

- Time of Use 101
- <u>Time of Use Tip Modules</u>
- Marketing Module
- Utility Info

Welcome and Announcement Report

The Welcome and Announcement Report is a dual-purpose report type that can introduce Home Energy Report recipients to their new report experience or can be customized to share an important announcement or update with existing customers.

Welcome Report

The Welcome Report is the first report a new or legacy customer receives as part of their Home Energy Report v3 program experience.

Legacy customers: Customers that have received Home Energy Reports in the past are considered legacy customers. The Welcome Report acknowledges how the report experience has changed.

New customers: Customers that have never received a Home Energy Report are considered new customers. The Welcome Report introduces new customers to their report insights.

Note: New customers does not include customers who move from one audience segment to another. For example, customers that move from a standard rate plan to a time of use plan.


See the <u>individual report modules</u> for more information about how the experience varies by module.

Announcement Report

The Announcement Report makes a custom statement or announcement that has an impact on the customer's energy use and relates to the insights presented in the rest of the report. For example, it could be used to make limited-moderate income customers aware of bill assistance programs or to prepare customers for fire season. The report front is fully customizable and requires utilities to include customized context alongside the existing insights and predefined content in order to frame the report in the context to what the customer is experiencing.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Welcome and Announcement Report Modules

The Welcome and Announcement Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details about the user experience.

The following modules are included on the front of the report:

- Header
- Introduction
- Announcement
- Quadrant
- Page Turn

The following modules are included on the back of the report:

- <u>Efficiency Zone</u> or <u>Neighbor Comparison</u>
- Welcome and Announcement Tips
- Utility Info

Report Modules

All reports consist of modules. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Report modules can be complex, providing dynamic information about a customer's energy use, or simple, containing a static image and hyperlinks. See each module description for details, or go to "Report Layouts" on page 42 for more information about how modules are organized.

Announcement

The Announcement module states the intent of the report. It includes text and an image that either welcomes customers to their new report experience or acknowledges a change to the customer's program.

Appears in: <u>Welcome and Announcement Report</u>, <u>Limited Income Report</u>, <u>Time of Use</u> <u>Report</u>, and <u>Peak Focused Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

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

Category	Description
Data Coverage	Not applicable.
Supported Fuels	Electric-only, gas-only, dual fuel

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Limitations

 Report type: This module is only offered as part of a welcome experience or as part of the <u>Welcome and Announcement Report</u>.

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User Experience

This section describes the user experience for each report type.

Welcome and Announcement Report

Welcome Report

The <u>Welcome Report</u> version of the module introduces the customer to their new report experience and clearly indicates that subsequent reports are not bills. This image is an example of the Announcement module for a new customer that receives a <u>Welcome Report</u>.

Welcome to your Home Energy Report

In addition to your usual bill, these personalized reports help you save energy, which helps us deliver cleaner, more reliable energy. Each report (including this one!) uses your actual energy use data, so you can get relevant tips and insights. Other UtilityCo customers have already saved a total of \$500,000 with their reports—and now you can start saving, too.



Heading: A heading that welcomes the customer to the Home Energy Report.

Announcement: The announcement introduces customers to their new report experience. It explains that the reports are designed to help them make informed decisions that can help them save. The announcement varies depending on whether the customer is new to reports

or if they are a legacy customer who is new to the report experience. See See "User Experience Variations" on page 76. for more information.

Image: The illustration supports the welcome message.

Announcement Report

The <u>Announcement Report</u> version of the module is customized to support the announcement type selected by the utility. This image shows an example of the module customized for an <u>Announcement Report</u>.



Heading: A custom heading that highlights the change.

Announcement: Custom body text that highlights a change to the customer's program experience. For example, a change to the customer's energy circumstances.

Image: An image that compliments the custom utility announcement

Time of Use Report and Peak Focused Report

<u>Time of Use Report</u> and <u>Peak Focused Report</u> version of the module emphasizes the report message of the importance of saving energy at all times, while also educating customers about the additional benefits of saving during peak hours. The module varies slightly for new and legacy customers.

Time of Use Welcome Report, Peak Focused Welcome Report - New Customer

Welcome to your Home Energy Report

In addition to your usual bill, these personalized reports help you save energy, which helps us deliver cleaner energy. And since you're on a Time-of-Use (TOU) plan, you'll also get helpful information to help you get the most out of it. Each report (including this one!) uses your actual energy use data, so you can get relevant tips and insights.

Heading: A heading that welcomes the customer to the Home Energy Report.

Announcement: The announcement explains to the customer that the reports are designed to help them save energy and personalized for their Time of Use plan.

Image: An image that compliments the custom utility announcement

Time of Use Welcome Report, Peak Focused Welcome Report- Legacy Customer

Here's your improved Home Energy Report

To help you save even more energy, we've made some updates to these reports. Since you're on a Time-of-Use (TOU) plan, your reports will now include useful information to help you shift your energy use and save more during peak hours. You'll still get your usual energy tips and insights, so you can keep on saving no matter what time of day it is.

Heading: A heading that alerts the customer to a change in their Home Energy Report.

Announcement: The announcement reemphasizes the purpose of the report and that their report insights are personalized to account for their Time of Use plan.

Image: An image that compliments the custom utility announcement.

Limited Income Report

The <u>Limited Income Report</u> version of the module emphasizes the report message of how saving energy can help the customer save money. The module varies slightly for new and legacy customers.







Limited Income Welcome Report - New Customer

Welcome to your Home Energy Report

These reports are designed to help you save energy and money, so your energy bill can be one less thing to worry about. So, in addition to your usual bill, we're sending these personalized reports to show you areas of your home you should focus on reducing. These reports have already saved UtilityCo customers a total of \$500,000—and now you can start saving, too.

Heading: A heading that welcomes the customer to the Home Energy Report.

Announcement: The announcement explains to the customer that the reports are designed to help them save energy and money.

Image: An image that compliments the custom utility announcement

Limited Income Welcome Report- Legacy Customer

What's new in your Home Energy Report

Our goal with these reports has always been to help you save energy and money, so your energy bill can be one less thing to worry about. In fact, you and other UtilityCo customers have already saved a combined total of \$500,000 with these reports—and now we're ready to help you save even more.

Heading: A heading that alerts the customer to a change in their Home Energy Report.

Announcement: The announcement reemphasizes the purpose of the report and that their report insights are personalized to help them save energy and money.

Image: An image that compliments the custom utility announcement.

User Experience Variations

New vs. Legacy Customers

The Announcement module of the Welcome Report varies slightly depending on whether the customer is a new or legacy customer.





Legacy customers: Customers that have received earlier versions of the reports in the past are considered legacy customers. The legacy costumer versions of the reports acknowledge how the report has changed. For example, "Welcome to your new Home Energy Report" and "Here's Your Improved Home Energy Report"

New customers: Customers that have never received a Home Energy Report are considered new customers. The new customer versions of the reports introduce customers them to their new insights. For example, "Welcome to your Home Energy Report."

Disaggregation Main Insight

The Disaggregation Main Insight module uses personalized information about an end use in the customer's home to motivated them to take advantage of a utility promotion. The goal of this module is to help customers understand their use in a specific end-use category where they are using more than the regional average so that they may feel motivated to uptake the promotion and subsequently reduce their energy use in that end-use category. The module can be used to promote the customer's largest end use category, or the utility may select a preferred end use category to reinforce the report promotion. Oracle Utilities Opower works closely with the utility to create marketing modules that enhance the report experience.

Appears in: Promotion Report



Header: The header introduces the main insight and how it relates to the customer's use.

Date Range: The date range specifies the time period from which the energy use insights are derived. This will be the year prior to the report period.

End-Use Category: The category label specifies the end use that the promotion will be about.

Usage Insight: The usage insight displays the end-use category as a percent of the customer's overall energy use. Appears as whole integer, following standard rounding rules.

Usage Insight Label: The label provides context for the large number callout.

Spend Insight: The spend insight shows how much the customer spent on the selected category during the identified date range. Appears as whole integer, following standard rounding rules.

Spend Insight Label: The label provides a general time period and context for the dollar amount shown.

Disclaimer: The disclaimer explains to the customer why they are receiving this report.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel.

Data Required: Disaggregation and / or a completed Home Energy Analysis.

Data History:

- A minimum of six bills is required for Non-AMI customers.
- A minimum of 60 days of AMI reads for AMI customers.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Energy Use Benchmark

The Energy Use Benchmark module provides a dynamic and personalized, at-a-glance interpretation of the customer's energy use. Energy use is categorized into one of the three sections or statuses: Fair, Good, and Great. The customer's status is determined by their performance relative to their <u>Efficiency Zone</u> or <u>Neighbor Comparison</u> modules.

Appears in: Progress Report, Limited Income Report, Time of Use Report, Solar Report

Energy Use Benchmark

This image shows an example of the Energy Use Benchmark module's design for the <u>Progress Report</u>, <u>Limited Income Report</u>, and <u>Time of Use Report</u>.



Heading: The heading notifies the customer that the energy use benchmark gives them an at-a-glance view of their energy use. It varies according to the customer's fuel type.

Energy Use Benchmark: The benchmark gauge is broken into three sections: Fair, Good, and Great. A customer's status on that gauge is determined by their performance relative to both comparison points in the <u>neighbor comparison</u> (similar homes and the efficiency zone). A customer's performance is indicated with an arrow that sits in the middle of a given segment of the gauge. Each state has a corresponding color:

- Orange: Fair. Customer is using more than Similar Homes.
- Yellow: Good. Customer is using more than Efficiency Zone / Efficient Neighbors threshold, but less than Similar Homes.
- Green: Great. Customer is using less than the Efficiency Zone / Efficient Neighbors threshold.

Benchmark Copy: Depending on the customer's current state and any differences since their last report, the copy below the gauge tells the customer how they can leverage the report or recognizes a change in state. In some instances, the benchmark copy reemphasizes the customer's fuel type.

Solar Energy Use Benchmark

The Solar Energy Use Benchmark accommodates negative energy states experienced by solar customers.



This image shows an example of the Solar Energy Use Benchmark.

Heading: The heading notifies the customer that the energy use benchmark gives them an at-a-glance view of their net energy use.

Energy Use Benchmark: The benchmark gauge is broken into three sections: Fair, Good, and Great. A customer's status on that gauge is determined by their performance relative to both comparison points in the <u>three-bar neighbor comparison</u>. A customer's performance is indicated with an arrow that sits in the middle of a given segment of the gauge. Each state has a corresponding color:

- Orange: Fair. The customer's net energy was positive and more than similar homes.
- Yellow: Good. The customer's energy use falls into one of the following categories:
 - Net energy was positive and less than similar homes
 - Net energy was negative and more than similar homes
 - Net energy was negative and more than efficient homes, but less than similar homes
- Green: Great. The customer's net energy was positive or negative and an efficient home.
- Yellow: State Change (High to Low).. The customer's benchmark state has changed from Fair to Good or Good to Great since the last report.

Benchmark Copy: The copy below the gauge tells the customer how they can leverage the report or recognizes the customer's lower net energy use.

Requirements and Limitations

Fuel:

- Progress Report, Limited Income Report, Time of Use Report: Electric-only, gasonly, and dual fuel
- Solar Report: Electric-only, gas-only

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Explainer

The Explainer module tells the customer what data is used to calculate the <u>Normative</u> <u>Comparison</u> module and provides ways to improve or correct the data used in the module by completing or updating the <u>Digital Self Service - Energy Management Home Energy</u> <u>Analysis</u>. The module includes a brief explanation of how the comparison is calculated, as well as URL and QR code options to go from their paper report to the Home Energy Analysis. The goal of this module is to reduce negative customer sentiment by providing transparency around the similar home comparison and offering a simple and quick way for customers to update their information if it is not accurate.

Appears in: <u>Progress Report</u>, <u>Limited Income Report</u>, <u>Time of Use Report</u>, <u>Solar Report</u>, <u>Electric Vehicle Report</u>, <u>Peak Focused Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly.
Data Requirements	A minimum of one historical bill.
Data History	A minimum of one historical bill.
Data Coverage	All billing and data delivery frequencies are supported.
Supported Fuels	 Progress Report, Limited Income Report, and Time of Use Report: Electric-only, gas-only, dual fuel. Solar Report, Electric Vehicle Report: Electric-only, dual fuel. Peak Focused Report: Electric-only.

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Limitations

 Module replacement: To ensure clear messaging, an additional promotion module should not be run in place of this module.

User Experience

This section describes the user experience for each report type.

Progress Report, Limited Income Report, Time of Use Report, and Peak Focused Report

This image is an example of the Explainer module's design for the <u>Progress Report</u>, <u>Limited</u> <u>Income Report</u>, <u>Time of Use Report</u>, and <u>Peak Focused Report</u>.



Header: The header is intended to either notify the customer that they can learn more about how their comparison is determined or notify them that their comparison is accurate as a result of their completing the Home Energy Analysis.

Body Text: The body text explains that the customer's home profile is used to identify similar homes of roughly the same square footage and with the same heating fuel type within a set distance. The number of homes, home type, location radius, and heating source information is all dynamic and varies by customer. The utility may choose to show less criteria, however, at least one must be included.

Call to Action: Customers are provided with two convenient ways to update the home profile:

Link: A link located below the body text that redirects the user to the Digital Self Service -Energy Management web portal, where they can sign in and complete the Home Energy Analysis.

QR Code: The QR code prompt encourages customers to take a five-minute home energy survey. Customers can scan their unique code with their phone and immediately transition from their paper report to either the authenticated or unauthenticated landing page, depending on which one is set up for the utility.

Solar Report

Solar Welcome Report

This image is an example of the Net Explainer module for a <u>Solar Report</u> of a customer with dual fuel and a positive comparison state.



Header: The header defines net energy.

Explainer : The explainer reinforce the insights shown in the report's three-bar neighbor comparison. The text varies based on the customer's comparison state and fuel type.

Image: The left image matches the customer's current net negative or net positive state. The right image of the opposite opposite state. The image is designed to reinforce the explainer definition state. For example, a house with a red door is paired with the positive next energy positive explainer to indicate that more energy is used than the solar panels produced. An image of sun shining over a house with a green door and roof line is paired with the negative net energy explainer to reinforce that in a negative net energy state the solar panels produce more energy than the customer used.

Solar Progress Report

This image is an example of the Explainer module for the <u>Solar Progress Report</u> of a customer with an incomplete Home Energy Analysis.



Header: The header is intended to either notify the customer that they can learn more about how their comparison is determined or notify them that their comparison is accurate as a result of their completing the Home Energy Analysis.

Body Text: The body text explains that the customer's home profile is used to identify similar solar homes of roughly the same square footage and with the same heating fuel type within a set distance. The number of homes, home type, location radius, and heating source information is all dynamic and varies by customer.

Image: The image reinforces that the customer's insights take into account their solar energy use.

Call to Action: Customers are provided with two convenient ways to update the home profile:

- Link: A link located below the body text that redirects the user to the Digital Self Service -Energy Management web portal, where they can sign in and complete the Home Energy Analysis.
- QR Code: The QR code prompt encourages customers to take a five-minute home energy survey. Customers can scan their unique code with their phone and immediately transition from their paper report to either the authenticated or unauthenticated landing page, depending on which one is set up for the utility.

Electric Vehicle Report

The Electric Vehicle Report explainer module is designed to help educate the customer about how their home energy use and home characteristics contribute to their comparison. The module header, body text, and call to action vary depending on whether or not the customer has completed their Home Energy Analysis.

This image is an example the module in the <u>Electric Vehicle</u> report of a customer who has not yet completed their Home Energy Analysis.



Header: The header notifies the customer that they can learn more about how their report works.

Body Text: The body text explains that the report uses the customer's energy use patterns and home characteristics to generate insights, and encourages them to complete the Home Energy Analysis for more a more accurate comparison.

Image: The image of an electric vehicle charging at home is used to visually reinforce that the customer's electric vehicle charging is taken into account in the report comparison and insights.

Call to Action: Customers are provided with two convenient ways to update the home profile:

- Link: A link located below the body text that redirects the user to the Digital Self Service -Energy Management web portal, where they can sign in and complete the Home Energy Analysis.
- QR Code: The QR code prompt encourages customers to take a five-minute home energy survey. Customers can scan their unique code with their phone and immediately transition from their paper report to either the authenticated or unauthenticated landing page, depending on which one is set up for the utility.

Header

The report header appears at the top of each report communication vary by report type. The report header is composed of a report image (logo), customer address block, and Johnson Box. The Johnson Box includes the program name or report type label, report date, account number, service address, and a benchmark insight or introduction module. The title of the report and whether a benchmark insight or introduction module is included in the report varies by <u>report type</u>.

Appears in: All report types.

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Not applicable.
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable.
Data History	Not applicable.
Data Coverage	Not applicable.
Supported Fuels	Not applicable.

Limitations

• **Report Image (Logo)**: The report image must be provided by the utility. The maximum allowable size is 132 x 72 pixels (1.83 x 1 inches).

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User Experience

This section describes the user experience of the header module for the <u>Progress Report</u>. See the <u>User Experience Variations</u> for examples of how this module varies for other report types.

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Home Energy Report March 20, 2020 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789
0014837 0023-C10-I -P14851-730905 ***********************************	Your energy use at a glance
APT. B AUSTIN, TX 12345-6789	Fair Good Great
	Use this report to learn about your energy use and how you can save more.

Logo: The logo appears in the top-left corner of the front page of the report, and the utility's address appears underneath it. The logo also appears at the back of the report in the lower-right corner of the "Utility Info" on page 41 module.

Customer Address Report Block: The customer address always appears in the top-left corner of the report, in the space beneath the logo and utility's address. This is the proper space for it to display in the envelope window. The report template has a blank area set aside for the address to be stamped on by the print vendor.

Johnson Box: The Johnson Box is the section that appears in the top-right corner of the front page of the report.

- Report Type Label: The report label identifies the report as a Home Energy Report.
- Report Date: The report date indicates the end date of the most recent billing period covered in the report. The goal is to inform the customer of the latest date for which we have data. This date does not correspond to the actual date that the report was generated.
- Account Number: The account number is unique to each customer and should match the number they see on their utility bill
- Service Location: The Service Location field displays the service address for which the report applies. This helps customers who receive reports for multiple service addresses distinguish between their reports. The Service Location field is displayed on all reports, including for customers who do not have multiple service locations.

Benchmark Module: The Benchmark module provides a dynamic, personalized, at-aglance interpretation of the customer's energy use broken on the three sections of a gauge: Fair, Good, and Great. See the <u>Benchmark</u> module. **Note**: Some report type headers includes an <u>Introduction Module</u> instead of a Benchmark module. See the User Experience Variations.

User Experience Variations

This section provides examples of the Header module varies for other report type experiences.

Promotion Report

This image is an example of the Header module design for the Promotion Report.



The Promotion Report Header includes a unique report type label and Promotion Introduction module. See Introduction Modules.

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Welcome and Announcement Report

The Welcome and Announcement Report header varies depending on whether the customer receives a welcome or announcement version of the <u>Welcome and</u> Announcement Report.

Welcome and Announcement Report - Welcome Version

This image is an example of the Header module design for the welcome version of the Welcome and Announcement Report.

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Your First Home Energy Report March 20, 2020 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789
0.014837 0023-C10-I -P14851-730905	Get ready to
AUTO**5-DIGIT 12345 SARAH CLARK 1000 SUNSHINE BLVD APT. B AUSTIN, TX 12345-6789 phthallalalalalalalalalalalalalalalalalal	save energy!

The report header includes a unique report type label and Announcement Introduction Module. See Introduction Modules.

Welcome and Announcement Report -Announcement Version

This image is an example of the Header module design for the announcement version of the Welcome and Announcement Report.



The report header includes a unique report type label and Announcement Introduction Module. See <u>Introduction Modules</u>.

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Seasonal Report

This image is an example of the Header module design for the <u>Seasonal Report</u> with a winter season focus.



Home Energy Report: Winter Edition November 20, 2021 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789

Colder weather is on the way!

The report header includes a unique report type label and Seasonal Introduction Module. See Introduction Modules.

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Limited Income Report

The header varies depending on whether the customer receives a welcome or progress version of the Limited Income Progress Report.

Limited Income Welcome Report

This image is an example of the Header module design for the Limited Income Welcome Report.



The report header includes a unique report type label and Welcome Introduction Module. See Introduction Modules.

Limited Income Progress Report

This image is an example of the Header module design for the <u>Limited Income Progress</u> <u>Report</u>.



Report Type Label: The report type label identifies the report as part of the Home Energy Report series.

Benchmark Module:The Benchmark module provides a dynamic, personalized, at-a-glance interpretation of the customer's energy use broken on the three sections of a gauge: Fair, Good, and Great. See the <u>Benchmark</u> module for more information.

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Time of Use Report

The header varies depending on whether the customer receives a welcome or progress version of the Time of Use Report.

Time of Use Welcome Report

This image is an example of the Header module design for the Time of Use Welcome Report

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Home Energy Report May 20, 2021 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789
00114837 0023-010-1 -P14851-730995 AUTO**5-DIGIT 12345 SARAH CLARK 1000 SUNSHINE BLVD APT. B AUSTIN, TX 12345-6789 p[h]h]H]H]H]H]H]H]H]H]H]H]H]H]H]H]H]H]H]H	Get ready to save more energy when it matters most!

The report header includes a unique report type label and introduction text. See <u>Introduction</u> <u>Modules</u>.

Time of Use Progress Report

This image is an example of the Header module design for the Time of Use Progress Report.

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Home Energy Report May 20, 2022 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789
0 0 1 4 8 3 7 0023-C10-I -P14851 -730805	Your energy use at a glance
AFAH CLARK 1000 SUNSHINE BLVD APT. B AUSTIN, TX 12345-6789	Fair Good Great
	Use this report to learn about your energy use and how you can save more.

Report Type Label: The report type label identifies the report as part of the Home Energy Report series.

Benchmark module: The Benchmark module provides a dynamic, personalized, at-a-glance interpretation of the customer's energy use broken on the three sections of a gauge: Fair, Good, and Great. See the <u>Benchmark</u> module for more information.

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Solar Report

The Solar Report header design varies slightly depending on whether the customer receives a welcome or progress version of the <u>Solar Welcome Report</u>.

Solar Welcome Report

This image is an example of the Header module design for the Solar Welcome Report.



The report header includes a unique report type label and Solar Introduction Module. See Introduction Modules.

Solar Progress Report

This image is an example of the Header module design for the Solar Progress Report.

UtilityCo 123 Energy Way, Austin, TX 12345-6789	Your Home Energy Report April 24, 2022 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789
0014837 0023-C10-1 -P14851 -730905 ********AUTO**5-DIGIT 12345 SARAH CLARK	Your net energy at a glance
1000 SUNSHINE BLVD APT. B AUSTIN, TX 12345-6789 p][1][1][1][1][1][1][1][1][1][1][1][1][1]	Fair Good Great
	Use this report to learn about your net energy and how you can save even more.

Report Type Label: The report label identifies the report as a Home Energy Report.

Benchmark Module: The Benchmark module provides a dynamic, personalized, at-aglance interpretation of the customer's net energy broken on the three categories: Fair, Good, and Great. See the Benchmark module for more information.

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Electric Vehicle Report

This image is an example of the Header module design for the Electric Vehicle Report.



The report header includes a unique report type label and Welcome Introduction Module.

Peak Focused Report

The Peak Focused Report header design varies slightly depending on whether the customer receives a welcome or progress version of the Peak Focused Report.

Peak Focused Welcome Report

This image is an example of the Header module design for the Peak Focused Welcome Report.



Home Energy Report May 20, 2022 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789

Get ready to save more electricity when it matters most!

Introduction Module: A short welcome message appears at the top of the report encouraging the customer to get excited about their new report experience. The message varies slightly depending on intro message is "Get ready to save more energy when it matters the most!"

Peak Focused Progress Report

This image is an example of the Header module design for the Peak Focused Progress Report.



Mini Time of Use Reminder Module: A short reminder located at the top of the report reminds the customer of when the peak period is based on their Time of Use plan. The graph

labels identify which periods in the graphs fall into high, medium, and low cost periods. See Mini Time of Use Reminder.

Home Profile

The Home Profile highlights the customer's progress and reminds them of the impact of completing the survey on their report insights. The module includes a list of known and unknown home attributes, a percent complete wheel which displays how much of the customer's <u>Home Energy Analysis</u> that is complete, and a QR code that links to the Home Energy Analysis. The module is available as a replacement for the <u>Explainer module</u> in any non-first send report experience.

Appears in: Optional replacement for the <u>Explainer module</u> in any non-welcome version of the <u>report experience</u>.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly.
Data Requirements	Not applicable.

Category	Description
Data History	A minimum of one historical bill.
Data Coverage	All billing and data delivery frequencies are supported.
Supported Fuels	Promotion, Announcement and Welcome, Limited Income, and Time of Use Reports: Electric-only, gas-only, dual fuel. Solar Report: Electric-only, dual fuel.

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Limitations

- The module is designed to replace the <u>Explainer</u> module or the <u>Marketing Message</u> in the <u>Progress Report</u>.
- The module can be used in any non-welcome version of a report type as a replacement for the Explainer module.

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User Experience

This section describes the user experience of a customer who has not yet completed their <u>Home Energy Analysis</u>, followed by how the user experience may vary.



Title and URL: The title reminds the customer of their DSS EM Home Energy Analysis status. The Home Energy Analysis URL appears under the title.

Explanation: A brief text encouraging the customer to finish their Home Energy Analysis to get more accurate insights in their report.

List of Attributes: The module includes a list of four home attributes. Each attribute that is known for the customer has a green check next to it, and each unknown attribute has a grey question mark logo next to it. Default Home Energy Analysis categories include home type, size, and heating. If heating is not available, it is replaced with the own or rent.

Percent Complete Wheel: A wheel shows the percentage of the customer's home profile survey that is completed. For example, if 50% of the survey is complete known for the customer, then 50% of the wheel would be colored in, and the text "50%" would appear in the center of the wheel.

QR Code: A QR code provides customers with quick access to their Home Energy Analysis from the report without having to log in to their account.

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User Experience Variations

Home Energy Analysis Not Attempted

If the customer has not yet begun their Home Energy Analysis, the module encourages them to start their survey so that their report includes more accurate insights.



Title: The title tells the customer to start their survey.

Explanation: A brief text encouraging the customer to take action and update their home profile appears below the title.

List of Attributes: The module includes a list of four home attributes. Each attribute had a grey unknown question mark logo next to it.

Percent Complete Wheel: The percent complete wheel shows 0 percent.

QR Code: A QR code provides customers with quick access to their Home Energy Analysis from the report without having to log in to their account. The QR code title echoes the module title message encouraging the customer to start their survey.

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Home Energy Analysis Recently Completed

If the customer recently completed their survey, the module is congratulatory and reassures them that their insights are accurate and readily available.



Title: The title congratulates the customer on completing their survey.

Explanation: A brief text tells the customer that their personalized tips and comparisons are accurate because they have completed their survey, and encourages the customer to update the survey if anything changes.

List of Attributes: The module includes a list of four home attributes. Each attribute has a green check mark logo next to it indicating that the attribute is known for the customer.

Percent Complete Wheel: The percent complete wheel shows 100 percent.

QR Code: A QR code provides customers with quick access to their Home Energy Analysis from the report without having to log in to their account. The title of the QR code invites the customer to use the QR code to view their Home Energy Analysis.

Home Energy Analysis Completed

If the customer completed the Home Energy Analysis previously but has not updated their survey in a while, the module encourages them to do so to make sure that they are getting the most accurate insights and tips.



Title: The title asks the customer if they have made any changes to their home.

Explanation: A brief text encourages the customer to update the survey to ensure that they are getting the most accurate tips and insights.

List of Attributes: The module includes a list of four home attributes. Each attribute has a green check mark logo next to it indicating that the attribute is known for the customer.

Computer Icon: The percent complete wheel is replaced with a computer icon.

QR Code: A QR code provides customers with quick access to their Home Energy Analysis from the report without having to log in to their account. The QR code title echoes the module title message encouraging the customer to view and update their survey.

Introduction Modules

Introduction modules identify that the reports are part of the customer's Home Energy Report experience and prepare the customer for what they will see in the report. The design of the modules varies by report type.

Appears in: <u>Progress Report</u>, <u>Welcome and Announcement Report</u>, <u>Time of Use Report</u>, <u>Seasonal Report</u>, <u>Solar Report</u>, and <u>Peak Focused Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly.

Category	Description
Data Requirements	Not applicable
Data History	 Announcement, Promotional, Welcome, and Time of Use Introduction modules: A minimum of six bills is required for Non-AMI customers. A minimum of 60 days of AMI reads for AMI customers. Seasonal Introduction: 13 months of billed usage data. A minimum of six bills is required for Non-AMI customers. A minimum of six bills is required for Non-AMI customers. Solar Introduction: Not applicable.
Data Coverage	All billing and data delivery frequencies are supported.
Supported Fuels	Promotion, Announcement and Welcome Report, Limited Income Report, Time of Use Report: Electric-only, gas-only, dual fuel Solar Report: Electric-only, dual fuel

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Limitations

- Promotion Report: Customers must meet the following criteria to receive the promotion report and this module:
 - The customer is using more than the regional average for the utility selected end use.
 - Oracle Utilities Opower have confirmed presence of the end use either through presence discovery or Home Energy Analysis.
 - The customer has appliance detection and disaggregation, heating and cooling disaggregation, or simple disaggregation with Home Energy Analysis.

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User Experience

This section describes the user experience for each report type.

Promotion Introduction

Appears in: Promotion Report

The Promotion Introduction module appears at the top of the <u>Promotion Report</u> within the report <u>Header</u>. It provides the customer with a preview of three energy use categories where they could save money. The categories can be drawn from the customer's top three energy use categories or selected by the utility to support the report promotion. The goal of this module is to identify the promotion report type as part of the customer's Home Energy Report experience and provide them with a preview similar to the <u>Benchmark module</u> seen in the <u>Progress Report</u>.

This image is an example of the Promotion Introduction module.



Report Type Label (Not depicted): The label "Home Energy Report: Usage Spotlight" appears at the top of the report header and explains what the piece of mail is and identifies it

as a Home Energy Report. See the "Header" on page 86 to learn more about the header module that appears at the top of the front page of every report.

Icons: The icons that appear above the intro message correlate to the energy use categories.

Intro Message: The intro message provides the customers with an overview of the energy use categories in which they could save more. They are listed in the order in which they appear in the report.

Announcement Introduction

Appears in: Announcement Report

The Announcement Introduction module appears at the top of the <u>Announcement Report</u> within the <u>Header</u> module. The goal of this module is to identify the report type as part of the customer's Home Energy Report experience and prepare the customer for what they will see in the report. The module text is customized to emphasize the selected report theme.

This image is an example of a custom module design for an Announcement Report.

Home Energy Report: Announcement March 1, 2020 Account #0123456789 Clark Lohr Rd 5000862182 Swanton MD 21561 US

Let us help make things a little easier

Report Type Label: The report title identifies the report as part of the Home Energy Report series and notes that the report will share an important announcement or update. For example, "Home Energy Report: Announcement."

Announcement Introduction: The announcement introduction places the utility's announcement or update in context. See the <u>Announcement Introduction</u> module for more information.

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Welcome Introduction

Appears in: Welcome and Announcement Report, Limited Income Welcome Report

The Welcome Introduction module appears within the header of the welcome version of the Welcome and Announcement Report, and the <u>Limited Income Welcome Report</u>. The goal of the module is to introduce Home Energy Report recipients to their new report experience.

This image is an example of the Welcome Introduction module for the <u>Welcome and</u> <u>Announcement Report</u> and <u>Limited Income Welcome Report</u>.

Your First Home Energy Report

August 12, 2021 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789

Get ready to save energy!

Report Type Label: The report type label identifies the report as the customer's first in a series of Home Energy Report. For example, "Your First Home Energy Report."
Welcome Introduction: The Welcome Introduction module provides the customer with a quick overview of the report topic. The introduction text varies slightly for new and legacy customers:

- Legacy customers: Customers that have received earlier versions of the reports are considered legacy customers. The Welcome Report and Limited Income Report for legacy customers acknowledges how the report has changed. The intro message for legacy customers is "Get ready to save more!"
- New customers: Customers that have never received a Home Energy Report are considered new customers. The Welcome Report and Limited Income Report for new customers introduces them to the new report and insights. The intro message for new customers is "Get ready to save energy!"

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Seasonal Report Introduction

Appears in: Seasonal Report

The Seasonal Introduction provides customers with a preview of their seasonal report focus. The goal of this module is to identify the Seasonal Report as part of the customer's Home Energy Report experience and provide them with a preview similar to the <u>Benchmark</u> <u>module</u> seen in the <u>Progress Report</u>.

This image is an example of the Summer Seasonal Introduction module.



Report Type Label: The label "Home Energy Report: Summer Edition" appears at the top of the Summer Seasonal Report <u>header</u>. The label explains what the piece of mail is and identifies it as a type of Home Energy Report.

Icons: A seasonally appropriate window image is included in the Introduction module.

Intro Message: A short, dynamic, seasonally-focused message places the report in context. For the summer variation, this message is, "Warmth in the air? Time to prepare!"

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Time of Use Introduction

Appears in: Time of Use Welcome Report

The Time of Use Introduction module appears within the header at the top of the <u>Time of Use</u> <u>Welcome Report</u>. The goal of this module is to identify the report type as part of the customer's Home Energy Report experience and prepare the customer for what they will see in the report.

This image is an example of the Time of Use Introduction module in a <u>Time of Use Welcome</u> <u>Report.</u>



Report Type Label: The label "Home Energy Report" appears at the top of the report and identifies it as part of the Home Energy Report Series. See the "Header" on page 86 to learn more about the header module that appears at the top of the front page of every report.

Introduction Text: A short, time of use-focused message places the report in context. For example, "Get ready to save more energy when it matters most!"

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Solar Introduction

Appears in: Solar Welcome Report.

The Solar Introduction module appears in the <u>header</u> of the <u>Solar Welcome Report</u>. The goal of this module is to identify the report type as part of the customer's Home Energy Report experience and prepare the customer for what they will see in the report.

This image is an example of the module's design for a Solar Welcome Report.

Your Home Energy Report

February 22, 2022 Account #1234567890 1000 Sunshine Blvd, Apt. B Austin, TX 12345-6789



Welcome to your Home Energy Report

Use these personalized reports to learn about your net energy and how you can get the most out of your solar panels.

Report Type Label: The label "Your Home Energy Report" appears at the top of the report and identifies it as part of the Home Energy Report Series. See the "Header" on page 86 to learn more about the header module that appears at the top of the front page of every report.

Icon: A solar icon echoes the solar-focus of the report.

Introduction Text: A short welcome message appears at the top of the report welcomes the customer to their solar report experience. For example, "Welcome to your Home Energy Report!"

Intro message: A short, solar-focused message places the report in context. For example, "Use these personalized reports to learn about your net energy and how you can get the most out of your solar panels."

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Electric Vehicle Introduction

Appears in: Electric Vehicle Progress Report

The Electric Vehicle Introduction module appears in the header of the <u>Electric Vehicle</u> <u>Progress Report</u>. The goal of this module is to identify the report type as part of the customer's Home Energy Report experience and prepare the customer for what they will see in the report.

This image is an example of the module in an Electric Vehicle Progress Report for a legacy customer.



Your report now has electric vehicle insights!

Report Type Label: The label "Home Energy Report" appears at the top of the report and identifies it as part of the Home Energy Report Series.

Intro message: A short message a reminds the customer that their report includes electric vehicle insights. The introduction message varies by customer type and use state. See <u>User</u> <u>Experience Variations</u> for more information.

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Peak Focused Introduction

Appears in: Peak Focused Report

The Peak Focused Introduction module appears in the header of the <u>Peak Focused</u> <u>Welcome Report</u>. The goal of this module is to encourage the customer to initiate energy reduction during peak usage hours.

This image is an example of the module in a Peak Focused Welcome Report for a legacy customer.



Report Type Label: The report title identifies the report as part of the Home Energy Report series.

Intro message: A short message tells the customer that their report includes information that will hep them save electricity at key moments.

User Experience Variations

Promotion Introduction

Utility Selected Preferred State

If the utility selects a preferred energy use category to support the main promotion, the icons that appear above the intro message correlate to the promoted end-use category, followed by the customers' second and third or first and second highest end-use categories. The intro message provides the customers with an overview of the energy use categories in which they could save more.

Heating and Cooling Top Use State

If a heating and cooling top use state is selected, the icons that appear above the intro message are heating and cooling icons, and the customer's other high end-uses are not mentioned in the introduction. However, the customer's tips will be related to their large end-use categories.

Heating and Cooling Utility Preferred

If a heating and cooling utility preferred state is selected, the icons that appear above the intro message are heating and cooling icons. The intro message tells the customer that they could be saving more in heating and cooling.

Gas-only Fuel Type

The introduction message for gas customers is, "Your top 3 gas costs."

Promotion Report: Dual fuel

If the customer's fuel type is dual fuel (combined) or electric they will see "Your top 3 energy costs" in the intro message. For example, Last year your top three energy costs cam from heating, water heating, and cooling."

Welcome Introduction

New and Legacy Customers

The introduction text varies slightly for new and legacy customers:

- Legacy customers: Customers that have received earlier versions of the reports are considered legacy customers. The <u>Welcome Report</u> and <u>Limited Income Report</u> for legacy customers acknowledges how the report has changed. The intro message for legacy customers is "Get ready to save more!"
- New customers: Customers that have never received a Home Energy Report are considered new customers. The <u>Welcome Report</u> and <u>Limited Income Report</u> for new customers introduces them to the new report and insights. The intro message for new customers is "Get ready to save energy!"

Seasonal Introduction

Winter Seasonal Report

The design elements for the summer and winter season modules are nearly identical with only slight modifications to the text and visuals to reflect the season.

Report Type Label (Not depicted): The label "Home Energy Report: Winter Edition" appears at the top of the Winter Seasonal Report header.

Intro Message: A short, dynamic, seasonally-focused message places the report in context. For the winter variation, this message is, "Colder weather is on the way!"

Seasonal Introduction

This module has no supported user experience variations.

Time of Use Introduction

Dual Fuel

If the customer's fuel type is dual fuel, the introduction message is "Get ready to save more energy when it matters the most!"

Solar Introduction

This module has no supported user experience variations.

Electric Vehicle Introduction

Introduction Text

The introduction text for electric vehicle customers varies based on whether they are a new or legacy customer, and their use state.

First Electric Vehicle Report:

- Legacy Customer: Customers that have received earlier versions of the reports are considered legacy customers. The introduction text for legacy customers highlights that their report has been improved to include electric vehicle insights:
 "Your report now has electric vehicle insights!"
- New Customer: If the customer is new to the Home Energy Report program and has never received a report before, the introduction text will communicate that the report will help them save energy:

"Get ready to save energy!"

Subsequent Electric Vehicle Reports: The introduction text for all additional reports varies based on the customer's use state:

- Great: "Great job being efficient!"
- Good: "Discover how to save more energy at home"

- Fair: "Explore what's impacting your home energy use"
- High Use to Low Use: "Great job! Your home energy use improved."
- Low Use to High Use: "Learn about your home energy use"

Mini Time of Use Reminder

Positioned in the top right of the progress version of the <u>Peak Focused Report</u>, the Mini Time of Use Reminder module is a customer's first point of reference for understanding peak electricity cost periods based on their Time of Use plan. The module clearly displays the multiplier for high-cost periods and their specific timings., provides a color-coded timeline that highlights peak times in for easy identification, and adapts to different utility peak times and billing structures, such as demand charges.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week.

Customer Requirements

Category	Description
Billing Frequency	Monthly or bi-monthly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	AMI data.Rate meta data.
Data History	A minimum of one historical bill.

Category	Description
Data Coverage	Not applicable.
Supported Fuels	Electric-only.

Limitations

- Peak Focused Report Only: This module is only available as part of the Peak Focused Report.
- Time of Use: Customers must be on a Time of Use Rate plan.

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User Experience

This section describes the user experience for a customer with three peak times.

From **4pm-7pm** on weekdays, the **highest usage hour** incurs a monthly **demand charge**

12am	6am		4pm	7pm
🔵 Off-peak		Partial-peak		On-peak

Header: The header informs the customers what the multiplier in cost will be during the peak period and what times the period will occur:

- Weekday price ratio: The multiplier of cost during the peak period.
- **High cost period label**: Rate plan-specific name for the high cost period. For example, peak period or on-peak.
- Weekday high cost period start time: The time the peak period will start. For example, 4pm.
- Weekday high cost period end time: The time the peak period will end. For example, 7pm.

Cost period bar: The cost period bar provides a visual representation of the cost periods.

 High Cost Period: The high cost period displays the most expensive time range, and is indicated by a warning-color. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."

- Medium Cost Period: The medium cost period label identifies the time range that is neither the most or least expensive, and is indicated by a medium warm color. It is dynamically rendered based on rate plan details. For example, "Partial-peak hours (\$\$)."
- Low Cost Period: The low cost period label identifies the least expensive time range, and is indicated by a light cool color. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

Cost start and end times: The cost period start time and end time are noted on the bar.

Cost period legend: The cost period legend identifies the cost periods represented in the cost period bar.

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User Experience Variations

Data States

The data states of the module are based on how many peak times the utility has, and whether the utility has a demand charge.

Two Peak Times

This image is an example of the Mini Time of Use Reminder module for two peak periods.

Electricity co during on-pe (3pm-6pm)	sts 1.2x more ak hours on weekdays
12am	3pm 6pm
📕 On-peak 📃 Off-p	oeak

Cost period bar: The cost period bar provides a visual representation of the high cost period.

- High Cost Period: The high cost period displays the most expensive time range, and is indicated by a warning-color. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."
- Low Cost Period: The low cost period label identifies the least expensive time range, and is indicated by a light cool color. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

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Demand Charge

This image is an example of the Mini Time of Use Reminder module for a customer with demand charge rate in addition to the Time of Use plan.

From **4pm-8pm** on weekdays, the **highest usage hour** incurs a monthly **demand charge**



If the customer has demand charging, then the user experience varies as follows.

Header: The header informs the customers when the demand charge occurs.

Weekday high cost period start time: The time the peak period will start. For example, 4pm.

- Weekday high cost period end time: The time the peak period will end. For example, 8pm.
- Cost period bar: The cost period bar provides a visual representation of the high cost period.

Cost period colors: The cost period provide the customer with a visual cue to draw their attention to the most crucial times to save every during peak events.

 High Cost Period: The high cost period displays the most expensive time range, and is indicated by a warning-color. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."

- Medium Cost Period: The medium cost period label identifies the time range that is neither the most or least expensive, and is indicated by a medium warm color. It is dynamically rendered based on rate plan details. For example, "Partial-peak hours (\$\$)."
- Low Cost Period: The low cost period label identifies the least expensive time range, and is indicated by a light cool color. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

Cost period legend: The cost period legend defines which colors represent cost periods in the cost period bar.

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Marketing Modules

Marketing modules encourage customers to take advantage of utility-specific or Oracle Utilities-specific products or programs. The modules are selected from a library of content that has been tested to optimize conversions and satisfaction. Small edits can be made to the text and visuals. For example, the modules can be customized to promote utility-specific programs (such as a home audit), products or features, processes, rebates, calls to action (URL, phone number, or both), and more.

Appears in: All report types.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Not applicable.

Category	Description
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable.
Data History	Not applicable.
Data Coverage	Not applicable.
Supported Fuels	Not applicable.

Limitations

- Module Size: Marketing module dimensions must be sized exactly to these specs.
- Module Options: Utilities must coordinate with their Delivery Team to select specific marketing modules for upcoming reports.
- Not Personalized: Marketing modules are static. They do not use dynamic data or personalized information for individual customers but can be targeted using segmentation and targeting.
- Customization Flexibility: The amount of customization available for marketing modules depends on the utility's service level purchase.
- Customization Flexibility: The amount of customization available for these marketing modules is limited by the utility contract. Contact your Delivery Team to discuss specific customization options.

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User Experience

This section describes the user experience for each report type.

This image is an example of a Progress Report marketing module.

Save more with a heat pump

Get up to \$4,000 on an air-source heat pump

When used year-round, heat pumps are one of the most cost-effective ways to heat and cool your home. Upgrade to an ENERGY STAR® air-source heat pump to save up to 50% on your heating costs. And if your home is electrically heated, you can also receive up to \$4,000 when you install a qualifying energy efficient air-source heat pump.

To learn more visit utilityco.com/heatpumprebate

This image is an example of the Promotion Report marketing module.



This image is an example of the winter seasonal marketing module included in the <u>Seasonal</u> <u>Report.</u>

Savings are great when you insulate

Save energy and stay cozy this winter

Improving your home's insulation is one of the most effective actions you can take to save energy. In fact, proper insulation can help you stay warmer in the winter while reducing your energy costs by 15%. So don't let your money leak out through the roof and walls—keep it in your pocket, where it belongs.

Plus, you can get up to \$100 in rebates on insulation materials from UtilityCo.

Discover how to insulate and save at utilityco.com/insulate.



This image is an example of a limited income marketing module included in the <u>Limited</u> Income Report.

Get help with your bill

Keep the lights on at home-even in a crisis

When you're going through a hardship, your energy bill should be the last thing on your mind. With our Community Assistance program, you can receive a credit of up to \$500 to cover your energy bill when you need it most.



See if you qualify now by scanning the code or visit **utilityco.com/billassistance**.

This image is an example of a time of use marketing module included in the <u>Time of Use</u> Report.

What's okay to use during peak hours?

You don't have to turn everything off to save electricity

Although it's good to save as much electricity as you can, continuing to use low-energy electronics (like your TV, phone chargers, and lights) won't necessarily drive your usage up too much during peak hours. Feel free to continue using these low-energy items as needed, while you focus on avoiding high-energy appliances, like your clothes dryer or dishwasher.

Find more ways to save at **utilityco.com/peak-savings**.



This image is an example of a marketing module designed to promote the benefit of solar panels in the Electric Vehicle Report.

Install solar to power your electric vehicle

You may have noticed your electric bills have increased since getting an electric vehicle (EV). To cut down on these costs, consider installing solar panels to power both your EV and your home!

While driving an EV is already beneficial for the environment, powering it with solar energy not only eliminates your gas usage, but uses electricity that is 100% renewable.

To learn more visit **utilityco.com/go-solar**.



Normative Comparisons

Normative comparison modules compare a customer against themselves (for example, their past energy usage) or their neighbors. These modules are designed to motivate customers to understand the underlying causes of the differences in each comparison and subsequently reduce energy.

Note: For most report types, utilities have the option of including either the Efficiency Zone or the Three-bar Normative Comparison module some report experiences. It is recommended that utilities with a savings-focus use the Three-bar Normative Comparison.

The design of the modules varies by report type and program design. Go to the individual module page to learn about the details of each module experience.

Efficiency Zone

The Efficiency Zone module is designed to motivate customers to save energy based on how they see themselves in relation to similar homes. It reframes the Efficient Homes concept from the Neighbor Comparison to improve customer satisfaction without heavily compromising energy efficiency. The module is comprised of a bar graph that compares customer and similar homes usage against an Efficiency Zone, and insights that place the customer's usage in context. Usage below or up to the threshold is considered in the "efficiency zone." The Efficiency Zone threshold is the average use of the most efficient 20% of similar homes during that bill period and might change with each report.

The normative comparison in Digital Self Service - Energy Management mirrors the customer's report experience. For example, a customer that receives the Efficiency Zone in their report will also see an Efficiency Zone in Digital Self Service - Energy Management. For more information about the web version of the Efficiency Zone, see <u>Digital Self Service</u> Energy Management Efficiency Zone.

Appears in: <u>Progress Report</u>, <u>Welcome and Announcement Report</u>, <u>Limited Income</u> <u>Report</u>, <u>Time of Use Report</u>

Note: Utilities have the option of including either the Efficiency Zone or <u>Three-Bar</u> <u>Neighbor Comparison</u> module in most report types.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly
Data Delivery Frequency	Monthly, bi-monthly, or quarterly
Data Requirements	Billing data and third-party data (GSI and parcel data)
Data History	A minimum of one historical bill
Data Coverage	Not applicable. See Data Requirements.
Supported Fuels	Monthly, bi-monthly, or quarterly

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Limitations

- Home Energy Reports vs. Web: HER v3 customers receive an Efficiency Zone user variation in the web product which differs slightly from the Efficiency Zone in the reports. See the Neighbor Comparison section of the <u>Oracle Utilities Opower Digital Self Service</u>
 Energy Management Cloud Service Product Overview for more information.
- Third-Party Data: Third-party data (GIS and parcel data) is needed to identify neighbors for the neighbor selection process.

- Neighbor Selection: A minimum number of neighbors (the default target is 100) must be selected for the customer. See Neighbor Selection Detailed for more information.
- Solar Report: The Efficiency Zone cannot be included in the <u>Solar Report</u>. Solar customers receive a solar variation of the three-bar neighbor comparison. See <u>Three-bar Neighbor Comparison</u> for more information.

User Experience

Efficiency Zone

This section describes the standard user experience for the Efficiency Zone as seen in several report types.

Appears in: <u>Progress Report</u>, <u>Welcome and Announcement Report</u>, <u>Limited Income</u> <u>Report</u>, <u>Time of Use Report</u>,

This image is an example of the Efficiency Zone.



Heading: The title reads, "How you compare to others." It invites the customer to explore their normative comparison and learn about their energy use in more detail.

Threshold: The label above the graph introduces the maximum Efficiency Zone threshold (for example, Up to 500 kWh). The threshold is the average use of the 20th percentile of similar homes during that bill period. A green tinted rectangle and darker vertical line indicate the range and upper boundary of the Efficiency Zone, enabling customers to quickly see whether they are in the zone. The threshold is recalculated and changes with each report.

Graph: The bar chart displays how much energy the customer (You) used in comparison with Similar Homes. The Similar Homes bar indicates the average use of the customer's neighbors.

Hero Insight: The hero insight is the large colorful numeric percentage to the right in the gray column which displays the customer's status relative to the Efficiency Zone or to Similar Homes. The color of the large number and percent sign varies, depending on their state. If the customer is within the Efficiency Zone, the large number is green. If the customer is not within the Efficiency Zone, the large number is orange.

The hero insight has three primary states:

- Great: In the Efficiency Zone
- Good or Fair: Outside the Efficiency Zone
- Fair: Higher than Similar Homes

Explainer Text: The explainer text defines the efficiency zone for the customer.

Secondary Insight: The secondary insight the smaller green check mark or orange X - (not pictured) located under the Hero Metric that presents the customer with their status relative to the other comparison group. Depending on how the customer is performing, the color of the secondary insight is either green (Great or Good) or orange (Fair). There are several possible states:

- Great: In the Efficiency Zone
- Great: Near the Efficiency Zone
- Good: Lower than Similar Homes
- Good: About the same as Similar Homes
- Fair: Not in the Efficiency Zone

User Experience Variations

Fuel Type

Gas-only and dual fuel customers see a variation in the units of energy displayed in the Efficiency Zone module. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel customers. Moreover, there is a variation in the wording of the insight statement. The word "electricity" is replaced by "natural gas" for gas-only customers, and "energy" for dual fuel customers.

Substituting the Neighbor Comparison for the Efficiency Zone

Utilities have the option of including either the Efficiency Zone or <u>Three-Bar Neighbor</u> <u>Comparison</u> module in their reports. It is recommended that utilities with a savings-focus include a Three-bar Neighbor Comparison in their report experience instead of the Efficiency Zone. Contact your Delivery Teamfor more information.

Peak Focused Normative Comparison

The Peak Focused Normative Comparison module educates customers about their energy use relative to other homes during on-peak periods. The module compares the customer ("You") to their neighbors, "Efficient Neighbors" and "Average Neighbors," and provides them with a comparison state (such as fair, good, or great) to help them measure how their electricity use is compared their neighbors. The results are displayed in a horizontal bar graph. Total electricity usage values are also displayed so the customer can have a better understanding of what their on-peak use compared to their total use during the bill period. An informational text below the bar graph explains that "Efficient Homes" represent the 20% of similar homes in the customer's comparison group that used the last amount of energy in the billing period, and provides information about how the graph works. Depending on the customer that savings are still within reach or informs them that they are leading their neighbors in savings.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	 Billing data and third-party data (for example, GIS and parcel data). AMI data

Category	Description
Data History	A minimum of one historical bill.
Data Coverage	AMI data for on-peak periods must have 100% of available reads for the customer.
Supported Fuels	Electric-only.

Limitations

- Peak Focused Report: This modules is only available as part of the <u>Peak Focused</u> Report.
- Time of Use Rate Plan: This module is only available to customers with a Time of Use rate plans.

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User Experience

This section describes the user experience for a customer with a good data state.



Heading: The heading notifies the customer that the normative provides them with a comparison of their on-peak hours usage to their neighbors.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically, the bar with the smallest value is on top and the bar with the largest value is on the bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Neighbors: The bar displays a usage value for the most efficient 20% of the customer's neighbors. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient homes value that appears in the module is not an average of the top 20% of similar homes. A threshold value—the 20th percentile of similar homes—is used to determine the efficient homes value. Efficient homes are not chosen in advance.

Explainer Text: Text below the bar chart includes an efficient homes description that defines efficient neighbors that the customer is being compared to as the 20% of similar homes in their comparison group that used the least energy. The fuel units used in the comparison are defined below the efficient neighbors description.

Insight Statement: The insight statement is located to the right of the bar chart and provides the customer with information about why the bar chart appears the way it does. Each data state has a unique top and bottom insight.

- Billing Period: The report billing period is located at the top of the insight statement.
- Top Insight: The top insight displays either a percentage or a message telling the customer how much more or less energy they used compared to their most relevant comparison group. The percentage color changes depending on whether the customer's usage is "great" "good" or "fair". The color of the insight changes based on the customer's usage to their most relevant comparison group."
- Bottom Insight: The bottom insight provides feedback indicating either a potential financial savings or a percentage insight to help interpret the impacts of current on-peak energy use. The financial version uses the customer's Time of Use rate to calculate an approximate annualized cost of the energy use gap between the recipient and their most relevant comparison group. For example, "\$150 could be saved per year if your on-peak usage was like efficient homes." The percentage indicates how much more or less energy the customer has used compared to their most relevant comparison group. See User Experience Variations for more information.

User Experience Variations

Insight Statement Variables

The insights included in the module are determined by the customer's usage state (Fair, Good, Great), threshold state (monetary, fallback, or alternative), and whether the program uses neighbors or similar homes language.

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Usage States

Possible customer usage states include the following:

- Fair
- Good
 - Near, but MORE than average neighbors
 - Near, but LESS than average neighbors
 - Near Similar Homes by +/- .5%
- Great
 - Near Efficient Homes by + .5%
 - Near Efficient Homes by -.5% Zero Usage

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Insight Statement States

The insights vary slightly depending on the relationship of the customer's cost or savings to the cost or saving threshold. The threshold is conferrable.

- Monetary: The monetary state is used when the cost or savings values are greater than the cost/savings threshold.
- Fallback: The fallback state is used when the cost or savings are not greater than the threshold.
- Alternative: The alternative state is used when the fallback state is enabled and the usage percentage is greater than 99%.

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Neighbors and Similar Homes Language

Utilities can configure the normative comparison to include "similar homes" or "neighbors" language." This option allows utilities to present the normative comparison data in the way that best suits their customers. For example, in rural regions where "neighbors" are spaced

far apart or separated by farmhouses or farmland, or in urban environments where "neighbors" include diverse apartment units, the term "neighbors" may be confusing to customers. While the selected language does not change the group of homes a customer is compared to, the language used in the insights varies slightly.

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Insight Statement Variations

The table below captures the possible insight statement variations.

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
Fair	Moneta ry	Your on- peak hour s usag e is fair	You have room for savings! Look for tips in this report		\$ could be saved per year if your on-peak usage was like average neighbo rs	\$ could be saved per year if your on-peak usage was like similar home
	Fallbac k		Your electricity use during on- peak hours was higher than average neighbors by X%	Your electricity use during on- peak hours was higher than similar homes by X%	You used more electricit y during on-peak hours than efficient	You used more electricit y during on-peak hours than efficient

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
					neighbo rs	homes
	Alternat ive		Your electricity use during on- peak hours was higher than average neighbors	Your electricity use during on- peak hours was higher than similar homes	Your used more electricit y during on-peak hours than efficient neighbo rs	You used more electricit y during on-peak hours than efficient homes
Good	Moneta ry	Your on- peak hour s usag e is good	You're doing well, but you still have room for savings! Look for tips in this report.		\$ could be saved per year if your on-peak usage was like efficient neighbo rs	\$ could be saved per year if your on-peak usage was like efficient homes
Good - Fallbac k when	Fallbac k		Your electricity use during on-	Your electricity use during on-	You used less	You used less

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
the moneta ry savings insights cannot be used			peak hours was higher than efficient neighbors by X%	peak hours was higher than efficient homes by X%	electricit y during on-peak hours than average neighbo rs	electricit y during on-peak hours than similar homes
	Alternat		Your electricity use during on- peak hours was higher than efficient neighbors	Your electricity use during on- peak hours was higher than efficient homes	You used less electricit y during on-peak hours than average neighbo rs	You used less electricit y during on-peak hours than similar homes
Good (near, but MORE than averag e neighb ors)	Moneta ry	Your on- peak hour s usag e is good	You're doing well, but you still have room for savings! Look for tips in this report.	\$ could be saved per year if your on-peak usage was like efficient neighbors	\$ could be saved per year if your on-peak usage was like efficient homes	\$ You used less electricit y during on-peak hours than similar homes

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
	Fallbac k		Your electricity use during on- peak hours was higher than efficient neighbors by	Your electricity use during on- peak hours was higher than efficient homes by X%	You used about the same electricit y during on-peak hours as average neighbo rs	You used about the same electricit y during on-peak hours as similar homes
Good (near, but LESS than averag e neighb ors)	Moneta ry		You're doing well, but you still have room for savings! Look for tips in this report.	\$ could be saved per year if your on-peak usage was like efficient neighbors	\$ could be saved per year if your on-peak usage was like efficient homes	\$ could be saved per year if your on-peak usage was like efficient homes
	Fallbac k		Your electricity use during on- peak hours was higher than efficient neighbors by	Your electricity use during on- peak hours was higher than efficient homes by	You used about the same electri	You used about the same electricit

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
			X%	X%	city during on-peak hours as average neighbo rs	y during on-peak hours as similar homes
Good (Near by +/- .5%)	Alternat		Your electricity use during on- peak hours was higher than efficient neighbors	Your electricity use during on- peak hours was higher than efficient homes	You used about the same electricit y during on-peak hours as average neighbo rs	You used about the same electricit y during on-peak hours as similar homes
Great	Moneta ry	Your on- peak hour s usag e is great	Nice! Your on-peak electricity use was lower than efficient neighbors by X%	Nice! Your on-peak electricity use was lower than efficient homes by X%	You used less electricit y during on-peak hours than average neighbo	You used less electri city during on-peak hours than similar

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
					rs	homes

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
Great (Near, but MORE than efficient homes)	Fallbac k		Nice! You used about the same as efficient homes/neigh bors. You're in the most efficient X%	Nice! You used about the same as efficient homes/neigh bors. You're in the most efficient X%	You used less electricit y during on-peak hours than average neighbo rs	You used less electricit y during on-peak hours than similar homes
Great (Near, but LESS than efficient neighb ors)			Nice work! Compared to average neighbors, you were in the most efficient X%	Nice work! Compared to similar homes, you were in the most efficient X%	You used less electricit y during on-peak hours than average neighbo rs	You used less electricit y during on-peak hours than similar homes
Great Near Efficien t Homes by + .5%	Alternat ive		Nice! You used about the same as efficient neighbors. You're in the most efficient	Nice! You used about the same as efficient homes. You're in the most efficient	You used less energy than average neighbo	You used less energy than similar homes

Usage State	Insight Statem ent State	Hea der	Top Insight - Neighbors Language	Top Insight - Similar Homes Language	Bottom Insight - Neighb ors Langua ge	Bottom Insight - Similar Homes Langua ge
Great Near Efficien t Homes by5%			X%	X%	rs	
Zero Usage	Moneta ry	Your on- peak hour s usag e is fair	You have room Look for tips in t	for savings! this report!	\$ could be saved per year if your on-peak usage was like average neighbo rs	\$ could be saved per year if your on-peak usage was like similar homes

Bottom Insight - Financial vs. Percentage Insight

The financial version of the bottom insight is enabled by default. If the percentage version of the insight is enabled, then the bottom insight indicates how much more or less energy the customer has used compared to their neighbors.



Data States with Icon Sets

Utilities have the option of including an icon set displayed beside the main insight heading. Each icon set has a unique display for Fair, Good, and Great states. The state of the icon set in the report matches the state of the normative comparison. Icon set options include:

- No icons (Off)
- Smiley icons: Neutral or thinking
- Leaf icons
- Medal icons

The following images is an example of the Peak Focused Normative Comparison module with smiley icons enabled.



The following image is an example of the thinking comprehension-focus smiley icons in a fair usage state.



The following image is an example of the environmental-focus leaf icons for a good usage state.



The following image is an example of the competitive-focus medal icons for a great usage state.



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Seasonal Normative Comparison

The Seasonal Normative Comparison module compares the customer's cooling or heating energy use from the previous season compared to other homes. This comparison motivates them to reduce cooling energy use during the upcoming extreme weather season.

Appears in: Seasonal Report
This section describes the summer Seasonal Normative Comparison experience for a customer whose program includes an Efficiency Zone.

LAST SUMMER

You used **more** on cooling than homes in the Efficiency Zone*



*Homes in the Efficiency Zone are the 20% of similar homes that used the least amount of energy from Jun 6 - Aug 30, 2020.

Normative Message Label: The label identifies the comparison season. For example, "Last Summer."

Insight: The insight summarizes the information in the bar chart.

Bar Chart: The bar chart displays how much energy each group in the comparison used.

You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.

Homes in the Efficiency Zone or Similar Homes: This bar indicates how all the customer's neighbors are doing. It is usually green. The energy use data that is shown is the mean energy use value. The bar is labeled according to the version of the normative comparison graph used in the customer's Progress Report.

Normative Insight : The insight appears above the bar chart and provides information about why the bar chart appears the way it does.

Explainer: Text to the left of the bar chart defines the season date range.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Three-Bar Neighbor Comparison

The Three-bar Neighbor Comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors. It compares the customer ("You") to two groups: Efficient Homes" and "Similar Homes." The results are displayed in a horizontal bar graph. An insight statement on the right indicates whether the customer falls in one of three states:

- Great
- Good
- Fair

A brief message indicates how the customer compares to efficient homes in the area. An informational section below the bar graph explains that "Efficient Homes" represent the 20% of similar homes in the customer's comparison group that used the least amount of energy in the billing period and provides information about how the graph works.

The neighbor comparison in Digital Self Service - Energy Management mirrors the customer's report experience. For example, a customer that receives the Efficiency Zone in their report will also see an Efficiency Zone in Digital Self Service - Energy Management. For more information about the web version of the neighbor comparison, see <u>Digital Self Service</u> <u>Energy Management Neighbor Comparison</u>.

Appears in: <u>Progress Report</u>, <u>Welcome and Announcement Report</u>, <u>Limited Income</u> <u>Report</u>, <u>Time of Use Report</u>, <u>Solar Report</u>, <u>Electric Vehicle Report</u>

Note: For most report types, utilities have the option of including either the Three-Bar Neighbor Comparison module or <u>Efficiency Zone</u> in their report.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly
Data Requirements	Billing data and third-party data (GIS and parcel data).
Data History	A minimum of one historical bill.
Data Coverage	Not applicable. Billing level data is used.
Supported Fuels	 Solar Report, Electric Vehicle Report: Electric-only, dual fuel Progress Report, Welcome and Announcement Report, Limited Income Report, Time of Use Report: Electric-only, gas-only, and dual fuel.

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Limitations

- Neighbor Selection: A minimum number of neighbors (the default target is 100) must be selected for the customer. See Neighbor Selection Detailed for more information.
- Home Energy Reports vs. Web: HER v3 customers receive an Efficiency Zone user variation in the web product which differs slightly from the Efficiency Zone in the reports. See the Neighbor Comparison section of the <u>Oracle Utilities Opower Digital Self Service</u>
 Energy Management Cloud Service Product Overview for more information.
- Third-Party Data: Third-party data (GIS and parcel data) is needed to identify neighbors for the neighbor selection process.

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User Experience

This section describes the user experience for each report type.

Three-Bar Neighbor Comparison

This section describes the user experience for the <u>Progress Report</u>, <u>Welcome and</u> <u>Announcement Report</u>, <u>Limited Income Report</u>, and <u>Time of Use Report</u>.



Heading: The heading notifies the customer that the neighbor comparison gives them a comparison of their energy use to similar homes.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically, the bar with the smallest value is on top and the bar with the largest value is on the bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Similar Homes: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Homes: This bar displays a usage value for the most efficient 20% of the customer's similar homes. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient homes value that appears in the module is not an average of the top 20% of similar homes. A threshold value—the 20th percentile of similar homes—is used to determine the efficient homes value. Efficient homes are not chosen in advance.

Normative Message / Insight Statement: The normative message appears below and to the right of the bar chart and provides an insight (for example, "29% more electricity than efficient homes") about why the bar chart appears the way it does. Specifically, it displays a percentage for either how much more or less the customer used compared to their "efficient homes," or how much more or less the customer used compared to "neighbors" (that is, all neighbors, including efficient neighbors).

- Efficient Homes Description: The neighbor comparison module includes an efficient homes description that defines efficient homes that the customer is being compared to as the 20% of similar homes in their comparison group that used the least energy.
- Fuel units: The fuel units used in the comparison are defined below the efficient homes description.

Customer Bill Alignment: Occasionally, the customer's previous bills do not coincide exactly in time with the previous bills of the customer's efficient homes. In order to arrive at the similar homes averages, it is necessary to align the similar homes energy use amounts with the customer's energy use amounts. In these scenarios, the application pro-rates, or "time-shifts," the similar homes bills to align with the customer bills by determining and adjusting for the amount of overlap. The time-shifted neighbor bills are then used to determine the neighbor averages.

Solar Three-Bar Neighbor Comparison

This section describes the Solar Three-Bar Neighbor Comparison user experience for a solar customer with a positive comparison state. The module accommodates the net zero and excess generation (negative) reads of solar customers. The graph varies based on the benchmark state, fuel type, neighbors and similar homes language, and whether the

customer has positive, negative, or net zero energy use. See <u>User Experience Variations</u> for more information.

Note: In the Solar Report, 'energy use' is replaced with 'net energy' to capture both use and production.

This image is an example of the Solar Three-Bar Neighbor Comparison that appears in the Solar Report.



Heading: The heading identified the customer as a solar customer and indicated that they will be compared to other solar homes or neighbors:

- Similar Homes: This bar indicates how all the customer's neighbors are doing.
- Neighbors: How the customer's net energy compares to other neighbors with solar.

Bar chart: The bar chart shows a customer's net energy compared to other homes with solar. The comparison groups are informed by the same logic as the standard experience but only include other homes with solar. A net zero indicator and three increment indicators are included on the graph to help orient the customer. Bar graph categories include:

- Efficient homes with solar: This bar displays a usage value for the most efficient 20% of the customer's similar homes.
- Similar homes with solar: This bar indicates how all the customer's neighbors with solar are doing.
- You: This bar indicates the customer's energy use.

The appearance of the bar graph varies depending on whether the customer has positive, negative, or net zero energy use. Possible comparison states include:

- **Positive comparison state**: In a positive comparison state, all graph bars show positive readings, meaning that the customers used more energy than their panels produced.
- Straddle comparison state: In the straddle comparison state, the graph shows a mix of positive and negative reads.
- Negative comparison state: If the customers used less energy than their panels produced, all graph bars show negative readings.

Explainer Text: The explainer text section of the solar three-bar neighbor comparison module includes definitions of net energy, comparison groups, and fuel used in the insights. See User Experience Variations for more information.

Electric Vehicle Three-Bar Neighbor Comparison

This section describes the Three-Bar Neighbor Comparison user experience for a solar customer with a positive comparison state. The Electric Vehicle Three-Bar Neighbor Comparison is adapted to show the impact of electric vehicle charging on home energy use. The graph varies based on the benchmark state, fuel type, and whether the customer has similar homes or neighbors language. See User Experience Variations for more information.

This image is an example of the Electric Vehicle Three-Bar Neighbor Comparison that appears in the <u>Electric Vehicle Report</u> for an electric vehicle customer with a good comparison state and similar homes language.



Heading: The heading indicates that the customer will be compared to other homes.

Bar chart: The bar chart shows a customer's energy use compared to other single family homes that may or may not have electric vehicles. The comparison groups are informed by the same logic as the standard experience but includes the customer's electric vehicle charging. Bar graph categories include:

- Efficient homes: This bar displays a usage value for the most efficient 20% of the customer's similar homes.
- Similar homes: This bar indicates how all the customer's neighbors are doing.
- You: This bar highlights the home energy use in relation to Efficient and Similar homes. It
 includes the customer's home energy use, electrical vehicle charging, and total energy
 use, but excludes EV charging

The appearance of the bar graph varies depending on the customer's comparison state. Possible comparison states include:

- Fair: Home energy use, excluding electric vehicle charging, was more than efficient homes or average neighbors.
- Good: Home energy use, excluding electric vehicle charging, was more than efficient than similar homes or average neighbors.
- **Great**: Total energy use was less than efficient homes or average neighbors.
- Near: Within more or less than five percent of the average efficient homes or average neighbor value.

Explainer Text: The explainer text defines the comparison group and efficient homes. The explainer state and text is determined by the available customer data. For example, square footage, heating source, home type, and fuel type data.

Insights: The purpose of the normative message and insight statement are to provide information about why the bar chart appears the way it does.

Insight Statement: The insight statement appears to the right of the bar chart and provides information about why the bar chart appears the way it does. The insight states are related to the Benchmark module states of Great, Good, and Fair. The insights states are related to the Benchmark state. See the <u>Benchmark</u> module for more information.

- **Top insight:** The top insight displays a percentage for either how much more or less the customer used compared to their "efficient homes. The percentage color changes depending on whether the customer's usage is Great, Good, and Fair.
- Bottom insight: The bottom insight tells the customer how their usage compared to compared to all neighbors, including efficient neighbors.

User Experience Variations

Three-bar Neighbor Comparison

This section describes variations applicable to the Three-bar Neighbor Comparison.

Gas-only, dual fuel

Gas-only and dual fuel customers see a variation in the units of energy displayed in the Three-bar Neighbor Comparison module. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel and solar customers.

Explainer Text

The explainer text varies by the available customer data, including:

- Square Footage
- Heating Source
- Home Type
- Fuel type

For example, the words "heating source" and "square footage" will appear in the explainer text for customers with confirmed square footage and heating source data, but not for others.

Fuel Units

The fuel units definition varies by customer fuel type:

- Electric-only: "A kilowatt-hour (kWh) is the standard unit used to measure electricity use".
- Gas-only: "A therm is a standard unit of measurement used to calculate gas use."
- Dual fuel: "Units represent a combination of electricity (kWh) and natural gas (therms)."

Insight Statement

The insight statement insights that provide the customer with a summary of their energy use compared to efficient homes or average neighbors. The insight statement is impacted by the customer's Benchmark state and fuel type.

The following table is an example of how the insight statement varies by fuel type for customers with a Great benchmark state.

Fuel Type	Benchmark State	State Edge Case	Top Insight	Bottom Insight
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Electric-only and Dual fuel	Great	Near but more than efficient homes	Nice! You used about the same as efficient homes. You're in the most efficient 20%	You used less energy than similar homes.
Gas only				You used less gas than similar homes.

Solar Neighbor Comparison

This section describes variations applicable to the Solar Neighbor Comparison.

Explainer Text

The explainer text includes content explaining net energy, the solar comparison group, and fuel. These explainers vary by fuel type, whether the customer receives similar homes or neighbors language, and home type. For example, "electricity" is used in reports for customers with net energy / dual fuel, and "energy" is used for customers with net energy / electric-only reports. "Efficient homes" or "Efficient Neighbors" appears depending on the neighbors language selected for the utility program. The following example of solar explainer text is for a solar customer with net energy / duel fuel enrolled in a program with similar homes language.

"Net energy is the difference between the amount of **electricity** your solar panels produce and the amount of gas and electricity you use. **Efficient homes** with solar are the 20% of homes in your comparison group with the lowest net energy."

Comparison Group Explainer Text

The comparison group explainer includes home type data. For example, if a customer's home type can not be confirmed, the text states that the comparison group is made of, "100 similar homes with solar in your area." If the customer data confirms that the customer lives in a single-family home, the text mentions that they were compared to other single-family homes, "100 single-family homes with solar in your area."

Fuel Explainer Text

The fuel explainer defines the unit used to measure the customer's fuel type.

- Duel fuel: A unit is a combined measurement of electricity (kWh) and gas (therms) use
- Electric: A Kilowatt-hour (kWh) is the standard unit used to measure electricity use.

Solar Comparison States

The appearance of the bar graph varies depending on the graph comparison state:

Positive Comparison State: In a positive comparison state, all graph bars show positive readings, meaning that the customers used more energy than their panels produced. This image is an example of a positive comparison state.



When the large number in the sidebar reaches a value of 101% or more, a positive alternate insight without a percentage is displayed to avoid comprehension issues. For example, "Nice! Your net energy was lower than Efficient homes!"

Straddle Comparison State: In the straddle comparison state, the graph shows a mix of positive and negative reads. The module varies based on fuel type, language type, and whether the customer's "You" bar is positive or negative.



Negative Comparison State: If the customers used less energy than their panels produced, all graph bars show negative readings. The module varies depending on the customer's benchmark state and fuel type.

The following image is an example of a negative comparison state in a Good benchmark state.



The following image is an example of a negative comparison state when the You value is rounded up or down to 0.



Welcome and Announcement Report

This section describes variations applicable to the <u>Three-Bar Neighbor Comparison</u> in the <u>Welcome and Announcement Report</u>.

Neighbor Comparison Placement

Utilities have the option to swap the placement of the <u>Quadrant Module</u> with the Neighbor Comparison or <u>Efficiency Zone</u>. See the <u>Welcome and Announcement Report</u> for more information.

Page Turn

The Page Turn module is included at the bottom of the front page of the report and contains a message and an arrow icon, prompting users to turn over the report for more information. The messaging of the module varies by <u>report type</u> and promotion type.

The Page Turn module is different than the <u>Utility Info</u> module, which appears in the footer on the back of the report.

Appears in: All report types.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Not applicable.
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable.
Data History	Not applicable.
Data Coverage	Not applicable.
Supported Fuels	Not applicable.

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Limitations

There are no applicable module limitations.

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User Experience

This section describes the user experience for the Progress Report.

Want to reduce your home's energy use? Turn over for personalized savings advice.

Message: The message is designed to motivate the customer to turn over the page and view content on the back.

"Want to reduce your home's energy use?"

Prompt: The prompt encourages the customer to turn over the report and learn more.

"Turn over for personalized savings advice."

Arrow Icon: The arrow footer directs customers to the back of the report.

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User Experience Variations

Page Turn by Report Type

The table below provides the page turn variations by report type.

Report	Report Version	Message	Prompt
Welcome and Announcement Report	Welcome	Turn over to explore your new energy- saving insights	Not applicable.
	Announcement	Turn over to explore your Home Energy Report insights and ways to save	
Promotion Report	Not applicable.	Curious about [End Use 1] and [End Use	Turn over for more ways to save.

Report	Report Version	Message	Prompt
		2]?	
Seasonal Report	Winter Seasonal	Ready to save more this winter?"	Turn over for ways to stay warm while you save
	Summer Seasonal	Ready to save more this summer?	Turn over for ways to stay cool while you save
Limited Income Report	Welcome	Turn over to explore your new energy- saving insights	Not applicable.
	Progress	Want to reduce your home's energy use?	Turn over for personalized savings advice.
Time of Use Report	Welcome	Turn over to explore your new energy- saving insights	Not applicable.
	Progress	Want to save more on your bill?	Turn over to explore your new energy- saving insights.
Solar Report	Welcome	Ready to start saving more?	Turn over for personalized insights.

Report	Report Version	Message	Prompt
	Progress	Save even more	Turn over for insights and tips.
Peak Focused Report	Welcome	Turn over to explore your new energy- saving insights	Not applicable.
	Progress	Want to reduce your home's energy use?	Turn over for personalized savings advice.
Electric Vehicle Report	Progress	Want to reduce your home's energy use?	Turn over for personalized savings advice.

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Promotion Report

Heating and Cooling Combined: In a Promotion Report that features Heating and Cooling combined, the page turn copy is, "Looking for more ways to save? Turn over for personalized tips."

Gas-only: For customers with gas-only fuel type 'energy' is replaced with 'gas.' The page turn copy is altered to mention gas, "Want to reduce your home's gas use?"

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Welcome and Announcement Report

Normative Comparison and Quadrant Placement: Utilities have the option to swap the placement of the Quadrant Module and normative comparison module (Efficiency Zone Module, Three-bar Normative Comparison, or Peak Focused Normative Comparison) in the Welcome and Announcement Report. In this instance, the page turn copy is, "Turn over to explore your new energy-savings insights."

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Gas-only

For customers with gas-only fuel type 'energy' is replaced with 'gas.' The page turn copy is altered to mention gas, "Turn over to explore your new gas-saving insights"

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Personal Tracker

The Personal Tracker provides customers with up to one year's comparison of their current year's usage to the previous year. It offers a range of data scenarios, displaying usage information across as few as three bills or as many as two full years of bills. The module includes an evaluative statement that assesses the customer's performance, a bar chart for visualization, seasonal helpers, and insights into why their energy use may have increased, decreased, or remained the same. This module may be used as a replacement for the <u>Self-Comparison</u> module located on the back of the <u>Progress Report</u>.

Appears in: Progress Report.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Not applicable.

Category	Description
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Progress Reports: Electric-only, gas-only, dual fuel.

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Limitations

The module can be used as a replacement for the <u>Self-Comparison</u> module in the <u>Progress Report</u>.

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User Experience

This section describes the user experience of an electric-only customer, followed by how the user experience may vary.



Header: The header informs the customer that the module is a comparison of their current energy use to the previous year.

Chart: The bar chart displays the customer's bills over time and provides a comparison to previous energy use if enough data is available. By default, it will compare the customer's energy usage month over month going as far back as the beginning of the previous year. It also supports customers with bimonthly or quarterly bill periods.

- Unit of measurement: The unit of measurement varies by fuel type: kWh, therms, and units.
- Insight icon: An insight icon positioned above the current month correlates to the secondary insight located below the chart.

Insight: The insight located next to the chart informs the customer if their energy use has increased or decreased since the previous bill period.

Secondary insight: The secondary insight provides explanations for why their energy use may have increased or decreased compared to the previous billing period, particularly in relation to changes in temperature. The module uses weather insight calculations to determine whether the average temperature was higher or lower between the current and comparison billing periods. Based on this calculation, the Personal Tracker provides suggestions as to why the customer's energy use increased or decreased.

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User Experience Variations

Fuel Type

The module varies by customer fuel type:

Dual Fuel: For dual-fuel customers, 'energy use 'is used in the module title and insights. The measurements is in units.

Gas: For gas customers, gas-specific language us used in the title and insight. The measurements are in therms.

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Available data

The user experience is impacted by the amount of available data.

Less than 13 months of data

If less than 13 months of data is available, the header changes to 'Track your progress.' The current bill is compared to previous period since a year or less of data is available.



13 months or more of data with one January bill

If the customer has at least 13 bills available, but only one of them is from January, the bars for missing months of the previous year do not appear in the chart.



13 months or more of data with two January bills

If the customer has at least 13 bills available, including two January bills, the module emphasizes that the chart is a comparison with the previous year.



Missing Data - Missing Bill

In cases where a bill is missing, an asterisk appears next to the corresponding x-axis label, and a message at the bottom of the module explains the possible reasons for the missing data. For example "Bills may be missing due to 0 kWh energy usage or no bills found for specific periods.".



Missing Data - Missing Year Over Year Comparison

In cases where a customer has more than 13 months of data is available but a comparison with last year's billing period is not possible because data from similar billing period from last year is missing, the comparison takes place with the previous billing period value. There is no secondary insight in this use case or an information icon above the current month.



Missing Data - Missing Bill and Year Over Year Comparison

For cases where comparison with last year's similar billing period is not possible and we cannot compare to the previous bill period, the module fails.

Billing

Bi-monthly Billing

If a customer has bi-monthly bills, the energy use bar will be plotted at the end of the twomonth period. This results in fewer data points compared to monthly bills. The seasonal icons above the chart are replaced with a short explainer text, "We report energy use based on the end of your bimonthly bill period."



Quarterly Billing

If a customer has quarterly bills, the energy use data bar will be plotted at the end of the three-month period. This results in fewer data points compared to monthly or bi-monthly bills. The seasonal icons above the chart are replaced with a short explainer text, "We report energy use based on the end of your quarterly bill period."



Program Promotion Module

The Promotion module enables the utility to promote a program of their choice that is related to the available disaggregation categories: heating, cooling, water heating, appliances, lighting, and fridge. The module is designed to help the customer evaluate whether the effort of taking action is worth the potential savings. Oracle Utilities Opower works directly with the

utility to design the promotion module on the front of the report to be specific to the report promotion.

Appears in: Promotion Report



Header: The header introduces the promotion and prepares the customer to learn about how they can save.

Rebate or Discount: This rebate or discount specifies how much the customer can save if they take advantage of the promotion.

Body Text: The body text explains the benefit of taking advantage of the promotion. For example, the greater focus for the water heater promotion is justifying the higher cost. Reputable information is also provided in the body text to help convince the customer of why the promotion is worthwhile.

Illustration: A set of customer-friendly images that encapsulate the promotion focus.

Link: The link directs the customer to where they can access the promotion.

Quadrant Modules

The Quadrant modules echo the theme of the <u>Announcement</u> module, and provide the customer with context and rationale for the personalized insights included in the <u>Welcome</u> and <u>Announcement Report</u>, <u>Time of Use Report</u>, <u>Limited Income Report</u>, and <u>Solar Report</u>.

Announcement Quadrant

The Quadrant module in the Announcement Report includes four customized sections that echo the theme of the <u>Announcement</u> module, and provides the customer with context and rationale for the personalized insights included in the report.

Appears in: Welcome and Announcement Report



Feature Heading: A primary feature heading that reemphasize the focus of the report.

Quadrants: Four custom quadrants that include a heading and text that highlight the announcement goal, and orients customers to the four custom aspects of their report experience.

Images: Images that complement the each of the quadrant messages.

Welcome Quadrant

The Quadrant module in the Welcome Report and Limited Income Report can be included on the front or back of the report, and includes standardized copy designed to educate new and legacy customers on the key features and benefits of the report. The focus of the quadrant varies by report type. Appears in: <u>Welcome and Announcement Report</u>, <u>Limited Income Report</u>, <u>Time of Use</u> <u>Report</u>, <u>Solar Report</u>, and <u>Peak Focused Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Not applicable.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	 Welcome and Announcement Report, Limited Income Report, Time of Use Report: Electric-only, gas-only, and dual fuel. Solar Report: Electric-only, dual fuel. Peak Focused Report: Electric-only.

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Limitations

 Peak Focused Report: The Peak Focused Report is only available for the electric fuel type.

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User Experience

This section describes the user experience for each report type.

Welcome and Announcement Report - Welcome Quadrant

The Quadrant module orients new customers to the four parts of the report experience: normative comparison, tips, variable insights, and how to get started

This image is an example of a Quadrant module included in the <u>Welcome and</u> Announcement Report.



- Feature Heading: A primary feature heading that reemphasize the focus of the report. The heading varies slightly depending on whether the customer is new or legacy customer.
- Top Left Quadrant Normative Comparison: This quadrant includes a headlines that tells the customer that their energy use will be compared to others, and an explanation of the <u>Neighbor Comparison</u> or <u>Efficiency Zone</u>. The icon matches the type of normative comparison included in the customer's report.

- Bottom Left Quadrant Variable Insight: This quadrant includes a headline that tells the customer that they will receive custom insights. The text explains that the insights that will change throughout the year along with their energy use.
- Top Right Quadrant Tips: This quadrant includes a headline that tells the customer that the report can help them save energy. The text explains that the tips in each report are specifically chosen for the customer and their home to give them relevant savings advice. The top right quadrant icon reflects the customer's fuel type.
- Bottom Right Quadrant Where to Begin: Highlights that there are personalize insights on the back of the report. The bottom right quadrant text and icon reflects the customer's normative comparison type.

Limited Income Report - Welcome Quadrant

The Quadrant module in the Limited Income Report orients new customers to the four parts of the report experience: normative comparison, tips, variable insights, and how the report will help limited income customers reduce energy use and save money.

This image is an example of a Quadrant module included in the welcome version of the Limited Income Report.



- Feature Heading: A primary feature heading that reemphasize the focus of the report. The heading varies slightly depending on whether the customer is new or legacy customer.
- Top Left Quadrant Normative Comparison: This quadrant includes a headlines that tells the customer that their energy use will be compared to others, and an explanation of the <u>Neighbor Comparison</u> or <u>Efficiency Zone</u>. The icon matches the type of normative comparison included in the customer's report.

- Bottom Left Quadrant Variable Insight: This quadrant includes a headline that tells the customer that they will receive custom insights. The text explains that the insights that will change throughout the year along with their energy use.
- Top Right Quadrant Tips: This quadrant includes a headline that tells the customer that the report can help them save energy. The text explains that the tips in each report are specifically chosen for the customer and their home to give them relevant savings advice. The top right quadrant icon reflects the customer's fuel type.
- Bottom Right Quadrant Where to Begin: Highlights that there are personalize insights on the back of the report designed especially for the limited income experience. The bottom right quadrant icon reflects the customer's normative comparison type. The text references that customer's normative comparison type, and tells them that the report will help them learn about energy efficiency programs that can help them reduce their bill, and assistance programs they may qualify for.

Time of Use Report - Welcome Quadrant

The Welcome Quadrant module included in the Time of Use Report educates new customers on the key features and benefits of the time of use report experience.

This image is an example of a welcome Quadrant module included in the <u>Time of Use</u> <u>Welcome Report</u>.



Primary Feature Heading: The default heading is, "What you can expect from the Home Energy Report program."

Top Left Quadrant - Normative Comparison: This quadrant includes a headlines that that tells the customer that their energy use will be compared to others, and an explanation of the

Efficiency Zone module and how that feature benefits the customer. The top left quadrant icon matches the type of normative comparison included in the customer's report.

Bottom Left Quadrant - Where to Begin: This quadrant tells the customer that this welcome report includes a normative comparison, insights, and tips that can help them start saving. The bottom right quadrant icon reflects the customer's fuel type.

Top Right Quadrant - Time of Use Plan: This quadrant includes a headline that tells the customer that the report takes their time of use plan into account and can help them save energy when it matters the most.

Bottom Right Quadrant - Variable Insight: This quadrant includes a headlines that that tells the customer that they will receive custom insights. The text explains that the insights that will change throughout the year along with their energy use.

Solar Report - Welcome Quadrant

The Welcome Quadrant module included in the Solar Welcome Report educates new customers on the key features and benefits of the solar report experience.

This image is an example of the module included in the Solar Welcome Report.



Primary Feature Heading: The default heading is, "What you can expect in future reports."

Top Left Quadrant - Normative Comparison: This quadrant includes a headlines that tells the customer that their energy use will be compared to other solar customers, and an explanation of the <u>Three-bar Neighbor Comparison</u> module and how that feature benefits the customer.

Bottom Left Quadrant - Tailored Insights: This quadrant tells the customer that this welcome report includes tailored insights that seasonally.

The bottom left quadrant icon reflects the customer's fuel type.

Top Right Quadrant - Tips: This quadrant tells the customer that th report includes tips chosen specifically for their home.

Bottom Right Quadrant - Offers: This quadrant includes a headlines that that tells the customer that the reports include rebates, programs, incentives, and other offers to help the customer save more and optimize their solar experience.

Peak Focused Report - Welcome Quadrant

The Welcome Quadrant module included in the Peak Focused Report educates new customers on the key features and benefits of the Time of Use report experience, with a focus on high-cost peak periods.

What you can expect from the on-peak Home Energy Report See how your on-peak Find helpful info about your TOU rate plan energy use stacks up These reports will help you keep Your similar homes comparison track of when electricity costs graph will be in most reports you receive, and will show your onthe most based on your plan, so peak energy use compared to you can focus on saving energy similar homes. when it matters most. **Receive tailored insights** Get personalized tips and peak savings advice that change over time Tips included in your reports are Since energy use changes chosen specifically for your throughout the year, your report will too. You'll get different types home, so you can save more at of reports, along with special any time of day, and especially during on-peak hours. offers that can help you save.

This image is an example of the module included in the Peak Focused Report.

Primary Feature Heading: The default heading is, "What you can expect from the Home Energy Report" program.

Top Left Quadrant - Normative Comparison: This quadrant includes a headline that tells the customer that their energy use will be compared to others, and an explanation of the Peak Focused Normative Comparison. The top left quadrant icon matches the type of normative comparison included in the customer's report.

Bottom Left Quadrant - Where to begin: This quadrant tells the customer that this welcome report includes a normative comparison, insights, and tips that can help them start saving. The bottom right quadrant icon reflects the customer's fuel type.

Top Right Quadrant - Time of Use plan: This quadrant includes a headline that tells the customer that the report takes their Time of Use plan into account and can help them save energy when it matters the most.

Bottom Right Quadrant - Variable Insight: This quadrant includes a headlines that tells the customer that they will receive custom insights. The text explains that the insights that will change throughout the year along with their energy use.

User Experience Variations

Customer Type

- Legacy Customers: Customers that have received earlier versions of reports in the past are considered legacy customers. The feature heading for legacy customers acknowledges how the report has changed. "What you can expect from the new Home Energy Report program."
- New Customers: Customers that have never received a Home Energy Report are considered new customers. The feature heading for new customers introduces them to the new insights. "What you can expect from the Home Energy Report program."

Normative Comparison Type

- Top Left Quadrant Normative Comparison: The text and image match the normative comparison type (Efficiency Zone, or a three bar graph for the <u>Three-bar Normative</u> <u>Comparison</u> and Peak Focused Normative Comparison) included in the customer's report experience.
- Bottom Right Quadrant Where to Begin: The quadrant text and icon reflects the customer's normative comparison type.

Fuel Type

- Top Right Quadrant Tips: The top right tips quadrant icon reflects the customer's fuel type.
- Blank Slot: Utilities have the option of replacing the Quadrant module with a custom module created by the Client Design team. The custom module must fit the primary feature specifications. Contact your<u>Delivery Team</u> about replacing the module.

Welcome Quadrant Placement

The Welcome Quadrant can be placed on the front or back of the <u>Welcome Report</u>, <u>Limited</u> <u>Income Welcome Report</u>, <u>Peak Focused Report</u>, and <u>Solar Report</u>. When the Welcome Quadrant appears on the back of the report, the <u>Efficiency Zone</u> or <u>Neighbor Comparison</u> appears on the front of the report.

Configuration Options

Seasonal Breakout Module

The Seasonal Breakout module informs the customer what percentage of their energy use the previous season went toward cooling or heating. The purpose of this module is to highlight the how large a customer's heating or cooling costs can get, and prepare them for the seasonal insights and tips presented later in the report.

Appears in: Seasonal Report



Header: The header highlights that cooling has an impact on the customer's summer energy bills.

Insight: The insight does the math for the customer, helping them understand in a quick take how much of their energy use went towards cooling the previous summer.

Explainer: The explainer text below the insight clarifies that the calculation takes into account window units, central air, and fans.

Image: A seasonally themed illustration is included in the module.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual fuel.

Data Required: A customer's cooling or heating use must be between 5% to 75% of their total energy use.

Data History: At least 13 months of data history.

Billing Frequency: Monthly or bi-monthly.

Self-Comparison

The Self-Comparison module offers customers a concise and personalized explanation for why a bill might be different or similar compared to a past bill. It includes a self-comparison that shows how the customer compares against their past energy use, rationale for the delta they might notice (for example, weather insights or bill period details), acknowledgment of improvement, and a moment of pride highlight. In the Solar Report, the Self-Comparison module includes solar-focused text and design variants of the comparison graph for the negative net energy and net zero energy states experienced by solar customers.

Appears in: Progress Report, Solar Progress Report



This image shows an example of the Self-Comparison module design for the <u>Progress</u> Report.

Header: The header sets the stage for a different type of comparison relative to the Efficiency Zone or Neighbor Comparison included on the front of the report.

Self-comparison bar chart: The bar chart shows a customer's energy use relative to their household in the past. The default state is a year-over-year comparison. If there is insufficient data for a year over year comparison, the module compares usage this bill to one's most recent bill.

Explainer: The explainer helps the customer understand possible behaviors or events that could have caused their energy use to change or stay the same. Possible states include:

- Warmer weather and usage increase
- Colder weather and usage increase
- Other (any combination not covered by the other states)

Insight: The insight does the math for the customer, helping them understand in a quick take by how much their usage has changed compared to last time. It also relies on the established warning and success colors of orange and green respectively (as seen in the Benchmark) to send a signal to the customer that is either positive or negative, without requiring them to absorb the copy or number themselves.

Solar Report - Self Comparison

This image shows an example of the Self-Comparison module design for the Solar Report.



Header: The header identifies the module as a comparison of the customer's net energy compared to the previous year.

Self-comparison bar chart: The bar chart shows a customer's energy use relative to their household in the past.

Explainer: The explainer helps the customer understand possible behaviors or events that could have caused their energy use to change or stay the same. Possible solar states include:

- Usage Increased
- Usage Decreased
- Usage Same

Each state can accommodate all net negative, all net positive, net zero, and net positive and net negative in the same graph.

Insight: The insight does the math for the customer, helping them understand in a quick take by how much their usage has changed compared to last time. It also relies on the established warning and success colors of orange and green respectively (as seen in the <u>Benchmark</u> module) to send a signal to the customer that is either positive or negative, without requiring them to absorb the copy or number themselves.

Requirements and Limitations

Fuel:

- **Progress Report**: Electric-only, gas-only, dual fuel.
- Solar Report: Electric-only, dual fuel.

Data Required: Billing data.

Data History:

- A minimum of two historical bills to generate the bill period over the bill period selfcomparison.
- A minimum of 12 months of historical bill data to generate the year over year selfcomparison.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Thermostat Adjustment Module

The Thermostat Adjustment module provides customers with a recommended thermostat adjustment for the season in order to align their settings with the U.S. Department of Energy recommendations. It also encourages the customer to purchase a smart thermostat in order to automate savings on cooling.

Appears in: Seasonal Report


Module Label: The label identifies the season applicable to the thermostat adjustment. For example, "This Summer."

Header: The header encourages customers to adjust their thermostat setting while away from the home to save energy.

Image: An Illustration is paired with large number call out of degrees to raise the thermostat.

Recommended Adjustment: The recommended adjustment tells the customer how they should modify their thermostat as recommended by the Department of Energy.

Details: The details encourage the customer to make saving energy easier by purchasing a smart thermostat so that they can automate their thermostat adjustment.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual fuel.

Recommended Data: AMI, Appliance Detection and Disaggregation data.

Data History: At least 13 months of data history.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Time of Use 101

The Time of Use 101 module educates customers about when electricity is most expensive based on their time of use rate plan. The module provides customers with information such as:

- Whether electricity prices differ on weekdays and weekends
- How much more expensive peak prices are than off-peak prices
- The hours during which electricity is most expensive
- A visual timeline that displays off-peak, partial-peak, and peak hours

The type of module a customer receives depends on their time of use rate plan and the type of report they receive:

Time of Use 101 for Welcome Reports: The welcome version of the module educates customers about their specific rate plan at the specific time the report is generated and why saving during peak is especially important. It also provides the customer with an example of how avoiding high energy appliances, like running the dryer, during peak hours can have a positive impact on their bill. The module varies by whether the customer has a simple or complex rate plan, and whether or not they are confirmed to have a clothing dryer.

Time of Use 101 for Progress Reports: The progress version of the module serves the dual purpose of educating customers about their specific rate plan at the specific time the report is generated and providing educational information about why saving during peak is especially

important. The module includes a heading, weekday graph, weekend graph, explainer, callto-action, and seasonal details where applicable.

Appears in: Time of Use Report, Peak Focused Report

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly or bi-monthly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Modeled Rates
Data History	Not applicable
Data Coverage	Not applicable.
Supported Fuels	 Time of Use Report: Electric-only, gas-only, dual fuel. Peak Focused Report: Electric-only.

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Limitations

- Number of Rates: A maximum of three rate types (peak, mid-peak, off-peak or super peak, peak, and off-peak) can be displayed at a given time.
- Off-Peak Hours (Welcome Report only): For the purpose of this report, Super Offpeak and Super Saver rates are included in a single off-peak timeline category. For example, a customer with multiple off-peaks or multiple on-peaks will see all off-peaks represented as a single off-peak category on the timeline.
- Peak Focused Report: The Peak Focused Report is only available for the electric fuel type.
- Time of Use Rate Plan and Demand Charge: The demand charge version of the module is only available to customers who have demand charges in addiction to a Time of Use rate plan.

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User Experience

Time of Use 101 - Welcome Report

This section describes the user experience for a customer with the welcome version of the module, a weekly peak period, and no weekend or holiday peak periods.

How you can save mor	re during peak hours
	Find out if your heating, water heater, and oven are electric. If they are, try using the electric ones less during on-peak hours. Don't worry about smaller electronics —like TVs and phone chargers—as they use much less electricity.
	On weekdays, electricity costs 2.3x more from 3pm-8pm.
	12am 10am 3pm 8pm 11pm
	On weekends, there are no peak hours.
	12am 11pm
	Off-peak hours (\$) Partial-peak hours (\$\$) On-peak hours (\$\$\$)
	To view your rate plan details, go to utilityco.com/tou-rateplans .

Heading: The heading informs the customer that there are simple steps that they can take to save energy during peak hours.

Image: The image includes a clock indicating on peak times highlighted to help aid in communicating peak hours.

Body Text: The body text identifies the dryer as one of the largest energy using appliances in the home and, therefore, costs a lot to run during peak hours.

Weekday Subheading and Graph: The weekday subheader is dynamic by rate plan and tells customers how much more their energy costs during the peak hours. The graph notes the price ratio and relevant peak hours:

- Weekday Price Ratio: The weekday price ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekday Peak Hours: The weekday peak hours displays the most expensive period for the week.

Weekend Subheading and Graph: The weekend subheader is dynamic by rate plan and notes whether or not there are peak hours on weekends and holidays.

- Weekend Price Ratio: If the utility has weekend peak hours, the ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekend Peak Hours: If the utility has weekend peak hours, the peak hours displays the most expensive period for the weekend.

Graph Labels: The graph labels identify which periods in the graphs fall into peak, mid-peak, or off-peak hours.

- High Cost Period: A warning-color identifies the most expensive time range. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."
- Medium Cost Period: A medium warm color identifies the time range that is neither the most or least expensive. It is dynamically rendered based on rate plan details. For example, "Partial-peak hours (\$\$)."
- Low Cost Period: A cool color identifies the least expensive time range. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

Call to Action: The call to action invites the customer to view their full plan details and provides a URL to the utility's rate plan page.

Time of Use Progress Report

This section describes the user experience for a customer with the progress version of the module with a single, weekday peak, no weekend peak hours, and a seasonal variation.

Sa pe	ave money by eak hours	using less	electricit	y during	
On	n weekdays, elect	ricity costs	2.3x more f	from 3pm-	8pm.
12a	am	10am	3pm	8pm	, 11pm
On	n weekends and h	olidays, the	re are no p	eak hours	
12a	am				11pm
	Off-peak hours (\$)	F	Partial-peak ho	urs (\$\$)	
	On-peak hours (\$\$\$)				
Wh	ny does it matter w	hen I use elec	stricity?		
Pea less help	ak hours are when er s electricity during pe lps us deliver cleaner	nergy demand eak hours will s energy to the v	is highest in o ave you more whole comm	our region. L e on your bill unity.	Jsing , and
This det	is Time-of-Use sched tails, go to utilityco.d	lule lasts May ⁻ com/tou-rate	1 - Sep 30. To olans .	o view your f	full plan
Head	ading: The heading tells the	customer that they o	can save money b	by using less ene	ergy

Weekday Subheading and Graph: The weekday subheader is dynamic by rate plan and tells customers how much more their energy costs during the peak hours. The graph notes the price ratio and relevant peak hours:

- Weekday Price Ratio: The weekday price ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekday Peak Hours: The weekday peak hours displays the most expensive period for the week.

Weekend Subheading and Graph: The weekend subheader notes whether or not there are peak hours on weekends.

- Weekend Price Ratio: If the utility has weekend peak hours, the ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekend Peak Hours: If the utility has weekend peak hours, the peak hours displays the most expensive period for the weekend.

Graph Labels: The graph labels identify which periods in the graphs fall into peak, mid-peak, or off-peak hours.

- High Cost Period: A warning-color identifies the most expensive time range. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."
- Medium Cost Period: A medium warm color identifies the time range that is neither the most or least expensive. It is dynamically rendered based on rate plan details. For example, "Partial-peak hours (\$\$)."
- Low Cost Period: A cool color identifies the least expensive time range. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

Details Subheading: The details section explains to the customer why it matters when they use energy.

Details Text: The text reminds the customer that saving energy during peak hours lowers their bill and helps their utility deliver clean energy to the community.

Call to Action: The call to action invites the customer to view their full plan details and provides a URL to the utility's rate plan page.

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User Experience Variations

Welcome Experience

Heading and Body Text: The heading and body text varies depending on the report type, whether or not the customer has a dryer, and the number of timelines included in the report.

Timeline Variations: The timeline subheading text varies based on the customer's rate plan and the type of days displayed in the sliding scale.

Progress Experience

Timeline Variations: The timeline subheading text varies based on the customer's rate plan and the type of days displayed in the sliding scale.

Peak Focused Report

The welcome version of the Time of Use 101 module is included in the <u>Peak Focused</u> <u>Welcome Report</u>. The module educates customers about their on-peak use and offers educational insights into why saving energy during peak hours holds particular significance.

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Demand Charge

The demand charge version of the module is included in the <u>Peak Focus Welcome Report</u> for customers who have a demand charges in addition to their Time of Use rates. The module educates customers about their rate plan's demand charge while emphasizing the critical role of minimizing peak demand to reduce costs. The module provides customers with information such as:

- Demand charges and their impact on overall costs
- Whether electricity prices differ on weekdays and weekends.
- How much more expensive peak prices are than off-peak prices.
- The hours during which electricity is most expensive.
- A visual timeline that displays off-peak, partial-peak, and peak hours.

This image is an example of a progress version of the Time of Use 101 module with demand charges for a customer with a weekly peak and partial peak periods, and no weekend peak periods.

Sa ap	ive money by s pliance use du	staggerii uring on-	ng your el -peak hou	ectric rs	
On	weekdays, elect	ricity cost	s more from	n 3pm-8pm).
12a	m	10am	3pm	8pm	11pm
On	weekends and h	iolidays, tl	nere are no	on-peak ho	ours.
12a	m				11pm
	Off-peak hours (\$)		Partial-peak h	nours (\$\$)	
	On-peak hours (\$\$\$)				
Wh	y does it matter wi	hen I use e	lectricity?		
Dur also on- hou app	ring on-peak hours, r o incur a Demand C peak use. To keep yo urs to run large applia bliances at the same	not only is el harge each our Demand ances, or at time.	ectricity more bill period for I Charge lowe least avoid rur	expensive, bu your highest r, wait until off nning multiple	ut you'll hour of f-peak
This det	s Time-of-Use sched ails, go to utilityco.c	lule lasts Ma com/tou-ra	iy 1-Sep 30. T teplans .	o view your fu	ull plan
Нор	ding: The heading informs t	he customer the	t there are simple	stens that they ca	n take to

Heading: The heading informs the customer that there are simple steps that they can take to save energy during peak hours.

Weekday Subheading and Graph: The weekday subheader is dynamic by rate plan and tells customers that their energy costs the most during the peak hours. The graph notes the price ratio and relevant peak hours:

- Weekday Price Ratio: The weekday price ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekday Peak Hours: The weekday peak hours displays the most expensive period and least expensive period for the week.

Weekend Subheading and Graph: The weekend subheader is dynamic by rate plan and notes whether or not there are peak hours on weekends.

- Weekend Price Ratio: If the utility has weekend peak hours, the ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekend Peak Hours: If the utility has weekend peak hours, the peak hours displays the most expensive period for the weekend.

Graph labels: The graph labels identify which periods in the graphs fall into peak, partialpeak, or off-peak hours.

- High Cost Period: A warning-color identifies the most expensive time range. It is dynamically rendered based on the customer's rate plan details. For example, "On-peak hours (\$\$\$)."
- Medium Cost Period: A medium warm color identifies the time range that is neither the most or least expensive. It is dynamically rendered based on rate plan details. For example, "Partial-peak hours (\$\$)."
- Low Cost Period: A cool color identifies the least expensive time range. It is dynamically rendered based on rate plan details. For example, "Off-peak hours (\$)."

Details Subheading: This heading prepares the customer to learn why it matters when they use energy.

Details Body Text: The body text explains that electricity more expensive during peak hours, and that the customer will incur a demand charge each bill period for their highest hour of on-peak use. The customer is encouraged to reduce large appliance use during on-peak hours in order to avoid the charge.

Call to Action: The call to action invites the customer to view their full plan details and provides a URL to the utility's rate plan page.

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Tip Modules

Tip modules present actionable energy savings tips for customers to follow. Tip module designs vary by report type as well as available customer and utility data.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	There is no limit on the number of customers per utility.

Customer Requirements

Category	Description
Billing Frequency	Not applicable
Data Delivery Frequency	Not applicable
Data Requirements	AMI data, Appliance Detection and Disaggregation data.
Data History	Not applicable
Data Coverage	Not applicable
Supported Fuels	Electric-only, gas-only, and dual fuel.

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Limitations

 Promotion Tips: The Promotion Tips module is only offered as part of the Promotion Report. See <u>Promotion Report</u> for report requirements.

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User Experience

This section describes the user experience for tips in the different report types.

Progress Report Tips

Appears in: Progress Report

The Progress Report includes a single tip module on the back of the report which highlights personalized aspects of the tip experience.

This image shows an example of the progress report tip design.



Heading: The heading indicates that this tip has been personalized for the customer.

Context: The progress report tip includes context to help the customer understand why that tip has been selected for them. Tip contexts are shown randomly with the exception of the "recent HEA completion context" which is shown in the report immediately following Home Energy Analysis completion. Availability of contexts is dependent on available customer AMI data and whether the customer completed the Home Energy Analysis. See <u>Home Energy Analysis</u>.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Promotion Report Tips

Appears in: Promotion Report

The back of the Promotion report includes two tip modules. The tips use disaggregation or Home Energy Analysis data to provide customers with low or no-cost actions.

This image shows an example of the promotion report tip design.



Heading: The heading "More ways you can save right now" builds off of the promotion on the front of the report "X could help you save." The language is state-agnostic and will be used regardless of where these specific categories fall in the customer's disaggregation breakdown.

End Use Category 1: The first end use shows the customer one of their top end uses, depending on the promotion use case.

End Use Category 2: The second end use shows the customer a second top end uses, depending on the promotion use case.

Usage Insight: The tip is paired with an insight showing the percent of the customer's overall use that the specific category makes up.

Insight Label: The insight label identifies that the insight shown is an annual insight. Note that the insights provided is always an annual insight.

Tip Title: The tip title focuses on future savings to help motivate the customer to act.

Tip Body: The tip body provides information to help customers act.

Savings Estimate: The savings estimate calculates a savings estimate for the customer based on their personal energy use data.

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Welcome Report Tips

Appears in: <u>Time of Use Welcome and Announcement Report</u>, <u>Limited Income</u> Welcome Report, <u>Solar Welcome Report</u>

The Welcome tip module includes two tips that highlight the personalized aspects of the tip experience.

This image shows an example of the welcome and announcement report tip design.



Header: The header indicates that the tips have been personalized for the customer.

Context: The tips include context to help the customer understand why these tips have been selected for them. Tip contexts are shown randomly with the exception of the "recent HEA completion context" which is shown in the report immediately following Home Energy Analysis completion. Availability of contexts is dependent on available customer AMI data and whether the customer completed the Home Energy Analysis. See <u>Home Energy</u> Analysis.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Tip Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to action: A link to the tips experience on the web to further engage customers in other products.

Seasonal Report Tips

Appears in: Seasonal Report

The Seasonal Report includes two seasonally relevant tips designed to help them lower their energy use, and encourages them to view more energy saving tips on the web. The first tip module focuses on how the customer can save on cooling during the summer season. The second tip helps them save on another targeted end use.

This image shows an example of the Seasonal Report tip design.



Header: The header indicates that the tips have been selected for the customer to help them lower their summer energy use.

Context: The tip context helps the customer understand why that tip has been selected for them.

Tip 1: The first tip is a seasonally-focused cooling tip designed to help the customer save during the summer season. To avoid confusion with the <u>Thermostat Adjustment</u> module, which includes a recommended thermostat action, this is not a thermostat tip.

- Title: Seasonally-focused title to motivate the customer to act.
- Body: Seasonally applicable text to help the customer take action.
- Savings Estimate: Calculates a savings estimate for the customer, based on their personal energy use data.

Tip 2: The second tip is designed to help the customer save on an additional targeted end use.

- Title: Seasonally-focused title to motivate the customer to act.
- **Body**: Seasonally applicable text to help the customer take action.
- Savings Estimate: Calculates a savings estimate for the customer, based on their personal energy use data.

Call to Action: The call to action encourages customers to explore more tips on the web. The link redirects customers to a seasonal tip guide when available.

Solar Progress Report Tips

Appears in: Solar Report

The Solar Progress Report tip presents a single tip module on the back of the report which highlights personalized aspects of the tip experience.

The welcome version of the Solar Report includes a welcome report tip. See <u>Welcome Report Tips</u> for more information.

The following image is an example of the Solar Tip design for a Solar Progress Report.



Header: The header indicates that this tip has been personalized for the customer.

Context: The tip context helps the customer understand why that tip has been selected for them. Possible solar tip contexts include low-cost, free, great investment, Home Energy Analysis, and recent Home Energy Analysis.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Time of Use Report Tips

The <u>Time of Use Report</u> includes three rotating tip modules that highlight personalized aspects of the tip experience that can help customers on time of use plans save energy and money.

Disaggregation Tip Module

Appears in: <u>Time of Use Report</u>

The Disaggregation and Tip module highlights the customer's highest electricity end-use category and provides a single tip related to that end-use. The tip shown is determined by the customer's top energy use category.

The following image is an example of the Disaggregation tip for a cooling top category.

Cooling was one of your highest electricity costs last month
Here's a tip to help you save:
Upgrade to an efficient central air conditioner
On summer days, air conditioning is often the largest part of your energy bill. You could save u to 50% on cooling costs by switching to a newe more efficient air conditioner.
Save up to \$20 per year

Headline: The headline highlights a cost category where the customer spent the most money in the previous month. It changes dynamically based on the customer's top electricity use.

Tip Lead-in: The tip lead-in prepares the customer to learn how to save energy and money on their future bills.

Illustration: The tip illustration compliments the selected tip.

Tip: The tip shown is determined by the customer's top energy use category.

Tip Savings Estimate: Calculates a savings estimate for the customer, based on their personal energy use data and information in Tip Manager.

Large Appliance Tip Module

Appears in: Time of Use Report

The Large Appliance Tip module highlights four large appliances that typically consume a lot of electricity when run, and provides a link to where to customers can learn more about saving energy. The module is designed to help educate customers on time of use rate plans about the types of appliances that they should try to avoid during peak hours when electricity is highest in demand. The module has two, season-specific states:

- Hot weather: The hot weather state includes the spring and summer seasons.
- Cold weather: The cold weather state includes the fall and winter seasons.

These images are examples of the Large Appliance Tip design for the hot and cold weather seasons.



Heading: Prepares the customer to learn where they can save the most electricity during peak hours.

Body Text: Echoes the headings message that the customer can save the most energy and money on their bill by using the featured appliances only during off-peak hours.

Appliance Images: This section includes four, seasonally appropriate recommendations for appliances that the customer should avoid using in peak hours.

Two Tip Module

Appears in: Time of Use Report

The Two Tip module provides the customer with a peak-savings tip and an anytime-savings tip. The peak-saving tip is identified as such so that the customer knows when to act on that tip. The general energy-efficiency tip can be in any end use category.

This image is an example of the Two Tip design.



Heading: The heading indicates that the tips has been selected for the customer and can be used to save energy during peak and off peak hours.

Tip Title: The first tip is specific to peak usage and can pull from the list of available peak tips. The second tip leverages standard tip targeting logic to present the customer with a general savings tip most relevant for their household.

Illustration: An illustration that compliments the tip is pulled from the tip illustration library.

Body: Pulls in existing body copy from Tip Manager, depending on the tip shown.

Cost Category: The cost category is displayed in a green highlight below the illustration to helps the customer understand the financial impact of the tip. Possible cost categories include free, smart purchase, and great investment.

Paired Tips

Appears in: Limited Income Report, Electric Vehicle Report

The Paired Tips module use disaggregation data and/or <u>Home Energy Analysis</u> data to provide customers with a tip related to the energy use highlighted in the <u>What Uses Most</u> module.

Note: Paired tips must be combined with the What Uses Most module.

This image is an example of an air leak tip selected to pair with a top energy use highlighted in the What Uses Most module.



Heading: The headering indicates that this tip has been personalized for the customer.

Tip Title: The module title focuses on future savings to motivate the customer to act, and corresponds directly to the customer's highlighted energy use in the <u>What Uses Most</u> module.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The URL redirects customers to the web portal where they can view additional energy saving tips.

Energy Literacy and Tip

Appears in: Peak Focused Report

The Energy Literacy and Tip module educates customers about why they are consuming energy during the high cost peak period, and provides guidance on what they can do to make a difference in their energy consumption. The module includes a list of two or three appliance categories that were detected during the high cost period, and a tip related to one of the categories that the customer can use to help reduce their energy consumption.



Heading: The heading invites customers to learn about their best opportunities to save energy.

Disaggregation: The disaggregation section provides the customer with information about what appliance categories consume the most energy during peak hours. It includes the following elements:

- Disaggregation category image and label: Labeled illustrations of the top three appliances detected during the highest cost period are ordered by highest to lowest energy consumer. Possible disaggregation categories include heating, cooling, dishwasher, dryer, electric vehicle, oven, pool pump, refrigerator, and water heater. The top three appliances are ordered by highest to lowest energy consumer.
- Disaggregation education: The disaggregation education statement tells the customer that these categories are highlighted because they are using these high energy consumers during peak hours, and that using them less will result in a noticeable difference in their bill.

Tip: The tip provides the customer with an action they can take to reduce their energy use. It is directly related to one of the saving opportunities listed in the disaggregation section. For example, the "Use fans instead of Air Conditioning" tip could be included when Cooling is listed as an energy saving opportunities.

- Tip label: The tip label draws the customer's attention to the tip action.
- **Tip title**: The tip title clearly states the change the customer should make.
- **Tip body**: The tip body provides justification for the recommended change and provides the customer with a clear action that they can take to apply the tip.

User Experience Variations

AMI and Appliance Detection and Disaggregation

If the utility has AMI and appliance detection and disaggregation data, the tip is related to the customer's highest disaggregated end use energy category. For example, if the customer spends the most energy on heating, the tip will be focused on heating.

Completed Home Energy Analysis

If the customer completed their Home Energy Analysis in the past and there is existing survey data, the tip copy indicates that the tips are personalized based on the results of the customer's survey.

Promotion Report Tip User Experience Variations

Promotional Report Tip - Utility Selects One End Use

Tips are displayed for the top two end uses (excluding the promotion end use).

Promotional Report Tip - Utility Selects Heating and Cooling Combined

Tips provide free and low-cost ways to save for heating and cooling as an alternative to the promotion on the front, which is likely a larger investment.

Seasonal Report Tips

Seasonal Report Tip - Winter Seasonal Report Tips

The Winter Seasonal Report tips are focused on actions that the customer can take to save energy and reduce their heating costs.

Seasonal Report Tip - No Savings

If there is not sufficient data to generate personalized savings estimates, the savings estimates do not appear in the tips module.

Seasonal Report Tip - Context

The tip context underneath the header has two states:

- No Information: The no information context is the most common user experience. The context informs the customer that the presented tips are low-cost. "These low-cost tips were chosen for you based on how you use energy in your home."
- **Recent Home Energy Analysis Completion**: The context informs the customer that the tips were selected based on the information that the customer provided in their recently

Solar Report Tips

Solar Welcome Report Tip - Completed Home Energy Analysis

If the customer has completed their Home Energy Analysis, the tip context indicates that the tips are personalized based on the results of the customer's survey.

Time of Use Report Tips

Time of Use Report Large Appliance Tip - Seasonal Variations

- Cold weather: The Cold Weather state combines the fall and winter seasons. By default, Heating - Furnace Clothes dryer, Oven, and Dishwasher are included in the cool season variation.
- Hot weather: The Hot Weather state combines the spring and summer seasons. By default, Cooling - Thermostat, Pool pump, Clothes dryer, and Dishwasher are included in the hot weather season variation.

Energy Literacy and Tip

Two Appliances Detected

If two appliances are detected in use during the highest cost period, they are ordered by the highest energy consumers.

Electric Vehicle Detected

If an electric vehicle is detected as one of the two or three highest energy consumers during the highest cost period it is included in the list of appliances.

Monthly Fallback

If on-peak data is not available, the module includes a list of the customer's top energy uses for the billing period. The disaggregation education text does not mention on-peak hours.

Time of Day Hourly Insight

The Time of Day Hourly Insight provides the customer with additional details about when a customer is consuming electricity and how they compare to their nearest comparison group. The module displays the customer's average hourly electricity use on weekdays, the highest cost period (peak) hours, non-peak hours, and an insight to highlight to the customer in which high cost period hour they are consuming the most energy. A URL is provided to direct customers to where they can learn more about their Time of Day rate plan.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service

Category	Description
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	 Billing data and third-party data (for example, GIS and parcel data). Hourly AMI data. Hourly normative comparison data.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only.

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Limitations

- Peak Focused Report: This modules is only available as part of the <u>Peak Focused</u> <u>Report</u>.
- **Time of Use Rate Plan**: This module is only available to customers on Time of Use rate plans.
- No Rate Data: The no rate data variation of the module may be included in other report types.

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User Experience

This section describes the user experience for a customer with two peak periods.



Heading: The heading draws the customer's attention to the module's focus on average hourly usage during weekdays.

Time of Day Graph: The graph helps the customer identify key times for energy savings by highlighting their average use during weekdays with a focus on the high-cost peak hours.

- Cost Period Labels: Provides a key to the graph elements. For example, "Off-peak,"
 "On-peak," and "Average neighbors."
- Hourly Bar Graph: Defines the customer's hourly off peak and on-peak usage. Highcost peak hours are indicated in the same color as the High Consumption Time Period.
- Comparison Group Usage Line: Indicates the comparison group's average hourly usage. If the state is fair then average neighbors data is used for the line data on the chart.
- Cost Period Start Times: Defines the hourly usage increments of the bar graph.
- Learn More: Text encouraging the customer to learn more about their peak rates and a URL where they can find more information.

Insight Heading: Reinforces the purpose of the module as a focus on the customer's peak hour usage.

- Highest Consumption Time Period: Identified the period during which the customer's average on-peak energy use was the highest. This element is dynamic by rate plan.
- Insight Description: Explains that the High Consumption Time Period is the period during which the customer's average on-peak energy use was the highest.
- Usage Measurement: Defines the measurement used in the graph.

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User Experience Variations

Three Peak Periods

If there are three peak periods, three peak distinct periods appear in the graph and are identified in the cost period labels.



Hourly Bar Graph: The graph includes the customer's high ("on-peak"), medium ("partialpeak"), and low ("off-peak") cost periods. The colors used in the graph are designed to draw attention to the distinct cost periods:

- High Cost Period: A warning-color identifies the most expensive time range. It is dynamically rendered based on the customer's rate plan details.
- Medium Cost Period: A medium warm color identifies the time range that is neither the most or least expensive. It is dynamically rendered based on rate plan details.
- Low Cost Period: A cool color identifies the least expensive time range. It is dynamically rendered based on rate plan details.

Cost period labels: Identifies the table elements and their associated colors.

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Comparison Group Usage Line Data

The type of data used for the line data on the chart varies depending on the customer's usage state:

- If the usage state is fair then average neighbors data is used for the line data on the chart.
- If the usage state is good or great then efficient homes data is used for the line data on the chart.



The module varies in the following ways:

- Comparison Group Usage Line: Indicates the comparison group's average hourly usage. If customers in a good or great usage state, the line is green.
- Cost Period Labels: The graph elements labels indicate the line data used:
 - Good or great: "Efficient neighbors"
 - Fair: "Average neighbors"

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Demand Charge



If the customer has demand charges, module varies in the following ways:

- Demand Charge Icon: A demand charge dollar icon appears at the max usage hour during the on-peak period in a bill period. The chart displays average usage for hours in the bill period.
- Insight Heading: Reinforces the purpose of the module as a focus on the customer's demand charge usage.
- Highest Consumption Time Period: Identifies the period during which the customer's demand charge occurred for the period. This element is dynamic by rate plan.

- Insight Description: Explains that the demand charge occurred in the period identified, and encourages the customer to learn more to save more.
- Learn More Link: Redirects the customer to the web portal where they can learn more about their demand charges.

No Rate Data

When there is no available rate data, or if the module is used in another report besides the Peak Focused Report, the module shows an hourly normative comparison and emphasizes the highest average usage hour.

Note: The no rate version of the Time of Day Hourly Insight module may be included in other report types for utilities that meet additional data requirements. <u>Contact your</u> <u>Delivery Team</u> for information.



The module varies in the following ways:

Time of Day Graph: The graph helps the customer identify key times for energy savings by highlighting their average use during weekdays. Peak hours are omitted.

- Cost Period Labels: Provides a key to the graph elements. Only "Your use" and "Average neighbors" are included.
- Hourly Bar Graph: Defines the customer's hourly usage. The highest use hour is indicated in the same color as the High Consumption Time Period. The graph displays 12am, 6am, 12pm and 6pm by default on the x-axis.
- Comparison Group Usage Line: Indicates the comparison group's average hourly usage. The line data varies depending on the customer's usage state.
- Highest Consumption Time Period: Identifies the period during which the customer's energy use was the highest. This element is dynamic by rate plan.

Missing or No Data

If data is missing or not available, then the module indicates the periods for which there is missing or no data. The following image is an example is of the Time of Day Hourly Insight module for a demand charge customer with missing data.



The module varies in the following ways:

- Asterisk: An asterisk is located above the graph period for which there is no data.
- Cost Period Labels: A cost period label identifies the asterisk as "Zero usage or missing data."

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Utility Info

The Utility Info module appears at the bottom of the back page of the Home Energy Report. The module contains sections for utility contact information, legal disclaimers, and additional resources.

Appears in: All report types.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Less than 100,000 per week

Customer Requirements

Category	Description
Billing Frequency	Not applicable.
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable.
Data History	Not applicable.
Data Coverage	Not applicable.
Supported Fuels	Not applicable.

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Limitations

• Save More Text: The Save More Text element is required for postal compliance

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User Experience

This section describes the user experience for all report types.



We're Here to Help: This section contains utility customer service contact information, such as the phone number, email, or website where customers can get support.

Save More Text: This section provides a website address associated with the Home Energy

Report program.

Legalese: This section provides utility legal disclaimers.

Logo: The utility logo appears in the lower-right corner of the report back in the "Utility Info" on page 41 module. The logo also appears in the top-left corner of the front page of the report.

The content of this module can be customized for individual utilities and different fuel types.

What Uses Most

The What Uses Most module educates customers about the top five energy uses in their home for the report period. One of the customer's top five energy uses is highlighted at the top of the module and is paired with a related energy-savings tip.

Appears in: Limited Income Report, Electric Vehicle Report

Note: While this module was designed for the limited income and electric vehicle customer experiences, it can be used for other audience segments as well. <u>Contact</u> <u>your Delivery Team</u> to discuss module options.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.

Category	Description
Data Delivery Frequency	Not applicable.
Data Requirements	 Minimum: Weather data and at least six historical bills. AMI Requirements: There are additional AMI data requirements to show advanced insights such as an appliance-level breakdown. Generally speaking, this requires about a years' worth of AMI data at hourly or sub-hourly resolutions.
Data History	 A minimum of six bills is required for Non-AMI customers. A minimum of 60 days of AMI reads for AMI customers.
Data Coverage	Not applicable.
Supported Fuels	 Limited Income Report: Electric-only, gas-only, dual fuel. Electric Vehicle Report: Electric-only, dual fuel.

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Limitations

Report Type: This module is available for the <u>Limited Income Report</u>, and <u>Electric Vehicle</u> <u>Report</u> by default, but may be included in other report experiences. Contact your <u>Delivery</u> <u>Team</u> for more information.

User Experience

This section describes the user experience for a limited income customer with heating as the highest energy use for the billing period.



Heading: The heading identifies the energy use state of the highlighted energy category.

Usage Categories: Usage categories are dynamic and vary based on the customer's past energy use, weather patterns, home characteristics, and available smart meter data. These usage categories help customers know where to focus and save.

- Highlighted Usage Category : A set of algorithms identify the customer's highest usage category and the percent of energy used by that category. The highlight appears in a grey box at the top of the module.
- Energy Breakdown Subheading: The Energy Breakdown subheading prepares the customer to learn about their other top energy uses.
- Usage Categories: An additional four energy use categories and their energy use percentages are listed. The categories are ordered from highest to lowest.
 - Other Categories Detail: Text explains what percent of the customer's energy use was made up of energy use categories not listed in the highlighted category or energy breakdown.

Paired Tip: An energy-saving tip related to the energy use highlight is included at the bottom left of the module. See <u>Paired Tips</u>.

User Experience Variations

Highlighted Usage Category

The usage category highlighted in the module heading varies by highlighted category type and module state (highest energy use, second highest energy use, most above regional average). The following table includes an example of the possible heading variations for heating as the highlighted category.

Highlighted category	Module State - Highest energy use	Module State - Second highest energy use	Module State - Most above regional average
Heating	Heating was your highest energy use this period	Heating was one of your highest energy uses this period	You used more on heating than average for our region

Electric Vehicle Report

The What Uses Most module for the <u>Electric Vehicle Report</u> includes electric vehicle charging as one of the possible top five energy uses. The goal of the electric vehicle usage category is to acknowledge the impact of a customer's electric vehicle charging on their home energy use, and to encourage the customer to focus on reducing their home use in the categories that they have the most control over. For example, most customers do not have much control over how much they need to drive or charge their electric vehicle, but they can easily sealing air leaks around their home.

Delivery

Delivery refers to how Oracle Utilities sends Home Energy Reports v3 to customers. The delivery information in this section is only applicable if the utility purchases an Oracle Utilities channel fee that includes printing or mailing of Home Energy Reports. See <u>Oracle Utilities</u> <u>Opower Channel Fees Guide</u> for more information.

Delivery Cadence

If the utility purchases the appropriate channel fee, Oracle Utilities and the utility mutually agree upon a report frequency for Home Energy Reports. Customers cannot adjust their own frequency, and utilities cannot adjust the frequency for individual customers.

Reports are generated using data from the latest utility bill for each report recipient. This means that the point at which the customer receives the report is dependent on the customer's individual billing dates. When customers receive a new bill and enough time has elapsed since the last report was generated, they become eligible to receive another report.

Delivery Options

It is possible to vary the frequency of reports for groups of customers over time. For example, customers with monthly billing data could be set up to receive a report every month for the first three months of the program, and then shift to bi-monthly reports thereafter.

Reports are sent only to customers who use a minimum amount of energy. This minimum energy use threshold is optimized for each Home Energy Report v3 program.

For more information about the delivery cadence and delivery options for your program, contact your Delivery Team.

Providing Customer Support

Customer Service Representatives (CSRs) can perform common support tasks in the Oracle Utilities Opower Customer Service Interface (CSI):

- Find and opening a customer's account
- Access a customer's web portal account
- View sent Home Energy Reports
- Manage a customer's report preferences
- Update information about a customer's home

See the <u>Oracle Utilities Opower Customer Service Interface - Program Management</u> <u>Product Overview</u> for details.

Enrollment

Home Energy Reports v3 are an opt-out program. In an opt-out program, customers are automatically enrolled in reports as long as they meet the eligibility criteria. Customers can unsubscribe from the reports later at any time.

Report Layouts

Home Energy Reports v3 implement several report types with different layouts and modules that vary throughout the year to provide customers with a dynamic experience. The report types are designed to construct a story for the customer to follow as they learn about their energy use. Some report modules are common to all report types, while others only appear in a specific report type. Available report types include:

- Progress Report
- Promotion Report

All report layouts are designed on a standard US letter paper size (8.5×11 inches, or 612×792 points).

Report Layout Example

Report layouts may differ by report type. The example below is for the <u>Progress Report</u> type and includes module placement and sizing information.

		100	
		1	Tips Header
Logo Return Address	Johnson Box Header		542 x 32 (12 columns)
210 x 72 (same as v2)	213 x 80 (5 columns)		16pt sp
			Tips
	8pt sp		542 x 360 (12 columns)
	Benchmark		
	213 x 136 (5 columns)		
	16nt so		
Main Insight Header	rahrah		
542 x 32 (12 columns)			
16pt sp			
	Ipt	1	e.
Main Insight	Explainer		· · · · · · · · · · · · · · · · · · ·
354 x 240 (8 columns)	166 X 240 (4 columns)		
			8pt sp
			oprsp
			Flexible Module
			542 x 192 (12 columns)
líntes] [
Socondary Insight Header			
542 x 32 (12 columns)			
16pt sp			
Secondary Insight			Set ce
342 X 110 (12 COlumns)			Spt sp
			Footer
			542 x 113 (12 columns)
8pt sp		1pt	
Pageturn 542 x 13 (12 columns)			
Leaguerer a tel A ra (ra communa)		-	
Email Home Energy Reports

Email Home Energy Reports are communications sent through the email channel to engage utility customers about their home energy use. They include a neighbor comparison, personalized tips, and links to online resources where customers can learn more about their usage and ways to save. Marketing modules may also be included. The goals of the product are to give customers actionable insights about their energy and motivate them to lower their usage.

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers in the Email Home Energy Reports program. These requirements must be met for a utility and a customer to participate in the program.

Utility Data Requirements and Limitations

- Scale: Scale restrictions may apply. The actual number of communications sent may be affected by attrition, opt-outs, customer eligibility, and data availability.
- Localization: Not all languages and locales are supported at this time. Contact your Oracle Utilities Sales Representative to confirm that Email Home Energy Reports are available in your market.
- Data Integration: Data must be sent to Oracle Utilities in the correct schema and at the appropriate frequency. See the Oracle Utilities Opower Legacy Billing Data Transfer Standards for details.
- Billing Frequency: The utility must bill their customers on a monthly, bi-monthly, or quarterly basis.

Customer Data Requirements and Limitations

- Customer Type: The customer must be residential.
- Data History: The customer must have at least one bill of historical billing data in the form of monthly, bi-monthly or quarterly read data.
- Contact Information: The customer's current email address must be available.
- Supported Devices: Oracle Utilities supports email clients that may be native to a specific device, such as the installed email client on the iPhone 6, as well as email client applications that may be accessed from any device or computer. Oracle Utilities supports and optimizes for the following email clients to view Email Home Energy

Reports:

- iPhone internal email client (iOS 10.0 and greater)
- iPad internal email client (iOS 10.0 and greater)
- Apple Mail (Mac OS X 10.10 and greater)
- Android internal email client
- Microsoft Outlook (2010 and greater)
- Outlook.com
- Yahoo! Mail
- Gmail.com
- Samsung Mail

For email clients that support multiple versions operating at the same time (for example, Apple iOS10 on iPhone5 or Microsoft Outlook 2010, 2012, and 2013), Oracle Utilities generally supports the most current major release as well as a number of previous major releases. For email clients that only provide a single version (for example, Gmail.com), Oracle Utilities supports the currently available version. Other email clients are not officially supported or tested by Oracle Utilities. Customers viewing Email Home Energy Reports on unsupported devices or applications may see user experience variations in their reports.

Customer Experience Overview

Email Home Energy Reports are sent to customers on a monthly, bi-monthly, or quarterly basis. The emails are often sent on Friday afternoons so that customers will have time to review the reports over the weekend. The major types and components of Email Home Energy Reports are described below.

Report Editions

During program launch, each customer is assigned to a report edition or experience. Typically, all customers in the program receive a similar report experience. In some instances, there may be multiple report experiences to which customer segments are assigned based on program goals. This allows for A/B testing and accommodates utilities that have both electric and gas customers. See "Report Editions " on page 249 for more information.

Report Modules

Each section of a report is referred to as a module. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Certain modules may be more relevant to customers at a specific time of year. Only a subset of available modules will appear on any individual report. See "All email reports consist of modules. Modules are separable pieces of content that communicate some type of relevant

and engaging information to the customer. Modules can be complex, providing dynamic information about a customer's energy use, or simple, containing a static image and hyperlinks. See each module description for details." on page 292 for more information.

Similar Homes Terminology

Depending on each utility's setup and configuration, customers may see "similar homes" terminology in the user interface instead of "neighbor comparison" terminology. Utilities can choose to use one type of terminology or the other based on how they think their customers will react to Oracle Utilities Opower products.

These variations are not extensive and only appear in a few places. If you are not sure which variation is used by your utility, check with your supervisor.

Report Tips

Home Energy Reports contain tips to help customers lower their energy use. Tips are selected from a library of energy saving recommendations crafted by Oracle Utilities Opower energy efficiency analysts and are approved by the utility during the launch of the program. These tips can be configured to include information on related utility programs when applicable. See Intelligent Tip Targeting for more information about the tip selection process. You can also see the *Oracle Utilities Inside Opower Product Overview* to learn about tip content editing options that may be available to your utility.

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Report Types

The following are the supported report types:

- Single Fuel Electric: Reports for customers who only have electricity. The energy units are displayed as kilowatt-hours (kWh).
- Single Fuel Natural Gas: Reports for customers who only have natural gas. The energy units are displayed as therms, CCF, or m³.
- Dual Fuel Electric and Natural Gas: Reports for customers who have both electricity and natural gas. The energy units are displayed using an Energy Index (units), which combines electricity usage (kWh) and natural gas usage (therms, CCF, or m³) into a single measurement.

The Energy Index used in Dual Fuel reports is a price-weighted index. Because electricity is usually more expensive per unit of energy than natural gas, Oracle Utilities adjusts for price before combining them into one unit. This keeps the proportional contributions to the overall combined unit roughly in line with customer expectations from

their bills. The calculation uses electricity and gas sales numbers for the residential segment to arrive at the price-weighted index.

Report Modules

All email reports consist of modules. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Modules can be complex, providing dynamic information about a customer's energy use, or simple, containing a static image and hyperlinks. See each module description for details.

Context-Aware Tips

The Context-Aware Tips module helps a customer understand why they are bring presented with a specific tip on their report. The module includes a personalized tip insight that explains why the customer is presented with a specific tip based on their report data. The tip content provides actionable and relevant information about the best ways for the customer to save energy, and a link which drives the customer to a web portal where they can get more information to take further action.



Personalized tip insight: The personalized tip insight is located above the tip header and explains why the customer is receiving this specific tip based on their report data.

Header: The header creates a link between the report insights and tip content. For example, "How can you reduce heating costs?"

Tip Content: The tip module provides actionable and relevant data that educates the customer about the best way to save energy. The module is comprised of a title, a tip across the bottom giving the customer actionable information to balance savings and comfort in their home, and an accompanying illustration.

Call to Action: Customers who have completed the Home Energy Analysis can click **See More Ways to Save** to view additional energy saving tips in the Oracle Utilities web portal.

Requirements and Limitations

Fuel: N/A.

AMI Data Required: N/A.

Data History: N/A.

Billing Frequency: N/A.

Daily Peak

The Daily Peak module displays a customer's average daily peak usage for the last month, so that customers can see which hours of the day they are using the most energy. The module includes one graph that shows peak use on the weekdays and another that shows use on the weekends. The messaging indicates if the customer has one peak, two peaks, or no peaks. If customers receive a monthly bill, the month covers the entire billing period.

If customers receive bills on a bi-monthly or quarterly basis, then the last 30 days of the billing period is considered the last month. If customers have access to the Energy Efficiency Web Portal, a message and URL are included to drive them to the web.





On weekends, you're an afternoon user.

- Bar Charts: Two bar charts show the customer's average energy use for each hour of the day. One bar chart shows hourly energy use on weekdays and the other shows use on weekends.
- Chart Description: Descriptive text below each bar chart identifies the billing period of the data displayed.
- Insight Statement: An insight statement above each bar chart summarizes the customer's peak energy use. The messaging indicates if the customer uses the most energy in the morning, afternoon, evening, or night. The insight statement varies based on the customer's energy use. For example, if the customer has a single peak on weekends that occurs between the hours of 6:00 AM and 12:00 PM, the insight statement says, "On weekends, you're a morning user".

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual-fuel

AMI Data Required: N/A

Data History: A minimum of 200 non-zero hourly data points from the appropriate 30-day period.

Billing Frequency: Monthly, bi-monthly, and quarterly

Disaggregation

The Disaggregation module displays an estimated breakdown of a customer's energy use in recognizable categories, such as heating, cooling, and lighting. Energy use and weather data are used to determine the heating and cooling breakdown. The remaining categories are determined by a customer's response to the Oracle Utilities Opower <u>Home Energy</u> <u>Analysis</u>.



Values are estimated based on weather patterns and your recent energy use. If this doesn't look right, please <u>visit your account</u> to update your home information

Header: The header or title of the module draws attention to the customer's recent energy use.

Insight Statement: An insight statement is positioned above the pie chart, which highlights the largest energy use category for the bill period.

Energy Use Categories: An energy use category refers to the way that energy is consumed, such as through a heating system or cooling system.

- Pie Chart Category Order: The largest category is shown at the noon position of the chart. The remaining categories are listed after the largest category from largest to smallest moving clockwise.
- Available Categories: Insights and categories within the module should match the categories that exist in the Home Energy Analysis.
- **Completion State**: The categories that display will look different depending on whether the module was generated before or after completing the Home Energy Analysis.

Bill Period: The bill period is displayed below the pie chart to indicate the relevant date.

End Use Category Breakdown: A color-coded list of categories is displayed at the bottom of the module. The proportion of total energy that each category used is displayed as a percentage next to each category. Each category is rounded to the nearest whole number, and the Other category represents what remains to sum to 100%.

Disclaimer and Link: A disclaimer statement at the bottom of the module describes the data used to calculate the customer's energy use disaggregation results and emphasizes that the information is estimated. A link to the customer's <u>Home Energy Analysis</u> is displayed for them to update their information if the results do not seem correct.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual-fuel.

AMI Data Required: N/A.

Data History: One of the following conditions must be met:

- Six bills with temperatures below 65°F and six bills with temperatures above 65°F.
- At least 12 bills that span at least 18 months.

Billing Frequency: Monthly.

Disaggregation Promotion

The Disaggregation Promotion module leverages appliance detection and disaggregation insights to provide the customer with a deeper understanding of their home energy use, and how they can benefit from taking advantage of specific programs or devices.



- Disaggregation Pie chart: The disaggregation pie chart is used to promote a rate, program or smart device. It is comprised of the following:
 - Prompt: The prompt encourages customers to think about the promoted rate, program, or smart device is provided above the pie chart. For example, "How much energy could you save by using smart appliances?"
 - Pie chart: A dynamic, customer-specific pie chart illustrating the how a specific category of the customer's energy use measures against the prompt. For example, a colored wedge of the pie chart representing 20% of the pie chart would be offset form the gray 'Other' category representing what remains to sum 100%. Unlike the See "Disaggregation" on page 220. which breaks energy use into multiple categories (such as, appliances, heating, cooling, and so on), the Disaggregation Promotion module displays a single category of the customer's energy use to reinforce the promotion goal.
- Insight Statement: An insight statement which highlights the largest energy use category for the bill period is positioned below the pie chart. For example, "You combined appliances account for 20% of your energy use." The category is rounded to the nearest whole number.
- Bill Period: The bill period is displayed below the insight. The bill period is determined using the dates provided by the Bill Summary service. If the start and end dates of the bill period are not provided in the Billing Suite Data Transfer Standards file, the start and end dates will be estimated and will be hidden from view.
- Promotion: The promotion is static and provides the customer with information that will help them take advantage of specific programs or devices. This will vary by program promotion and must be provided to Oracle Utilities by the utility. For example, "You could

reduce your energy use by 15% by upgrading to more energy efficient models, and get a rebate of up to \$300."

 Disclaimer and Link: A disclaimer statement at the bottom of the module describes the data used to calculate the customer's energy use disaggregation results and emphasizes that the information is estimated. A link is displayed for them to browse the promoted rate, program, or smart device.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual-fuel.

AMI Data Required: N/A.

Data History: One of the following conditions must be met:

- Six bills with temperatures below 65°F and six bills with temperatures above 65°F.
- At least 12 bills that span at least 18 months.

Billing Frequency: Monthly.

Electric Vehicle Confirmation

The electric vehicle confirmation module proactively asks the customer to confirm whether or not they charge an electric vehicle at home, and if so, which type of charger they use. The goal of this module is to identify electric vehicle customers who are eligible to receive the "Electric Vehicle Edition" on page 255 experience. Confirmed electric vehicle customers who are currently enrolled in an Email Home Energy Report program are only asked to confirm their charger type.

UtilityCo

Stacey Williams Acct ****1234

Do you drive an electric vehicle?

Recent changes in how you use electricity suggest you may be driving — and charging — an electric vehicle.

Let us know, so we can share information about how your EV impacts your energy bills and provide personalized tips for becoming more energy efficient.

Do you charge an electric vehicle at home?



Heading: The heading asks whether or not the customer charges an electric vehicle at their home. For example, "Do you drive an electrical vehicle?"

Text: The body text clarifies why Oracle Utilities Opower believes that they may be experiencing this event. For example, "Recent changes in how you use electricity suggest you may be driving – and charging – an electric vehicle. Let us know, so we can share information about how your EV impacts your energy bills and provide personalized tips for becoming more energy efficient."

Call to Action: Restates the opening prompt. For example, "Do you charge an electric vehicle at home?"

Feedback Buttons: 'Yes' or 'No' buttons that the customer can click to respond to the prompt. When customer's click the applicable feedback button, they are redirected to the Thank You page. If the customer confirms that they do charge an electric vehicle they are also asked to confirm their charger type. If the customer replies they do not charge an electric vehicle, they are thanked for participating.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: Not applicable.

Data History: Not applicable.

Billing Frequency: Not applicable.

Electric Vehicle Breakout

The electric vehicle breakout module provides customers with a more detailed look at how their electric vehicle charging impacts their energy as single bar-chart. The chart explains and visualizes how a customer's electric vehicle charging impacts their overall energy use, and encourages them to save energy.



Charging your EV at home used about 153 kWh.

Insight: The "Charging your EV at home used about 53 kW]" reminds customers that their electric vehicle changing impacts their overall energy use and prepares them for a more detailed view of their electric vehicle use.

Horizontal bar: The horizontal bar provides an isolated view of the customer's usage. The bar indicates three usage states: total usage, general home energy usage, and electric vehicle usage. The bar matches the data presented in the Electric Vehicle Neighbor Comparison.

Detection and Disaggregation Disclaimer - Third report and beyond (not depicted): From the third report onward, the module includes a short detection and dissagregation disclaimer that describes the data sources used to create the electric vehicle usage estimate. For example, "We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves." In the first two reports, this information appears as the <u>Electric Vehicle</u> Detection and Disaggregation module.

Requirements and Limitations

Fuel: Electric and dual fuel

AMI Data Required: Hourly AMI, and appliance detection and disaggregation.

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Detection and Disaggregation Explanation

The electric vehicle detection and disaggregation explanation module describes how electric vehicle usage is calculated in the electric vehicle edition of the report. This information appears as a distinct module for the first two reports. From the third report onward, this information appears as part of the breakout module.

Wondering how we calculate your EV charging?

We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves.

Heading: The heading draws the customer's attention to how their charging is calculated.

Detection: The explanation includes a short disclaimer that describes the data sources used to create the electric vehicle usage estimate, and tells the customer that the estimates become more accurate over time.

Requirements and Limitations

Fuel: Electric and dual fuel.

AMI Data Required: Hourly AMI, and appliance detection and disaggregation.

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Feel Good

The electric vehicle feel good module is a static message that reminds customers of the positive impact of their electric vehicle use despite higher home energy use. This module appears in every electric vehicle edition Email Home Energy Report. In the first report, the module aims to deliver a reassuring "feel good" message to electric vehicle drivers who have seen a significant uptick in energy use from charging an electric vehicle at home. After the second report, this module slot can be replaced with utility-specific content or marketing modules.

Driving an electric vehicle makes you part of a clean-energy future!

Even though your home energy use has gone up due to EV charging, you've left the higher cost of gas-powered driving behind and lowered your carbon footprint.

Most EVs refuel for as little as a dollar per equivalent gallon of gasoline. Plus, EV owners avoid most of the repetitive costs of maintaining a car engine.

So, charge up, feel good, and go!

Heading: The module heading is positive and supportive of the customer's electric vehicle use.

Feel good message: The module message includes a reminder that while the electric vehicle customer's home energy use may be higher than it used to be, they are making a positive contribution to every conservation by reducing their carbon footprint, and saving money over the long-term.

Requirements and Limitations

Fuel: Electric and dual fuel

AMI Data Required: Hourly AMI, and appliance detection and disaggregation.

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Neighbor Comparison

The EV Neighbor Comparison compares the customer ("You") to two different groups: "Efficient Neighbors" and "Average Neighbors." The results are displayed in a

horizontal bar graph. The "You" bar displays general home use and indicates what percentage of the home use was due to electric vehicle charging. A summary statement indicates how the customer compares to their efficient neighbors. "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. The comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors.



Normative Message / Insight Statement: The normative message appears above the chart and provides an insight

Bar Chart: The bar chart displays how much energy each group in the comparison used. The energy units displayed in the chart are based on the customer's fuel type. For example, kWh is shown for single fuel electric customers, and "units" is used for dual fuel customers since electricity and natural gas usage are combined into a single measurement.

- You: This bar indicates how the customer is doing. It displays general home use and indicates what percentage of the home use was due to electric vehicle charging.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. The efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value—the 20th percentile neighbor—is used to determine the efficient neighbors value.

Dynamic Neighbor Description: The dynamic neighbor description summarizes the characteristics of the neighbors that the customer is compared to. This information helps assure customers that the comparison is fair and accurate. The description may include one or more of the following:

- Number of neighbors: The number of other homes that the customer is compared to.
- Proximity: The geographic proximity of the neighbor's homes rounded to the nearest whole unit.
- Home Size: The average home square footage among neighbors.
- Heat Type: The heating type of the neighbors, such as gas or electric heating.

Requirements and Limitrations

Fuel: Electric and dual fuel.

AMI Data Required: Hourly AMI and Appliance detection and disaggregation data.

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, quarterly.

Electric Vehicle Welcome Message

The Electric Vehicle Welcome Message is included in the first Electric Vehicle Email Home Energy Report. It appears at the top of the report and explains the program and provides information about its purpose so that customers are oriented to the program.



Starting today, you'll receive a report every few months showing how charging your electric vehicle (EV) impacts your energy bill. We'll also include personalized tips for energy efficiency, so you can reduce your use in other areas.

Welcome Message: The welcome message includes a greeting that thanks the customer for driving an electric vehicle and explains that they are receiving a report experience that is especially designed to take into account their electric vehicle use. After the first report, the Welcome Message is dropped form the report.

Requirements and Limitations

Fuel: Electric and dual fuel

AMI Data Required: Hourly AMI and AD&D

Data History: N/A

Billing Frequency: N/A

Heating and Cooling Thermostat Disaggregation

The Heating and Cooling Thermostat Disaggregation module uses AMI or billing-based heating and cooling disaggregation insights to drive thermostat program and device participation. It is designed to enhance the effectiveness of program promotions by providing the customer with a deeper understanding of their heating and cooling use, and explaining the benefits of purchasing a smart thermostat.

You could stay comfortable while using less energy than you currently do.

Save with a smart thermostat instead of giving up your comfort

Based on your heating and cooling use, a smart thermostat could help you reduce your costs by **up to 15%**. You can set schedules and set the temperature from your smart phone. Some models even learn your comfort preferences, and adjust themselves to save you more.



Savings shown are estimates; actual results may vary based on home attributes, usage, and other factors.

LEARN MORE

Heading: The heading draws the customer's attention to the promotion topic and prepares them to learn about the insight.

Energy Use Insight: The energy use insight tells the customer what percent of their total annual energy use is due to heating and cooling.

Heating Energy Use: The percent of their total heating energy usage.

Cooling Energy Use: The percent of their total cooling energy usage.

Date Range: This is dynamic based on the billing period.

Promotion Subheading: The utility may promote a program of their choice that is related to heating and cooling.

Promotion Text: The promotion text is designed to help the customer understand the cost and benefits of taking advantage of the promotion.

Call to Action: The button redirects the customer to where they can access the promotion.

Explainer: The explainer states how the information was calculated.

Requirements and Limitations

Fuel Type: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History: At least 12 bills in the last 18 months or at least six bills

Billing Frequency: Monthly, bimonthly.

Heating Analysis Pie Chart

The Heating Analysis Pie Chart displays the customer's estimated heating-related energy consumption from last season as a percentage of their total energy consumption. It is paired with a brief message that indicates their estimated heating costs. The goal of this module is to help customers better understand how they use energy during the hearing season.



Title: The title focuses on heating-related energy use in the winter season.

Pie Chart: The pie chart highlights the estimated proportion of the customer's total energy consumption that is attributed to heating during the past winter.

Insight: The pie chart is paired with an insight that may consist of two parts: an energy efficiency insight and a cost insight.

Energy Efficiency Insight: All customers receive an energy efficiency insight, which say that they can lower their bills by heating their home more efficiently.

Cost Insight : If a customer's total estimated heating costs are more than \$10, they will see an estimated amount of money they spent on heating last winter. This insight will not be displayed if the \$10 threshold is not met.

Heating % Insight: The default threshold for the heating percentage is 10%. The module will not display if this threshold is not met.

Comparison Information: This section appears below the bar chart and identifies the date range of the data. There is also a brief statement to indicate that the data is based on the customer's energy use patterns, as well as local weather patterns.

Learn More / Call to Action: Customer can click Learn More to view their Home Energy Analysis in the Oracle Utilities web portal.

Requirements and Limitations

Fuel Type: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History: At least 12 bills in the last 18 months or at least six bills

Billing Frequency: Monthly, bimonthly.

Heating Neighbor Comparison

The Heating Neighbor Comparison module shows the customer's estimated heating usage from last winter compared to that of their "Efficient Neighbors" and "Average Neighbors." The purpose of this module is to encourage energy efficiency behavior leading up to and during the winter season. The heating usage is calculated based on energy use and weather data from the previous winter. The data is displayed in a vertical bar graph and is paired with an insight about how the customer compared to their neighbors.



- Module Title: The title focuses on a neighbor comparison specifically related to heating energy use.
- Bar Chart: The bar chart shows how much energy the customer used on average to heat or cool their home during a given season, and then compares this amount to that of their neighbors from the same season.
- You: This bar indicates how the customer is doing.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. By default it is green because green is commonly associated with energy efficiency.
- Comparison lcons: This graphic highlights whether the customer is doing "Great,"
 "Good," or "Using more than average," which represents a summary of the five different states of the normative message.
- Normative Message / Insight Statement: The normative message appears above the bar chart and provides an insight about why the bar chart appears the way it does.
- Comparison Information: This section appears below the bar chart and identifies the date range of the data and the characteristics of the neighbors used in the comparison. It includes the customer's number of neighbors and the geographic proximity of the neighbors' homes.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A

Data History: Billing data for the previous billing period.

Billing Frequency: Monthly, bimonthly, and quarterly.

Marketing Modules

The utility has the option of adding additional marketing modules to the email. Marketing modules can be customized to contain text and pictures, and are often used to promote utility-specific programs or drive customers to online tools and resources. Such modules can be targeted to specific customer segments at predefined times. Sequences of modules can be scheduled for delivery as campaigns. Modules may be configured to appear above, below, or in between the standard neighbor comparison and personalized tips modules.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History: N/A.

Billing Frequency: Monthly, bi-monthly, quarterly.

Neighbor Comparison

The Neighbor Comparison compares the customer ("You") to two groups: "Efficient Neighbors" and "All Neighbors." The results are displayed in a horizontal bar graph. A summary statement indicates how the customer compares to their efficient neighbors, and an evaluative statement is highlighted to indicate if the customer is doing "Good," "Great," or is "Using more than average" compared to their efficient neighbors. "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. The comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors.

You	used 12% less than your efficient neighbors.
•	Great
	Good
	Using more than average
You	48 kWh
Efficient Neighbors	55 kWh
All	111 kW
Nov 29, 2013 - You're compar are a similar si neighbors are	- Jan 9, 2014 red with 100 homes an average of 150 mi from you that ize (1,325 sq. ft.) and have electric heat. Efficient the most efficient 20% of this group.

- Normative Message / Insight Statement: The normative message appears above the chart and provides an insight ("You used 18% more than your neighbors") about why the bar chart appears the way it does. Specifically, it displays a percentage for (a) how much more or less the customer used compared to their "efficient neighbors" or (b) how much more or less the customer used compared to "neighbors" (i.e., all neighbors, including efficient neighbors). The wording of the statement itself varies depending on several factors.
- How You're Doing: This graphic highlights whether the customer is doing "Great,"
 "Good," or "Using more than average" compared to All Neighbors or Efficient Neighbors.
- Bar Chart: The bar chart displays how much energy each group in the comparison used. The energy units displayed in the chart are based on the customer's fuel type. For example, kWh is shown for single fuel electric customers, and therms or CCfs are used for single fuel gas customers. For duel fuel customers, the term "units" is used, since electricity and natural gas usage are combined into a single measurement.
 - You: This bar indicates how the customer is doing.
 - All Neighbors: This bar indicates how all the customer's neighbors are doing.
 - Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. The efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value—the 20th percentile neighbor—is used to determine the efficient neighbors value.

- Dynamic Neighbor Description: The dynamic neighbor description summarizes the characteristics of the neighbors that the customer is compared to. This information helps assure customers that the comparison is fair and accurate. The description may include one or more of the following:
 - Number of neighbors: The number of other homes that the customer is compared to.
 - Proximity: The geographic proximity of the neighbor's homes rounded to the nearest whole unit.
 - Home Size: The average home square footage among neighbors.
 - Heat Type: The heating type of the neighbors, such as gas or electric heating.

Requirements and Limitations

Fuel: Electric, gas, and dual fuel.

AMI Data Required: N/A.

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, quarterly.

Personal Tracker

The Personal Tracker provides a historical view of the customer's energy use-to-date with the goal of comparing the current year to the previous year. The Personal Tracker can show as few as three historical bills or as many as two years of historical bills. A message appears above the chart comparing the customer's recent use to their historical use. Gas-only and dual fuel customers see a variation in the units of energy displayed. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel customers.



Normative Message / Insight Statement: A normative message above the chart explains the customer's energy use. The message varies depending upon how much data is available.

Available Data	Message
13 or more historical bills are available, including two January bills.	The message provides a year-to-date comparison that explains how the customer's energy use so far this year compares to their use in the previous year.
13 or more historical bills are available, including one January bill.	The message explains how the customer's energy use in the most recent bill compares to their energy use from the same billing period of the previous year.
Less than 13 but at least 3 historical bills are available.	The message compares the energy use in the current bill to energy use in the previous bill.

Bar Chart: The bar chart displays the customer's bills over time and provides a comparison to previous energy use if enough data is available. Each bar in the chart represents a bill.

When 13 or more historical bills are available, a double bar chart compares the customer's energy use on each bill in the current year to their energy use on each corresponding bill from the previous year. If less than 13 but at least three bills are available, a bar chart shows the customer's energy use on each available bill.

Missing Data Message: If there is missing data, then a message displays below the chart to explain the reasons for this. For example, the message will explain that missing data may be a result of the customer's net energy use being at or below zero for the billing period, or because a comparable bill from the previous year could not be found. This message is hidden if there is no missing data.

"See More Energy Trends" Button: By default, a **See More Energy Trends** button takes users to the Data Browser in the Oracle Utilities web portal. In the Data Browser, customers can see a more interactive view of their energy trends.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual fuel.

AMI Data Required: N/A.

Data History: A minimum of three historical bills

Billing Frequency: Monthly, bi-monthly, and quarterly.

Post-Audit Home Profile

The Post-Audit Home Profile can be included in the first Email Home Energy Report that a customer receives after completing the <u>Home Energy Analysis</u> in the Energy Efficiency Web Portal. It is designed to introduce customers to their new personalized Email Home Energy Report by providing a summary of their responses to the audit, and informing customers that both their report and tips have been updated based on their home attributes. When included in an Email Home Energy Report, the Post-Audit Home Profile appears at the top of the report, below the header.

Your entire report is more accurate

Now that you've updated your home profile, we can give you a more accurate neighbor comparison and better personalized tips. Here's what you've told us:



- Introductory Message: A message appears at the top of the module to describe that the Email Home Energy Report has been updated based on the customer's home attributes.
- List of Home Attributes: The module includes a list of eight home attributes, including home type, home size, and heating type. Across from each attribute is the customer's response to the attribute from the completed What Uses Most audit or Home Energy Analysis. The eight attributes displayed in the module were chosen because they are the most helpful to Oracle Utilities in personalizing the Email Home Energy Report. If an attribute is still unknown for a customer after they have completed the audit, then it is excluded from the list of attributes in the Post-Audit Home Profile.
- "Update your home profile" Message: A message appears at the bottom of the module that informs customers they can update their home profile by returning to the What Uses Most audit or Home Energy Analysis.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A. Data History: N/A. Billing Frequency: N/A.

Pre-Audit Home Profile

Want a more accurate report?

The Pre-Audit Home Profile can be included in Email Home Energy Reports for customers who have not yet completed the <u>Home Energy Analysis</u> in the Energy Efficiency Web Portal. It is designed to show customers which of their home attributes are unknown, and to encourage them to provide these attributes by completing the audit to receive a more personalized Email Home Energy Report. When included in an Email Home Energy Report, the Pre-Audit Home Profile appears at the top of the report, below the header.



 Benefit Message: A message at the top of the module describes the benefits of completing the audit. By default, the message is "To see a more accurate comparison and helpful tips, update your home profile. It won't take long—just 2-3 minutes."

- List of Home Attributes: The module includes a list of eight home attributes, including home type, home size, and heating type, and indicates which of the attributes are known or unknown for the customer.
- Action Statement: The bottom of the module displays a call to action that provides instructions on how to complete the What Uses Most audit or Home Energy Analysis.
- "Complete Home Profile" Button: Customers can click a Complete Home Profile button at the bottom of the module to be directed to the What Uses Most audit or Home Energy Analysis in their Oracle Utilities web portal account.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual-fuel

AMI Data Required: N/A

Data History: N/A

Billing Frequency: N/A

Seasonal Myths Tip

The Seasonal Myths Tip module presents the customer with seasonally relevant myths and facts that educate them about the best way to save energy while maintaining comfort. It is comprised of a title, two myths, and a tip that gives the customer actionable information to balance savings and comfort in their homes.

	Winter thermostat myths Myth #1 <i>"My house heats faster if I set my thermostat to</i> <i>a higher temperature."</i> Fact: A higher temperature doesn't heat your house faster — it only heats your house longer. It's best to stick with an efficient setting that you're comfortable with.
	Myth #2 <i>"Replacing my old, drafty windows is the best</i> <i>way to insulate my house."</i> Fact: Upgrading to energy-efficient windows will help reduce heat loss, but there are more cost-effective solutions. First consider sealing air leaks or adding insulation.
Но	ow to heat your home efficiently
Set your	thermostat to a constant temperature, such as 68°F.
When you leav	e, lower the temperature 10-15 degrees to avoid wasting heat.
	SEE MORE TIPS

Title: The title reflects a focus on winter season myths.

Tip Content: The tip module provides seasonally relevant myths and facts that educate the customer about the best way to save energy while maintaining comfort. The module is comprised of a title, two myths (each with an accompanying illustration and fact that dispels the myth), and a tip across the bottom giving the customer actionable information to balance savings and comfort in their home.

See More Tips: Customers can click See More Tips to view additional energy saving tips in the Oracle Utilities Opower web portal.

Requirements and Limitations

Fuel: N/A.

AMI Data Required: N/A.

Data History: N/A.

Billing Frequency: N/A.

Subject Line, Header, and Footer

The subject line and header are used to engage the customer, brand the communication, and identify the time period of the neighbor comparison. The footer provides customers with

links to manage preferences and unsubscribe from Email Home Energy Reports. It also contains the utility address and other necessary legal text.

Header

Subject Line: The subject line is designed by Oracle Utilities to engage customers. The default subject line is "Hi [firstname lastname] - your Home Energy Report is here." Our research has shown that including the customer's name results in a higher open rate.

Header: The header appears at the top of every report.

The header contains the following:

- Logo: A logo provided by the utility. This is the same logo used in the Energy Efficiency Web Portal.
- Utility account number: Since the account number is required to register on the Energy Efficiency Web Portal, having the number on the report provides a useful reference for customers. Part of the account number is obscured by default.

Footer

The footer is included at the bottom of every report and includes components that provide more context about the report. This includes the following:

- Manage Preferences: A link to the Energy Efficiency Web Portal page where a customer can edit their report preferences.
- Unsubscribe: A link to a page where customers can unsubscribe from Email Home Energy Reports. An unsubscribe link must appear due to CAN-SPAM regulations in the US and similar regulations abroad. The URL the unsubscribe link points to cannot be customized. Unsubscribing from Email Home Energy Reports in this manner unsubscribes the customer from all Oracle Utilities Opower email communications. This action is permanent. A customer cannot opt in again after opting out of Email Home Energy Reports.
- Address: The utility's mailing address. The mailing address must appear due to CAN-SPAM regulations in the US and similar regulations abroad.
- **Disclaimer**: This is an optional disclaimer that can be added at the request of the utility.
- Legal text: This is the copyright and any other legal text required by the utility or Oracle Utilities.

Target Rank Graph

The Target Rank Graph module is designed to encourage consistently high users to improve their target ranking by showing customers how their energy use is ranked compared to 100 of their similar neighbors. The Target Rank Graph is comprised of a horizontal bar graph that

charts the customer's energy use for the current billing period and shows how they rank compared to similar neighbors, a description of how the customer's neighbors were chosen for the comparison, and a **View Home Energy Use** button that customers can click to explore their energy use in the <u>Oracle Utilities Opower Data Browser</u>.



Note: This module is only available as part of the Target Rank Edition.

Heading: By default, the heading is "How do you rank among neighbors"

Graph: A horizontal bar graph charts the customer's energy use on the current billing period and shows how they rank compared to their similar neighbors.

Date Range: A date range below the graph displays the current billing period.

Neighbor Comparison Description: A neighbor comparison description appears below the graph. It describes how the customer's neighbors were chosen for comparison.

View Home Energy Use: Customers can click the button at the bottom of the module to explore their energy use in the Data Browser in their web portal account.

Limitations and Requirements

Fuel: Gas-only, electric-only.

AMI Data Required: N/A.

Data History: 12 months of historical billing data.

Billing Frequency: Monthly or bimonthly.

Target Rank Insight

The Target Rank Insight is designed to inform the customer of their current rank as compared to other customer homes, and encourage them to continue to improve their rank by using less energy. The module includes the customer's current rank, an insight about how the customer rank has changed since the last report, and a call to action that highlights how much money the customer can save by improving their energy use.

Your neighbor efficiency rank



Your target rank is 9 spots away.

You can save up to \$30 by meeting your target rank.

Note: This module is only available as part of the Target Rank Edition.

Title: By default, the title is "Your neighbor efficiency rank" to emphasize that the comparison is against other neighbors or similar homes.

Rank: The customer's current rank is displayed in large font. This is the customer's rank as compared to other customer homes (typically 100 homes).

Insight Statement: An insight statement appears next to the rank to describe how the customer has progressed since their previous Target Rank report. The insight statement may congratulate the customer for reaching their target rank, inform them how many ranks they've gained or lost since the previous report, or denote a personal best rank.

Call to Action: Language at the bottom of the module encourages customers to continue to improve their rank by highlighting how much money can be saved by reaching the target rank within the campaign period.

Requirements and Limitations

Fuel: Gas-only, electric-only.

AMI Data Required: N/A.

Data History: 12 months of historical billing data.

Billing Frequency: Monthly or bimonthly.

Time of Use Daily Peak

For customers with electric time of use rate plans, load-shaping insights can be included in the Email Home Energy Report using the Time of Use Daily Peak module. This module is designed to educate utility customers about their time of use rate plan and to encourage them to shift energy use to off-peak hours.

This module displays a customer's peak and off-peak usage during weekdays and weekends. Typically, a utility's peak time rates are different on weekdays and weekends.

This module should replace the <u>Daily Peak module</u> in the Email Home Energy Report for customers who are on a time of use rate plan.



Header: The header statement calls the reader's attention to the fact that this module will show them how they used energy during peak hours. The default header reads "Your usage during peak hours".

Insight Statement: The insight statement describes the reader's time of use plan, including details about when peak times are and how much more expensive electricity is during those times. For example, the insight statement for the weekday chart might read "On weekdays, electricity is 1.5x more expensive from 4-9pm." The insight statement for the weekend chart might read, "On weekends, there are no peak hours."

Hourly Usage Bar Chart: The module displays two charts showing the customer's average hourly electricity costs during the previous week. The Weekdays chart is displayed first, followed by the Weekends chart. The charts highlight peak hours to draw attention to how the customer's average electricity costs during peak hours compare to their average electricity costs during peak hours compare to their average electricity costs during beak hours.

The chart can also display partial-peak periods and multiple peak periods, as needed.

Footer: A statement below the chart identifies the time period used to determine the hourly average usage. For example, the footer statement below the weekday chart might read, "This is based on your average weekday electricity use in the last billing period." The footer statement below the weekend chart might read, "This is based on your average weekend electricity use in the last billing period."

Graph and Insight Statement Variations: Different components of the Time of Use Daily Peak module, such as the highlights in the bar chart and the insight statement, can take on different states depending on the utility's rate plan. For example, if the time of use rate plan has partial-peak or multiple peak periods, the chart shows these different periods and adjusts the insight statement accordingly. Similarly, the insight statement can change depending on whether the rates are the same during weekdays and weekends.

Requirements and Limitations

Fuel: Electric-only and dual fuel

AMI Data Required: Yes

Data History: Minimum of 200 non-zero hourly data points from the appropriate 30-day period

Billing Frequency: Monthly or bi-monthly

Email Address: Customer must have a valid email address on file

Customer Feedback

The Customer Feedback module is an optional module that can be included to solicit feedback about the Email Home Energy Report.

Do you find this email helpful?



Prompt: A question at the top of the module asks customers if the promotion helpful.

Response option buttons: The customer can respond 'Yes' or 'No' to the module questions.

Landing Page: After submitting feedback, customers are directed to a confirmation page in the Energy Efficiency Web Portal where they are thanked for their input. The page also informs customers that their feedback is used to make improvements to the product.

Requirements and Limitations

Fuel: Gas-only, electric-only, and dual-fuel.

AMI Data Required: N/A.

Data History: A minimum of three historical bills.

Billing Frequency: Monthly, bi-monthly, and quarterly.

Ways to Save

The Ways to Save module provides a set of automatically selected energy savings tips that are prioritized based on each customer's unique attributes. This feature ensures that each tip is relevant to a customer's unique needs. The tips are continually refreshed with new information and are designed to cover a wide variety of energy-saving and financial investment categories.

Ways to Save

i	A-1
1	

Upgrade to an efficient refrigerator

Your refrigerator is on 24/7. As a result, it uses more energy than most appliances in your home. An old refrigerator uses nearly twice as much energy as a new

ENERGY STAR[®] refrigerator.

Save up to \$45 per year



Upgrade to an efficient washing machine

Consider buying a new ENERGY STAR[®] clothes washer —it can use about 25% less energy and 45% less water than conventional models by handling larger loads and leaving clothes less damp before they enter the dryer.

Save up to \$140 per year



Replace your inefficient light bulbs

Inefficient incandescent bulbs are costly to run and replace in the long term. Use compact fluorescent light (CFL) bulbs — they use 75% less energy and last at least ten times longer.

Save up to \$140 over bulb life



Title: The default tips module heading is Ways to Save. It can be configured to reflect a different title.

Tip Content: An individual tip includes a tip image, tip title, and tip summary. Clicking on an individual tip takes the customer to the public-facing tip details page on the Web Portal or Digital Self Service - Energy Management website.

- Tip Image: The tip image is a visual representation of the action that the tip recommends. Customers can click on the title to view more detailed information about the tip.
- **Tip Title**: The tip title is a short sentence that summarizes the recommended action. Customers can click on the title to view more detailed information about the tip.

• **Tip Summary**: The tip summary elaborates on the tip with more explanation about why doing the tip is beneficial.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

AMI Data Required: N/A.

Data History: N/A.

Billing Frequency: Monthly, bimonthly, and quarterly.

Report Editions

Customers receive multiple reports over a set period, and each report is part of a specific *report edition*. Report editions are report sequences that change dynamically over time to provide customers with a collection of <u>modules</u> focused on a theme, such as a seasonal change or joining the Oracle Utilities Opower program. The editions available include:

- Know It Show It Edition
- Target Rank Edition
- Winter Edition
- Summer Edition
- Electric Vehicle Edition

For example, the <u>Winter Edition</u> contains modules, tips, and promotions focused on helping customers save energy in the winter months. Such report variations increase customer engagement by providing timely and relevant information to customers throughout the year.

Oracle Utilities and the utility decide how many print reports a customer receives throughout the year and which report editions they get.

Know It Show It Edition

The Know It Show It edition is a set of Email Home Energy Reports sent to customers to encourage them to provide their home attributes by completing the What Uses Most Audit in the Energy Efficiency Web Portal or the Home Energy Analysis in the Digital Self Service Energy Efficiency Web Portal. If the customer has not completed their audit, the reports include a pre-audit home profile that informs the customer that some of their home information is missing and encourages them to complete the audit. If the customer completes their audit during the course of the campaign, the final report will provide them with a summary of how their Email Home Energy Report is more accurate due to the home attributes that they provided.

Example of a pre-audit report:
Want a more accurate report?				
Update your home profile for a better look at your energy use. Here's what we need to know to make your report more accurate:				
	38% complete			
O Home type: Single family	? Heating type			
📀 Home size: 1400 sq. ft.	? Pool			
Sireplace: No	? Dryer			
? Own or rent	? Second fridge			
UPDATE YOUR PROFILE				

Example of a post-audit report:



Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details on the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition.

- Header
- Marketing Module
- Neighbor Comparison
- Post-Audit Home Profile
- <u>Pre-Audit Home Profile</u>
- Ways to Save

Target Rank Edition

The Target Rank edition is a series of Email Home Energy Reports delivered once a month for six months. These reports encourage customers who consistently use a lot of energy to lower their energy use by providing them with an alternative experience and an achievable energy savings goal. Each report in the edition shows electric customers their energy use rank compared to 100 of their similar neighbors, and sets a target rank for the customer to achieve. Each report tracks the customer's progress towards reaching this rank and provides personalized tips for how to save more energy.

Example of a Target Rank Edition:

UtilityCo
Jane Johnson Acct ****1234
Introducing your neighbor efficiency rank
For the next 6 months, you'll be receiving reports that show you more details about how your energy use compares with your neighbors, and give you with a personalized target to aim for.
This will give you a better idea of how your actions affect your use, and help you improve your rank!
Your neighbor efficiency rank
77 th
You can save up to \$23 by meeting your target rank.
How do you rank among neighbors (1st is most efficient)
Your target rank: 70th 70th 694 kWh
76th 753 kWh
77th You 769 kWh
78 th 782 kWh
Dec 21, 2016 - Jan 20, 2017 You are compared to approx. 100 nearby homes most similar to yours. Your target is based on details about your home, weather and past electricity use.
VIEW HOME ENERGY USE
Understanding your rank and target
How is my rank determined? Your rank is like a zoomed-in version of your similar neighbor comparison, with each rank representing one of the 100 similar homes in your comparison group. We see where your electricity use falls compared to these homes, then assign you a rank.
How is my target chosen? UtilityCo looks at your home's size, number of occupants, local weather, and past electricity use to provide you with a personalized efficiency target to hit. With all of these factors in mind, we believe you can achieve your rank goal without compromising on comfort.
GET TIPS TO IMPROVE YOUR RANK
<u>Unsubscribe</u> from these emails <u>Manage preferences</u> Utility name 10F Frit Mayer Drive Suite 123 Arlington, V&22009 (950) 555-5555 Copyright 2017 Cpower. All rights reserved.

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details on the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition.

- Header
- Target Rank Graph
- Target Rank Insight
- Ways to Save

Winter Edition

The Winter edition is a sequence of emails that engages customers during the winter months with seasonally-relevant content. It includes a normative comparison about heating-related energy use, a pie chart that highlights the proportion of total energy used on heating, winter energy efficiency myths, and energy saving tips.

Example of a Winter Edition:



a nigner temperature. Fact: A higher temperature doesn't heat your house faster

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details on the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition.

- Context-Aware Tips
- Header
- Heating Analysis Pie Chart
- Heating Neighbor Comparison
- Seasonal Myths Tip
- Ways to Save

Summer Edition

The Summer edition is a sequence of emails that engages customers during the winter months with seasonally-relevant content. It includes a normative comparison about cooling-related energy use, a pie chart that highlights the proportion of total energy used on cooling, winter energy efficiency myths, and energy saving tips.

Edition Modules

While any modules can be included in an edition, a list of recommended modules for this edition is listed below. Go to the individual module page for more details on the user experience.

Note: The modules below are listed in alphabetical order, not the order in which they appear in the report edition.

- Context-Aware Tips
- Header
- Neighbor Comparison
- Ways to Save

Electric Vehicle Edition

The Electric Vehicle edition provides electric vehicle customers with a personalized and relevant report that drives energy efficiency savings. Unlike the standard report experiences, the electric vehicle experience takes into account the impact of customer electric vehicle use

on their energy usage and incorporates additional insights to help customers understand how their electric vehicle use factors into their report.

Edition Modules

The modules included in the electric vehicle edition change over time as customers become accustomed to the report.

First Report

The first report is designed to welcome the customer to the electric vehicle Email Home Energy Report program and introduce them to how the report is customized to their user experiences.

UtilityCo

Jane Johnson Acct ****1234

Thanks for reducing your fossil fuel use by driving an electric vehicle.



Starting today, you'll receive a report every few months showing how charging your electric vehicle (EV) impacts your energy bill. We'll also include personalized tips for energy efficiency, so you can reduce your use in other areas.



(1,200 sq ft) and have electric heat. Efficient neighbors are the most efficient 20% of this group. Learn more.





Wondering how we calculate your EV charging?

We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves.

Driving an electric vehicle makes you part of a clean-energy future!

Even though your home energy use has gone up due to EV charging, you've left the higher cost of gas-powered driving behind and lowered your carbon footprint

The first report experience includes the following modules:

- Electric Vehicle Welcome Message
- Electric Vehicle Neighbor Comparison
- Electric Vehicle Detection and Disaggregation Explanation (first and second report only)
- Electric Vehicle Breakout
- Electric Vehicle Feel Good
- Ways to Save

Second Report

The second report continues to educate the customer about the report features and how report benefits them.

UtilityCo

Jane Johnson Acct ****1234

You used 20% more than your neighbors.



You're compared with 100 homes an average of 4 miles from you that are a similar size (1,200 sq ft) and have electric heat. Efficient neighbors are the most efficient 20% of this group. Learn more.

Charging your EV at home used about 153 kWh.



Wondering how we calculate your EV charging?

We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves.

Balance out your EV charging by becoming more energy efficient.



Wash laundry with cold water

About 90% of the energy needed for washing clothes is used to heat the water. Unless your clothes have oily stains, washing with cold or warm water will clean them just as effectively.

Ξ		1	
Ξ			
Ξ			

Check your air filters every month

Heating and cooling can account for more than 50% of your home energy use. By cleaning or replacing air filters regularly, you can improve the performance of your system and reduce energy costs.



The second report experience includes the following modules:

- Electric Vehicle Neighbor Comparison
- Electric Vehicle Detection and Disaggregation
- Electric Vehicle Breakout
- Electric Vehicle Feel Good
- Ways to Save

Third Report and Beyond

By the third report, the customer knows what to expect from their program. The third report onward presents a streamlined user experience that includes the following modules:

UtilityCo

Jane Johnson Acct ****1234

You used 20% more than your neighbors.



Jul 7, 2019 - Aug 9, 2019

You're compared with 100 homes an average of 4 miles from you that are a similar size (1,200 sq ft) and have electric heat. Efficient neighbors are the most efficient 20% of this group. Learn more.

Charging your EV at home used about 153 kWh.

Jul 7, 2019 - Aug 9, 2019



We combine your home profile with energy data from your smart meter to estimate your EV charging. These estimates will become even more accurate as the technology evolves.

Balance out your EV charging by becoming more energy efficient.



Wash laundry with cold water

About 90% of the energy needed for washing clothes is used to heat the water. Unless your clothes have oily stains, washing with cold or warm water will clean them just as effectively.



Check your air filters every month

Heating and cooling can account for more than 50% of your home energy use. By cleaning or replacing air filters regularly, you can improve the performance of your system and reduce energy costs.



Upgrade to a Level 2 EV charger

A Level 2 charger delivers 2-3x faster charging times, so you can charge your EV when energy rates are lowest. And, a

- Electric Vehicle Neighbor Comparison
- <u>Electric Vehicle Breakout</u>
- Electric Vehicle Feel Good or an electric vehicle topic slot
- Ways to Save

Enrollment

Customers can be enrolled to receive Email Home Energy Reports through an opt-in or optout program. In an opt-in program, customers are given the option to sign up, rather than being automatically enrolled. In such cases, customers can sign up for Email Home Energy Reports by using settings available in the Energy Efficiency Web Portal. In an opt-out program, customers are automatically enrolled if they meet the eligibility criteria.

Delivery

Oracle Utilities coordinates with a third-party email platform to send Email Home Energy Reports. This platform provides Oracle Utilities with information on send, bounces, opens, opt-outs, unsubscribes, and click-throughs. Oracle Utilities does not track the web behavior of a customer after they have clicked on a link in the Email Home Energy Report.

For programs that include both email and paper reports, [Email Home Energy Reports are usually generated during the same week as the corresponding paper [Home Energy Reports are generated.

Content is delivered directly in the email message with no attachments. This makes it more convenient for customers to quickly view the information, and it makes the emails less likely to be blocked by spam filters.

Delivery Cadence

Oracle Utilities supports the following delivery frequencies for Email Home Energy Report programs: monthly, bi-monthly, and quarterly. Because the reports are generated from data from the latest utility bill for each customer, the delivery cadence will depend on each customer's billing dates and the program design specified in your statement of work.

Delivery Options

For programs that include both email and paper reports, Email Home Energy Reports are usually generated during the same week as the corresponding Home Energy Reports. Email Home Energy Reports are typically sent on Friday afternoons so that customers will have time to review the reports over the weekend. However, delivery may be configured for days other than Friday. Ask your Service Delivery Manager which delivery options are best suited to your program.

Providing Customer Support

Customer Service Representatives can do the following in the Customer Service Interface (CSI):

- Find and open a customer's accounts
- Access a customer's Energy Efficiency web portal account
- View sent Email Home Energy Reports
- Manage a customer's report preferences
- Update information about a customer's home

See the <u>Oracle Utilities Opower Customer Service Interface - Program Management</u> <u>Product Overview</u> for details.

Email Home Energy Reports v3

Email Home Energy Reports v3 are communications sent through the email channel to engage utility customers about their home energy use. The reports provide a new, modernized experience with bold colors, a varied layout, and data-driven insights targeted to specific customer attributes. It includes new and enhanced features such as the Efficiency Zone normative comparison, Energy Use Benchmark performance summary, and energy disaggregation-based insights and tips about the customer's major energy end-use categories, such as heating, cooling, and appliances.

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers in the Email Home Energy Reports program. These requirements must be met for a utility and a customer to participate in the program.

Utility Data Requirements and Limitations

- Scale: Scale restrictions may apply. The actual number of communications sent may be affected by attrition, opt-outs, customer eligibility, and data availability.
- Localization: Not all languages and locales are supported at this time. Contact your Oracle Utilities Sales Representative to confirm that Email Home Energy Reports are available in your market.

- Data Integration: Data must be sent to Oracle Utilities in the correct schema and at the appropriate frequency. See the Oracle Utilities Opower Legacy Billing Data Transfer Standards for details.
- Billing Frequency: The utility must bill their customers on a monthly, bi-monthly, or quarterly basis.

Customer Data Requirements and Limitations

- Customer Type: The customer must be residential.
- **Data History**: The customer must have at least one bill of historical billing data in the form of monthly, bi-monthly or quarterly read data.
- Contact Information: The customer's current email address must be available.
- Supported Devices: Oracle Utilities supports email clients that may be native to a specific device, such as the installed email client on the iPhone 6, as well as email client applications that may be accessed from any device or computer. Oracle Utilities supports and optimizes for the following email clients to view Email Home Energy Reports:
 - iPhone internal email client (iOS 10.0 and greater)
 - iPad internal email client (iOS 10.0 and greater)
 - Apple Mail (Mac OS X 10.10 and greater)
 - Android internal email client
 - Microsoft Outlook (2010 and greater)
 - Outlook.com
 - Yahoo! Mail
 - Gmail.com
 - Samsung Mail

For email clients that support multiple versions operating at the same time (for example, Apple iOS10 on iPhone5 or Microsoft Outlook 2010, 2012, and 2013), Oracle Utilities generally supports the most current major release as well as a number of previous major releases. For email clients that only provide a single version (for example, Gmail.com), Oracle Utilities supports the currently available version. Other email clients are not officially supported or tested by Oracle Utilities. Customers viewing Email Home Energy Reports on unsupported devices or applications may see user experience variations in their reports.

Customer Experience Overview

Email Home Energy Reports v3 are communications sent through the email channel to engage utility customers about their home energy use. The reports provide a new, modernized experience with bold colors, a varied layout, and data-driven insights targeted to specific customer attributes.

- Report Types
- Report Modules

Report Types

Email Home Energy Reports v3 implement several report types with different layouts and modules that vary throughout the year to provide customers with a dynamic experience. The report types are designed to construct a story for the customer to follow as they learn about their energy use. Some report modules are common to all report types, while others only appear in a specific report type. The available report types include:

- Peak Focused Report
- Progress Report
- Promotion Report
- Welcome Report
- Limited Income Report
- Seasonal Report
- Time of Use Report
- Annual Report
- Solar Report
- Electric Vehicle Report

Annual Report

The Annual Report educates the customer about their energy use in the previous calendar year, and advises them on the most impactful actions that they can take to save energy and money in the new year. It also includes a community message that reminds the customer that their efforts contribute to a massive collective impact.

UtilityCo

Account #*****7890 **Energy Lookback** A review of your 2021 energy use and how to save more this year

Your 2021 energy use at a glance



Nice work! Let's get you saving even more this year.

How your use compares to others over the last 12 months



You: 6,242 units

- Similar homes: 7,659 units
- Efficiency Zone: Up to 4,601 units

A unit is a combined measurement of electricity (kWh) and gas (therms) use.

The **Efficiency Zone** represents the 20% of similar homes in your comparison group that used the least energy this period. To create the comparison group, we use your home profile to look for 100 single-family homes in your area with a similar **heating source** and **square footage**.

Need to update your home profile? Go to the Home Energy Survey

Your energy use was outside of the Efficiency Zone by



You used less energy than similar homes

See the <u>individual report modules</u> for more information about how the experience varies by module.

Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

The Annual Report includes the following modules:

Subject Line (Not Depicted) <u>Header</u> <u>Energy Benchmark</u> <u>Efficiency Zone or Three-Bar Neighbor Comparison</u> <u>Annual Secondary Insight</u> <u>Annual Report Tips</u> <u>Marketing Module</u> Footer

Electric Vehicle Report

The Electric Vehicle Report provides electric vehicle customers with a report experience that takes into account the unique priorities of electric vehicle customers, and the impact that electric vehicle charging has on their energy use. The report includes insights and explanations that are specific to the electric vehicle customer experience, and encourages customers to further enhance their report by completing the Home Energy Survey.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency
Scale	No limitations.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Daily, monthly, bi-monthly, or quarterly. See module-specific requirements.
Data Requirements	 Hourly AMI data and insights. Electric vehicle confirmation. Contact your Delivery Team for more information.
Data History	See module-specific requirements.
Data Coverage	See module-specific requirements.
Supported Fuels	Electric-only and dual fuel.

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Limitations

- Electric Vehicle Disaggregation Data: There are additional data requirements to show advanced insights such as Electric Vehicle disaggregation. Contact your Delivery Team for more information.
- Efficiency Zone: The Efficiency Zone is not available for this report type.

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User Experience

This section describes the Electric Vehicle Report. The report is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals.

This image is an example of the Electric Vehicle Report user experience for an electric-only fuel customer. Go to the individual module page for more details about the user experience.



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Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

The Electric Vehicle Report includes the following modules:

Subject Line (Not Depicted) <u>Header</u> <u>Three-Bar Neighbor Comparison</u> <u>What Uses Most</u> <u>Paired Tips</u> <u>Marketing Modules</u> <u>Footer</u>

Limited Income Report

The Limited Income Report educates limited income customers about ways to be more energy efficient and presents opportunities for them to reduce their immediate and future bills. While the overall goal is to encourage energy efficiency, the report includes features that acknowledge the unique circumstances and needs of limited income customers. There are two types of reports:

- Limited Income Welcome Report
- Limited Income Progress Report

Limited Income Welcome Report

The Limited Income Welcome Report is the first report a new or legacy limited income customer receives as part of their Home Energy Report v3 program experience. The report varies slightly depending on whether the customer is a new or legacy customer.

Legacy customers: Customers that have received earlier versions reports in the past are considered legacy customers. The Welcome Report acknowledges how the report experience has changed.

New customers: Customers that have never received a Home Energy Report are considered new customers. The Welcome Report introduces new customers to their report insights.



Note: New customers does not include customers who move from one audience segment to another.

See the <u>individual report modules</u> for more information about how the experience varies by module.

Limited Income Progress Report

The Limited Income Progress Report is focused on general energy efficiency and money saving goals for limited income customers.







Use this report to learn about your energy use and how you can save more.

How you compare to others



See the <u>individual report modules</u> for more information about how the experience varies by module.

Limited Income Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules designed to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

Limited Income Welcome Report Modules

The modules included in the Limited Income Welcome Report vary depending on whether the customer is a new or legacy customer.

The Limited Income Welcome Report includes the following modules:

Subject Line (Not Depicted) Header Welcome **Energy Use Benchmark** Efficiency Zone or Neighbor Comparison What Uses Most Paired Tips Mini Home Energy Analysis Footer Limited Income Progress Report Modules The Limited Income Progress Report includes the following modules: Subject Line (Not Depicted) Header **Energy Benchmark** Efficiency Zone or Neighbor Comparison What Uses Most

Paired Tip

Mini Home Energy Analysis

Marketing Module (Not Depicted)

Footer

Peak Focused Report

The Peak Focused report informs customers about their electricity usage, with a focus on peak periods under their Time of Use rate plan. The report includes a diverse set of modules designed to encourage customers to be aware of electricity costs, and guides customers towards making energy-use conscious behavior changes during peak high-cost periods of the day. There are two types of Peak Focused Home Energy reports:

Peak Focused Welcome Report: The welcome version of the report is designed to introduce new and legacy customers who are new to the experience with a focus on peak energy use. It is the first report sent to new customers, and is structured to facilitate positive behavior changes, equip customers with actionable tools and information, enhance overall customer satisfaction, and promote energy savings.

Peak Focused Progress Report: The progress version of the report includes insights designed to inform customers about their electricity usage, with a focus on peak periods under their Time of Use rate plan. It encourages more energy-efficient behaviors and heightened awareness of electricity costs.



Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

Peak Focused Welcome Report

The Peak Focused Welcome Report includes the following modules:

- Subject Line (Not Depicted)
- Header
- Welcome
- <u>Mini Time of Use Reminder</u>
- Peak Focused Normative Comparison
- Energy Literacy and Tip
- <u>Customer Feedback</u>
- Footer

Peak Focused Progress Report

The Peak Focused Progress Report includes the following modules:

- Subject Line (Not Depicted)
- Header
- Mini Time of Use Reminder
- Peak Focused Normative Comparison
- Time of Day Hourly Insight
- Energy Literacy and Tip
- <u>Customer Feedback</u>
- Footer

Progress Report

The Progress Report uses insights and various energy saving tips to motivate customers to maintain or improve their energy efficiency. The design of the report leverages behavioral science techniques such as normative comparison, curiosity, and anchoring to help customers stay engaged with their report experience over time. The Energy Use Benchmark, neighbor comparison, context-aware tips, and marketing module promotion features are designed to help the customer save energy.

Account #***

UtilityCo



Your energy use at a glance

Mar 5 - Apr 4, 2020



You likely used more this period due to changes in your home or energy use habits.

Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

The Progress Report includes the following modules:

- Subject Line (Not Depicted)
- Header
- Energy Benchmark
- Three-bar Neighbor Comparison or Efficiency Zone
- Progress Report Tips
- Mini Home Energy Analysis
- Customer Feedback
- Footer

Promotion Report

The Promotion Report offers customers personalized insights about specific end-uses in their home in order to motivate them to take advantage of a utility-offered promotion. This report type leverages Oracle Utilities Opower disaggregation capabilities to facilitate customer adoption of more efficient devices, appliances, and deep home retrofits.

UtilityCo

Account #*****7890

Sarah,

You could be saving more on water heating, cooling and lighting.



Where you spent the most on energy

Jun 1, 2020 – May 30, 2021

Water Heating





You were selected to receive this report because you may be using more than the regional average for this energy use category. Numbers are approximate and calculated with your energy usage.

A new water heater could help you save



\$400 UtilityCo Rebate

If your water heater is over 10 years old, now's a good time to upgrade to an ENERGY STAR[®] heat pump water heater. According to the U.S. Department of Energy, you can save over 50% on water heating costs—for a family of 3, that adds up to \$2,610 in energy savings over its lifetime!

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Claim your rebate

The report experience is determined by the promotion type selected by the utility. Oracle Utilities Opower works with the utility to select the promotion they wish to run based on available disaggregation insights. Possible report states include:

Customer's Top End Use Category: The utility selects the end use category to focus on for the main insight and promotion at the top of the email. In this case, the selected end use is the customer's largest end use.

Utility Preferred Category: The utility selects the end use category to focus on for the main insight and promotion at the top of the email. This is not the customer's largest end use.

Heating and Cooling Combined - Top Use: Heating and cooling categories are combined and are the focus of the main insight and promotion at the top of the email. These end uses are the customer's largest end uses for last year.

Heating and Cooling Combined - Utility Preferred: Heating and cooling categories are combined and are the focus of the main insight and promotion. These end uses are not the customer's largest end uses for the last year.

Promotion Report Modules

The Promotion Report type is built with a predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use, and to promote specific offerings and tips for them to act upon. Go to the individual module page for more details about the user experience.

The Promotion Report includes the following modules:

Subject Line (Not Depicted) <u>Header</u> <u>Disaggregation Main Insight</u> <u>Promotion Report Tips</u> <u>Promotion Module</u> <u>Customer Feedback</u> <u>Marketing Module</u> <u>Footer</u> Seasonal Report

The Seasonal Report is designed to motivate customers to reduce their energy use in time leading up to the extreme weather seasons of summer and winter. The summer version of the Seasonal Report focuses on cooling use since cooling has the largest impact on the summer utility bills. The winter version of the Seasonal Report focuses on heating since

heating has the largest impact on the winter bills. The reports are sent before the start of the season to help the customer prepare and plan for the season ahead. The report provides specific tips and actions customers can take to lower their heating or cooling use, and a recommended thermostat adjustment that is unique to the seasonal report.



See the <u>individual report modules</u> for more information about how the experience varies by module.

Seasonal Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules that have been carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. See the individual module pages for more details on the user experience.

The Seasonal Report includes the following modules:

Subject Line (Not Depicted) <u>Header</u> <u>Seasonal Breakout</u> <u>Seasonal Normative Comparison</u> <u>Thermostat Adjustment</u> <u>Seasonal Report Tips</u> <u>Seasonal Home Energy Analysis</u> <u>Customer Feedback</u>

Footer

Solar Report

The Solar Report provides a personalized report experience that is focused on improving energy savings behaviors and customer satisfaction for solar customers. The report takes into account the impact of solar on the customer's energy use and acknowledges how their solar use contributes to the public good.

There are two types of solar reports:

Solar Welcome Report: The welcome report is the first report a customer on a solar plan receives. It introduces the customer to their solar-only neighbor comparison and tells them what they can expect from subsequent reports.

Solar Progress Report: The progress report is focused on general energy efficiency and money saving goals for solar customers.


Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

Solar Welcome Report

The Solar Welcome Report includes the following modules:

Subject Line (Not Depicted)

Header

Welcome

Energy Benchmark

Three-Bar Neighbor Comparison

Solar Report Tips

Customer Feedback

Footer

Solar Progress Report

The Solar Progress Report includes the following modules:

Subject Line (Not Depicted)

Header

Energy Benchmark

Three-Bar Neighbor Comparison

Solar Report Tips

Customer Feedback

Footer

Time of Use Report

The Time of Use Report provides customers on a time of use energy plan with a email report experience that is focused on overall energy savings and rate education. The Time of Use Report experience includes the following report types:

Time of Use Welcome Report: The Time of Use Welcome Report is the first report a customer on a time of use plan receives. It welcomes the customer to the program and tells them what they can expect from their reports.

Time of Use Progress Report: The Time of Use Progress Report is focused on general energy efficiency and money saving goals for customers on time of use plans.

Time of Use Welcome Report

Time of Use Progress Report



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See the <u>individual report modules</u> for more information about how the experience varies by module.

Time of Use Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules that have been carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. See the individual module pages for more details on the user experience.

Time of Use Welcome Report

The Time of Use Welcome Report includes the following modules:

Subject Line (Not Depicted)

Header

Welcome

Efficiency Zone or Neighbor Comparison

Time of Use 101

Time of Use Tip Modules

Mini Home Energy Analysis

Customer Feedback

Footer

Time of Use Progress Report

The Time of Use Progress Report includes the following modules:

Subject Line (Not Depicted)

Header

Energy Use Benchmark

Efficiency Zone or Neighbor Comparison

Time of Use 101

Time of Use Tip Modules

Mini Home Energy Analysis

Footer

Welcome Report

The Welcome Report introduces new and legacy Email Home Energy Report recipients to the v3 experience. The Welcome Report structure builds off <u>Progress Report</u> and includes an additional Welcome module at the top of the report that varies slightly depending on whether the customer is a new or legacy customer.

New customers: Customers that *have never received* an Email Home Energy Report before are considered new customers. A welcome module that introduces them to report experience and insights is included at the top of their Welcome Report.

Legacy customers: Customers *that have received* an earlier version of the Home Energy Report are considered legacy customers. A welcome module at the top of the Welcome Report acknowledges how the report has changed to include energy use at a glance, the Efficiency Zone module, and improved tips and insights. The new items are numbered, and corresponding numbers that highlight the new modules and insights appear in the email in the upper-right corner of the modules.



The Efficiency Zone represents the 20% of similar homes in your comparison group that used

Report Modules

Email Home Energy Report v3 is built with predefined mix of dynamic and static modules carefully crafted to tell customers a personalized story about their energy use. It provides new experiences and insights that vary over time, depending on specific customer attributes and utility goals. Go to the individual module page for more details on the user experience.

The Welcome Report includes the following modules:

Subject Line (Not Depicted) Header Welcome Energy Benchmark Efficiency Zone or Neighbor Comparison Welcome Report Tips Mini Home Energy Analysis Customer Feedback Footer

Report Modules

All email reports consist of modules. Modules are separable pieces of content that communicate some type of relevant and engaging information to the customer. Modules can be complex, providing dynamic information about a customer's energy use, or simple, containing a static image and hyperlinks. See each module description for details.

Customer Feedback

The Customer Feedback module is an optional module that can be included to solicit feedback about the Email Home Energy Report. It asks the customer how useful they found the report, and provides the utility with a way to gather feedback that can be used to improve the report experience. The module questions vary by <u>report type</u>.

Appears in: <u>Peak Focused Report</u>, <u>Progress Report</u>, <u>Promotion Report</u>, <u>Seasonal Report</u>, <u>Solar Report</u>, <u>Time of Use Report</u>.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not appliable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, and quarterly.
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable.
Data History	A minimum of three historical bills.
Data Coverage	Not applicable.
Supported Fuels	Gas-only, electric-only, and dual-fuel.

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Limitations

- Mini Home Energy Analysis: This module should not be used in the same report at a Mini Home Energy Analysis.
- **Frequency**: The module should not be used no more than once a quarter in the Promotion Report.

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User Experience

The module varies slightly depending on report type.

Promotion Report

This image shows an example of the module in the **Promotion Report**.



- **Prompt:** A question at the top of the module asks customers if the promotion helpful.
- Response Option Buttons: The customer can respond 'Yes' or 'No' to the module questions.
- Landing Page: After submitting feedback, customers are directed to a confirmation page in the Energy Efficiency Web Portal where they are thanked for their input. The page also informs customers that their feedback is used to make improvements to the product.

Progress Reports

This image shows an example of the module that could appear in the <u>Progress Report</u>, <u>Seasonal Report</u>, <u>Time of Use Report</u>, and <u>Solar Report</u>.



Prompt: A question at the top of the module ask the customer if the email is helpful.

Scale: The customer can rate the usefulness of the email on a scale of one to five, where one is not useful at all and five as very useful.

Disaggregation Main Insight

The Disaggregation Main Insight module uses personalized information about an end use in the customer's home to motivated them to take advantage of a utility promotion. The goal of this module is to help customers understand their use in a specific end-use category where they are using more than the regional average so that they may feel motivated to uptake the promotion and subsequently reduce their energy use in that end-use category. The module can be used to promote the customer's largest end use category, or the utility may select a preferred end use category to reinforce the report promotion. Oracle Utilities Opower works closely with the utility to create marketing modules that enhance the report experience.

Appears in: Promotion Report

This image shows an example of the Disaggregation Main Insight module.

Where you spent the most on energy

Jun 1, 2020 - May 30, 2021

Water Heating



\$396 spent last year

You were selected to receive this report because you may be using more than the regional average for this energy use category. Numbers are approximate and calculated with your energy usage.

- Heading: The heading draws the customer's attention to the promotion topic and prepares them to learn about the insight.
- Date Range: This is dynamic based on the billing period.
- Spent Last Year: The total amount of cost the customer incurred on the promotion topic in the last year.
- Total Energy Use: The percent of their total energy usage or cost.
- Promotion Text: A description of the promotion that the disaggregation insight highlights.
- **Explainer:** The explainer states how the information was calculated and why the customer was selected to receive this promotion.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Energy Use Benchmark

The Energy Use Benchmark module provides a dynamic and personalized, at-a-glance interpretation of the customer's energy use. The Benchmark has three sections the indicate overall customer status as it relates to their energy use:

- Fair
- Good
- Great

The customer's status on that gauge is determined by their performance relative to both comparison points in the <u>neighbor comparison</u>.

Note: The Energy Use Benchmark module must be used in context with the <u>Efficiency</u> <u>Zone</u> or the <u>Neighbor Comparison</u>.

Appears in: <u>Progress Report</u>, <u>Welcome Report</u>, <u>Limited Income Report</u>, <u>Annual Report</u>, <u>Time of Use Report</u>, <u>Solar Report</u>

This image shows an example of the Energy Use Benchmark module.



Use this report to learn about your gas use and how you can save more.

Heading: The heading notifies the customer that the benchmark gives them an at-a-glance view of their energy use. It varies according to the customer's fuel type.

Energy Use Benchmark: The benchmark gauge is broken into three sections: Fair, Good, and Great. A customer's status on that gauge is determined by their performance relative to both comparison points in the normative comparison (similar homes and the efficiency zone). A customer's performance is indicated with an arrow that sits in the middle of a given segment of the gauge. Each state has a corresponding color:

- Orange: Fair. Customer is using more than Similar Homes and Efficiency Zone / Efficient Homes.
- Yellow: Good. Customer is using less than similar homes, but more than the Efficiency Zone / Efficient Homes.
- Green: Great. Customer is using less than the Efficiency Zone / Efficient Homes threshold.

Benchmark Copy: Depending on the customer's current state and any differences since their last report, the copy below the gauge tells the customer how they can leverage the report or recognizes a change in state. In some instances, the benchmark copy reemphasizes the customer's fuel type.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, or quarterly.

Home Energy Analysis

The Home Energy Analysis modules prompt the customer to answer simple questions about their home attributes and energy habits to improve their report experience. The type of

module the customer receives varies by report type:

Mini Home Energy Analysis: The Mini Home Energy Analysis prompts the customer to answer simple questions about their home attributes and energy habits from within the report. See the Mini Home Energy Analysis for more information.

Seasonal Home Energy Analysis: The Seasonal Home Energy Analysis encourages customers to complete the Home Energy Analysis in order to improve their report experience, and includes a call to action button that redirects the customer to the Home Energy Analysis in <u>Digital Self Service - Energy Management</u> where they can complete the full survey. See the <u>Seasonal Home Energy Analysis</u> for more information.

Mini Home Energy Analysis

The Mini Home Energy Analysis module prompts the customer to answer simple questions about their home attributes and energy habits from within the Email Home Energy Report v3. The module creates an additional opportunity for customers to provide information that can be used to improve their report experience regardless of whether they complete the full Home Energy Analysis in Digital Self Service - Energy Management.

Appears in: Progress Report, Welcome Report, Limited Income Report, Time of Use Report

Help us improve your report



Header: The header notifies the customer that the Mini Home Energy Analysis gives them an opportunity to improve their report experience.

Question: The report cycles through 'yes' and 'no' questions that the customer has not completed in <u>Digital Self Service - Energy Management</u>.

Benefit Text: The benefit text emphasizes that by replying to the questions the customer improves the accuracy of their report and tips.

Response Option Buttons: The customer can respond '**Yes'** or '**No**' to most module questions. The response button will redirect them to the Home Energy Analysis in <u>Digital</u> <u>Self Service - Energy Management</u> where they can complete the full survey.

Requirements and Limitations

Fuel: Electric-only, Gas-only, Dual fuel.

Data Required: N/A.

Data History: N/A.

Billing Frequency: N/A.

Seasonal Home Energy Analysis

The Seasonal Home Energy Analysis module encourages customers to complete the Home Energy Survey in order to improve their report experience specific to the seasonal report. The module creates an additional opportunity for customers to provide information that can be used to improve their report experience regardless of whether they complete the full Home Energy Analysis in Digital Self Service - Energy Management.

Appears in: Seasonal Report

This image shows an example of the Seasonal Home Energy Analysis module.

Get personalized winter tips and insights

Tell us more about your home

Take the 5-minute Home Energy Survey so we can deliver tips and insights customized to how you use energy in your home.

Take the survey

Header: The header is dynamic by season.

Subheader: The subheader emphasizes the action the customer should take.

Body Text: The body text encourages the customer to take a couple minutes to complete their survey to improve their report tips and insights.

Call to Action: The call to action button, "Take the survey," redirects the customer to the Home Energy Analysis in Digital Self Service - Energy Management where they can complete the full survey.

Requirements and Limitations

Fuel: Electric-only, Gas-only, Dual fuel.

Data Required: N/A.

Data History: N/A.

Billing Frequency: N/A.

Home Profile

The Home Profile highlights the customer's progress and reminds them of the impact of completing the survey on their report insights. The module includes a list of known and unknown home attributes, a percent complete wheel which displays how much of the customer's <u>Home Energy Analysis</u> that is complete, and a link to the <u>Home Energy Analysis</u>.

Appears in: Progress Report, Welcome Report

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.

Category	Description
Data Requirements	Not applicable.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only, gas-only, dual fuel.

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Limitations

- Progress and Welcome Report only: This module may only be used in the <u>Welcome</u> and <u>Progress</u> reports.
- Welcome Report: This module may be used as a replacement for the <u>Home Energy</u> Analysis in the <u>Welcome Report</u>.

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User Experience

This section describes the user experience of a customer who has not yet completed their <u>Home Energy Analysis</u>, followed by how the user experience may vary.

Complete your Home Energy Survey	
71%	
Home Energy Survey completion	
You're so close to getting personalized tips for energy savings and more accurate neighbor comparisons!	
Home type: Unit in multi-family building	
Home size: 1400 sq. ft.	
? Heating	
? More home details	
Finish the survey	

Title: The title reminds the customer of their Home Energy Analysis status.

Percent Complete Wheel: A wheel shows the percentage of the customer's home profile survey that is completed. For example, if 50% of the survey is complete known for the customer, then 50% of the wheel would be colored in, and the text "50%" would appear in the center of the wheel.

Explanation: A brief text encouraging the customer to finish their Home Energy Analysis to get more accurate insights in their report.

List of Attributes: The module includes a list of four home attributes. Each attribute that is known for the customer has a green check next to it, and each unknown attribute has a grey question mark logo next to it.

Button A button provides customers with quick access to their Home Energy Analysis from the report without having to log in to their account.

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User Experience Variations

Home Energy Analysis Not Attempted

If the customer has not yet begun their <u>Home Energy Analysis</u>, the module encourages them to start their survey so that their report includes more accurate insights.

Start your Home Energy Survey	
Home Energy Survey completion For personalized tips on energy savings and more accurate neighbor comparisons, complete this quick survey.	
? Home type? Home size	
? Heating? More home details	
Start the survey	

Title: The title tells the customer to start their survey.

Percent Complete Wheel: The percent complete wheel shows 0 percent.

Explanation: A brief text encouraging the customer to take action and update their home profile appears below the title.

List of Attributes: The module includes a list of four home attributes. Each attribute had a gray unknown question mark logo next to it.

Button: A link provides customers with quick access to their <u>Home Energy Analysis</u> from the report without having to log in to their account. The button title echoes the module title message encouraging the customer to start their survey.

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Home Energy Analysis Recently Completed

If the customer recently completed their survey, the module is congratulatory and reassures them that their insights are accurate and readily available.

Congrats on completing your Home Energy Survey!	
100%	
Home Energy Survey completion	
Personalized tips and accurate neighbor comparisons are now at your fingertips.	
Home type: Unit in multi-family building	
Home size: 1400 sq. ft.	
Heating: Yes	
More home details	
View your survey	

Title: The title congratulates the customer on completing their survey.

Percent Complete Wheel: The percent complete wheel shows 100 percent.

Explanation: A brief text tells the customer that their personalized tips and comparisons are accurate because they have completed their survey, and encourages the customer to update the survey if anything changes.

List of Attributes: The module includes a list of four home attributes. Each attribute has a green check mark logo next to it indicating that the attribute is known for the customer.

Button: A link provides customers with quick access to their <u>Home Energy Analysis</u> from the report without having to log in to their account. The title of the button invites the customer to use the QR code to view their Home Energy Analysis.

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Home Energy Analysis Completed

If the customer completed the <u>Home Energy Analysis</u> previously but has not updated their survey in a while, the module encourages them to do so to make sure that they are getting the most accurate insights and tips.



Title: The title asks the customer if they have made any changes to their home.

Computer Icon: The percent complete wheel is replaced with a computer icon.

Explanation: A brief text encourages the customer to update the survey to make sure that they are getting the most accurate tips and insights.

List of Attributes: The module includes a list of four home attributes. Each attribute has a green check mark logo next to it indicating that the attribute is known for the customer.

Button: A link provides customers with quick access to their <u>Home Energy Analysis</u> from the report without having to log in to their account. The button title echoes the module title message encouraging the customer to view and update their survey.

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Marketing Modules

Marketing modules encourage customers to take advantage of utility-specific or Oracle Utilities-specific products or programs. The modules are selected from a library of content that has been tested to optimize conversions and satisfaction. Small edits can be made to the text and visuals. For example, the modules can be customized to promote utility-specific programs (such as a home audit), products or features, processes, rebates, calls to action (URL, phone number, or both), and more.

Appears in: <u>Promotion Report</u>, <u>Progress Report</u>, <u>Limited Income Report</u>, <u>Annual Report</u>, <u>Electric Vehicle Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.

Category	Description
Data Delivery Frequency	Not applicable.
Data Requirements	 Appliance detection and disaggregation with Digital Self Service - Energy Management - Home Energy Analysis heating and cooling disaggregation. Simple disaggregation with Digital Self Service - Energy Management - Home Energy Analysis completion.
Data History	 Appliance detection & disaggregation: A single bill from the last bill period or previous to last bill period is required. Heating and cooling: Six bills are required non-AMI customers. 60 days of AMI reads are required for AMI customers.
Data Coverage	Not applicable.
Supported Fuels	Electric-only, gas-only, dual fuel.

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Limitations

Image and text placement: There are limitations on where images and text may be placed in the module depending on module type.

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User Experience

Flexible Marketing Modules

Flexible marketing modules may be used in either a <u>Promotion Report</u>, <u>Progress Report</u>, <u>Electrical Vehicle Report</u>. The module designed to aligned with the goals of the report.

The following image is an example of a flexible marketing module with a disaggregation breakdown focus.



The following image is an example of a marketing module with an electric vehicle focus.



Limited Income Marketing Module

Marketing modules specific to the limited-income experience can be included in the <u>Limited</u> <u>Income Report</u>. Default module types include testimonials, community assistance, budget billing, and weather assistance.

The following image is an example of a limited income-specific weatherization marketing module included in the Limited Income Report.

See if you qualify for free weatherization upgrades



Looking to make your home more comfortable without driving up the bill? With the Weatherization Assistance Program (WAP), you could get free weatherization improvements to help you save more energy and money all year round.

See if you qualify

Community Marketing Module

The Community Marketing Message is included in the <u>Annual Report</u>. The goal of the module is to remind the customer that their energy savings have an impact beyond their own bills, and encourage the customer to keep saving energy in the year ahead.

The following image is an example of a Community Marketing Message module included in the Annual Report.



Mini Time of Use Reminder

Positioned in the top right of the progress version of the <u>Peak Focused Report</u>, the Mini Time of Use Reminder module is a customer's first point of reference for understanding peak electricity cost periods based on their Time of Use plan. The module clearly displays the multiplier for high-cost periods and their specific timings, provides a color-coded timeline that highlights peak times in for easy identification, and adapts to different utility peak times and billing structures, such as demand charges.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Note applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly or bi-monthly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	AMI and rate meta data.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only.

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Limitations

- Peak Focused Report only: This module is only available as part of the <u>Peak Focused</u> <u>Report</u>.
- **Time of Use Rate Plan**: This module is only available to customers on Time of Use rate plans.
- Demand Charge: This module supports customers on Time of Use plans with demand charges.

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User Experience

This section describes the user experience for a customer with two peak periods, followed by how the user experience may vary.

Electricity costs 2.75x		
more during on-peak hours		
(4pm-7pm) on weekdays		
12am	4pm	7pm
12am	4pm	7pm

Header: The header informs the customers what the multiplier in cost will be during the peak period and what times the period will occur:

- Weekday price ratio: The multiplier of cost during the peak period.
- High cost period label: Rate plan-specific name for the high cost period. For example, "peak period" or "on-peak."
- Weekday high cost period start time: The time the peak period will start. For example, 4pm.
- Weekday high cost period end time: The time the peak period will end. For example, 7pm.

Cost period bar: The cost period bar provides a visual representation of the high cost period.

- High cost period color: The high cost period is indicated by a warning-color to provide a visual cue to the customer to take heed of this time period. In the example image, the "on-peak" period is indicated by a dark orange warning color.
- Low cost period color: The low cost period is indicated by a cool color. In the example image, "off-peak" is indicated by a cool blue color.
- High cost start and end times: The high cost period start time and end time are noted on the bar.

Cost period legend: The cost period legend defines which colors represent cost periods in the cost period bar.

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User Experience Variations

Three Peak Times

This image is an example of the Mini Time of Use Reminder module for a customer with three peak periods.

Electricity costs 2.5x more during on-peak hours				
(4pm-9pm) on weekdays				
12am	6am		4pm	9pm
-				
📕 Off-peak 📄 Partial-peak 🛑 On-peak				

If the customer has three peak times, the user experience varies as follows.

Cost period bar: The cost period bar provides a visual representation of the low, medium, and highest cost periods. For three peak period times, it includes the following:

- High cost period color: The high cost period is indicated by a warning color to provide a visual cue to the customer to take heed of this time period. In the example image, the "on-peak" period is indicated by a dark orange warning color.
- Medium cost period color: The medium cost period is indicated by a medium color. In the example image, the "partial-peak" period is indicated by a light orange color that is lighter than the high cost period warning color.
- Low cost period color: The low cost period is indicated by a light cool color. In the example image, "off-peak" is indicated by the blue color.
- Cost start and end times: The cost period start time and end time are noted on the bar.

Cost period legend: The cost period legend defines which colors represent cost periods in the cost period bar. Only one legend item is displayed for more than one block of the same color,

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Demand Charge

This image is an example of the Mini Time of Use Reminder module for a customer with demand charge rate in addition to the Time of Use plan.

From 4pm-7pm on weekdays, the highest usage hour incurs a monthly demand charge			
12am	6am	4pm	7pm
Off-peak	Partial-	peak	On-peak

If the customer has demand charging, then the user experience varies as follows.

Header: The header informs the customers when the demand charge occurs.

Weekday high cost period start time: The time the peak period will start. For example, 4pm.

- Weekday high cost period end time: The time the peak period will end. For example, 9pm.
- Cost period bar: The cost period bar provides a visual representation of the high cost period.

Cost period colors: The cost period provide the customer with a visual cue to draw their attention to the most crucial times to save every during peak events.

- High cost period color: The high cost period is indicated by a warning-color to provide a visual cue to the customer to take heed of this time period. This is the period when demand charging occurs. In the example image, the "on-peak" period is indicated by a dark orange warning color.
- Medium cost period color: The low cost period is indicated by a medium color. In the example image, the "partial-peak" period is indicated by a light orange color.
- Low cost period color: The lowest cost period is indicated by a cool color. In the example image, the "off-peak" period is indicated by a cool blue color.

Cost period legend: The cost period legend defines which colors represent cost periods in the cost period bar.

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Footnote

If the footnote is configured, it appears below the cost period legend. An asterisk appears in the heading next to the peak day.

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Normative Comparisons

Normative Comparison modules compare a customer against themselves (for example, their past energy usage) or their neighbors. These modules are designed to motivate customers to understand the underlying causes of the differences in each comparison and subsequently reduce energy. Types of normative comparisons include:

- Three-bar Neighbor Comparison: The Three-bar Neighbor Comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors. It compares the customer ("You") to two groups: "Efficient Homes" and "Similar Homes." The results are displayed in a horizontal bar graph.
- Efficiency Zone: The Efficiency Zone is composed of a bar graph depicting the use of the customer and similar homes relative to a green efficiency zone, paired with the key insights or takeaways for the customer. If the customer's bar is at the green vertical threshold line or to the left of it, within the light green box, they are considered "in the efficiency zone." The Efficiency Zone threshold represents the average use of the 20th percentile of similar homes during that bill period and will change with each report.
- Seasonal Normative Comparison: The Seasonal Normative Comparison compares the customer's cooling or heating energy use from the previous season compared to other homes.
- Peak Focused Normative Comparison: The Peak Focused Normative Comparison module includes total electricity usage values so that the customer can have a better understanding of what their peak use is compared to their total use.

Note: Utilities have the option of including either the Efficiency Zone or the Threebar Neighbor Comparison module in some report experiences. It is recommended that utilities with a savings-focus include a Three-bar Neighbor Comparison in their report experience.

The design of the modules varies by the customer's report type and program design. Go to the individual module page to learn about the details of each module experience.

Efficiency Zone

The Efficiency Zone module is designed to motivate customers to save energy based on how they see themselves in relation to similar homes. It reframes the Efficient Homes concept from the Neighbor Comparison to improve customer satisfaction without heavily compromising energy efficiency. The module is comprised of a bar graph that compares customer and similar homes usage against an Efficiency Zone, and insights that place the customer's usage in context. Usage below or up to the threshold is considered in the

"efficiency zone." The Efficiency Zone threshold is the average use of the most efficient 20% of similar homes during that bill period and might change with each report.

Note: Utilities have the option to replace the Efficiency Zone module with the <u>Neighbor Comparison</u> module.

The normative comparison in Digital Self Service - Energy Management mirrors the customer's report experience. For example, a customer that receives the Efficiency Zone in their report will also see an Efficiency Zone in Digital Self Service - Energy Management. For more information about the web version of the Efficiency Zone, see <u>Digital Self Service</u> <u>Energy Management Efficiency Zone</u>.

Appears in: Progress Report, Welcome Report, Limited Income Report, Annual Report, Time of Use Report

This image shows an example of the Efficiency Zone module.

How you compare to others

Efficiency Zor	ne: Up to 460 kWh		
-			
0	250	500	750
	11 KMb		
	r homos: 766 kWh		
The Efficiency Z the least energy area with a simila Need to update y Go to the Home	one represents the 20% of simil this period. To create this group, ar heating source and square fo your home profile? Energy Survey.	ar homes in your comparison we look for 100 single-family botage .	group that used homes in your
Your energy use was outside of the Efficiency Zone by 40%			
You used less energy than similar homes.			

Heading: The title reads, "How you compare to others." It invites the customer to explore their normative comparison and learn about their energy use in more detail.

Threshold: The label above the graph introduces the maximum Efficiency Zone threshold (for example, Up to 500 kWh). The threshold is the average use of the 20th percentile of similar homes during that bill period. A light green tinted rectangle and darker green vertical line indicate the range and threshold of the Efficiency Zone, enabling customers to quickly see whether they are in the zone. The threshold is recalculated and changes with each report.

Graph: The bar chart displays how much energy the customer (You) used in comparison with Similar Homes. The Similar Homes bar indicates the average use of the customer's neighbors.

Hero Insight: The hero insight is the large colored numeric percentage which displays the customer's status relative to the Similar Homes. The color of the large number and percent sign varies, depending on whether they are above or below similar homes. If the customer is within the Efficiency Zone, the large number is green to visually correspond with the "Great" state of the benchmark. If the customer is not within the Efficiency Zone, the large number is orange to signal warning to the customer visually correspond with the "Fair" state of the benchmark.

The hero insight has three primary states:

- Great: In the Efficiency Zone
- Good or Fair: Outside the Efficiency Zone
- Fair: Higher than Similar Homes

Explainer Text: The explainer text explains what data goes into the comparison graph and provides the customer with a way to improve or correct these details in the Home Energy Analysis.

Secondary Insight: The secondary insight is displayed below the hero metric and varies depending on the customer's energy use. If the customer is using less than similar homes or in the efficiency zone, the secondary insight will either display a green check. If the customer is not in the efficiency zone, the secondary insight will display an orange 'x' indicating that the. There are several possible states:

- Great: In the Efficiency Zone
- Great: Near the Efficiency Zone
- Good: Lower than Similar Homes
- Good: About the same as Similar Homes
- Fair: Not in the Efficiency Zone

Customer Bill Alignment: Occasionally, the customer's previous bills do not coincide exactly in time with the previous bills of the customer's efficient homes. In order to arrive at the similar homes averages, it is necessary to align the similar homes energy use amounts with the customer's energy use amounts. In these scenarios, the application pro-rates, or "time-shifts," the similar homes bills to align with the customer bills by determining and adjusting for

the amount of overlap. The time-shifted neighbor bills are then used to determine the neighbor averages.

Requirements and Limitations

Fuel: Electric, gas, and dual fuel.

AMI Data Required: N/A.

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, quarterly.

Peak Focused Normative Comparison

The Peak Focused Normative Comparison module is included in the <u>Peak Focused Report</u>, and educates customers about how their energy use compares to their neighbors. It compares the customer ("You") to "Efficient Neighbors" and "Average Neighbors," and provides the customer with an comparison state (such as fair, good, or great) to help them measure how their electricity use is compared to these neighbors. The results are displayed in a horizontal bar graph. Total electricity usage values are also displayed so the customer can have a better understanding of what their peak use is compared to their total use. Depending on the customer's comparison state, an insight message after he graph either informs the customer that savings are still within reach or that they are leading their neighbors in savings.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Maximum of 300,000 a week.

Customer Requirements

Category	Description
Billing Frequency	Monthly or bi-monthly.
Category	Description
-------------------------	------------------------------------
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Billing data and third-party data.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only.

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Limitations

- Peak Focused Report only: This modules is only available as part of the <u>Peak Focused</u> <u>Report</u>.
- Time of Use Rate Plan: This module is only available to customers on Time of Use rate plans.
- Demand Charge: This modules supports customers on Time of Use plans with demand charges.

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User Experience

This section describes the user experience for a customer with good usage, followed by how the user experience may vary.





Header: The heading notifies the customer that the normative provides them with a comparison of their on-peak hours usage to their neighbors.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically, the bar with the smallest value is on top and the bar with the largest value is on the bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient homes value that appears in the module is not an average of the top 20% of similar homes. A threshold value—the 20th percentile of similar homes—is used to determine the efficient homes value. Efficient homes are not chosen in advance.

Explainer text: The explainer text appears below the bar chart and includes an efficient homes description that defines efficient neighbors that the customer is being compared to as the 20% of similar homes in their comparison group that used the least energy, and the fuel units used in the comparison are defined below the efficient neighbors description.

Insight Statement: The purpose of the insight statement are to provide information about why the bar chart appears the way it does. The insight statement appears to the right of the bar chart and provides information about why the bar chart appears the way it does. Each data state has a unique top and bottom insight.

- Billing period: The report billing period is located at the top of the insight statement.
- Top insight: The top insight displays either a percentage or a message telling the customer how much more or less the customer used compared to their "efficient neighbors." The color of the insight changes based on the customer's usage to neighbors.
- Bottom insight: The bottom insight provides the customer with feedback indicating potential savings or a percentage to enforce their performance in energy use. The potential savings version uses the customer's Time of Use rate to calculate an annual cost to the energy use gap between the customer and their neighbors. The percentage version indicates how much more or less energy the customer has used compared to their neighbors.

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User Experience Variations

Insight Statement Variations

The insight statements vary slightly depending on the relationship of the customer's cost/savings to the cost/saving threshold:

- Monetary: The monetary state is used when the cost/savings values are greater than the cost/savings threshold.
- Fallback: The fallback state is used when the cost/savings are not greater than the threshold.
- Alternative insights: The alternative state is used when the fallback state is enabled and the usage percentage is greater than 99%.

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Neighbors and Similar Homes Language

Utilities can configure the normative comparison to include "similar homes" or "neighbors" language." This option allows utilities to present the normative comparison data in the way that best suits their customers. For example, in rural regions where "neighbors" are spaced far apart or separated by farmhouses or farmland, or in urban environments where "neighbors" include diverse apartment units, the term "neighbors" may be confusing to customers. While the selected language does not change the group of homes a customer is compared to, the language used in the insights varies slightly.

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lcons

Utilities have the option of including an icon set displayed beside the main insight heading. Each icon set has a unique display for Fair, Good, and Great states. The state of the icon set in the report matches the state of the normative comparison. Icon set options include:

- No icons (Off)
- Smiley icons: Neutral or thinking
- Leaf icons
- Medal icons

The following image is an example of the Peak Focused Normative Comparison with neutral smileys enabled for a customer in a great usage state.



A Kilowatt-hour (kWh) is the standard unit used to measure electricity use.

The following image is an example of the thinking comprehension-focus smiley icons in a fair usage state.



The following image is an example of the environmental-focus leaf icons for a good usage state.



The following image is an example of the competative-focus medal icons for a great usage state.



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Three-Bar Neighbor Comparison

The Three-Bar Neighbor Comparison is designed to motivate customers to save energy based on how they see themselves in relation to their neighbors. It compares the customer ("You") to two groups: "Efficient Homes" and "Similar Homes." The results are displayed in a horizontal bar graph. A brief message indicates how the customer compares to efficient homes in the area. An informational section below the bar graph explains that "Efficient Homes" represent the 20% of similar homes in the customer's comparison group that used the last amount of energy in the billing period and provides information about how the graph works. An insight statement located below the Three-Bar Neighbor Comparison indicates whether the customer falls in one of three states:

- Great
- Good
- Using more than average

The neighbor comparison in Digital Self Service - Energy Management mirrors the customer's report experience. For example, a customer that receives the Efficiency Zone in their report will also see an Efficiency Zone in Digital Self Service - Energy Management. For more information about the web version of the neighbor comparison, see <u>Digital Self Service</u> <u>Energy Management Neighbor Comparison</u>.

Appears in: <u>Progress Report</u>, <u>Welcome Report</u>, <u>Limited Income Report</u>, <u>Annual Report</u>, <u>Time of Use Report</u>, <u>Solar Report</u>, <u>Electric Vehicle Report</u>

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Maximum of 300,000 a week.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, quarterly.
Data Delivery Frequency	Monthly and bi-monthly.
Data Requirements	Billing data and third-party data.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric, gas, and dual fuel.

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Limitations

Report Type: The behavior of this module varies by report type. See the <u>User</u>
 <u>Experience</u> for more information.

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User Experience

This section describes the user experience for the Three-bar Neighbor Comparison Module. The module varies by report type, service type, and other factors. See the <u>User Experience</u> <u>Variations</u> for additional information about each Three-bar Neighbor Comparison type.

Progress Three-bar Neighbor Compassion Graph

This image is an example of the Three-bar Neighbor Comparison module included in the <u>Progress Report</u>, <u>Welcome Report</u>, <u>Limited Income Report</u>, <u>Annual Report</u>, <u>Electric Vehicle</u> <u>Report</u>, and <u>Time of Use Report</u>.

	How you compare to others
	Efficient homes: 600 kWh
	You: 700 kWh
	Similar homes: 800 kWh
Nee	d to update your home profile? ∋ the Home Energy Survey.
	Your energy use was higher than efficient homes by
	17%
	You used less energy than similar homes.

Heading: The heading notifies the customer that the Three-Bar Neighbor Comparison gives them a comparison of their energy use to similar homes.

Bar Chart: The bar chart displays how much energy each group in the comparison used. Typically, the bar with the smallest value is on top and the bar with the largest value is on the

bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Similar Homes: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color. The energy use data that is shown is the mean energy use value.
- Efficient Homes: This bar displays a usage value for the most efficient 20% of the customer's similar homes. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient homes value that appears in the module is not an average of the top 20% of similar homes. A threshold value—the 20th percentile of similar homes—is used to determine the efficient homes value. Efficient homes are not chosen in advance.

Hero Insight: The hero insight is the large colored numeric percentage which displays the customer's status relative to Similar Homes. The color of the large number and percent sign varies, depending on whether they are above or below Similar Homes. If the customer is within the Efficient Homes group, the large number is green to visually correspond with the "Great" state of the benchmark. If the customer is not within the Efficient Homes group, the large number is orange to signal warning to the customer visually correspond with the "Fair" state of the benchmark.

The hero insight has three primary states:

- Great: Less than or equal to Efficient Homes.
- Fair: Higher than Similar Homes.
- Good or Fair: Outside the Efficiency Zone.

Explainer Text: The explainer text explains what data goes into the comparison graph and provides the customer with a way to improve or correct these details in the Home Energy Analysis.

- Great: Less than or equal to Efficient Homes.
- Great: Close to Efficient Homes.
- **Good:** About the same as Similar Homes.
- Good: Lower than Similar Homes.
- Fair: More than Similar Homes.

Secondary Insight: The secondary insight is displayed below the hero metric and varies depending on the customer's energy use. If the customer is using less than similar homes or in the Efficiency Zone, the secondary insight will display a green check. If the customer is not in the Efficiency Zone, the secondary insight will display an orange 'x.' There are several possible states:

- Great: Less than or equal to Efficient Homes.
- Great: Close to Efficient Homes.
- Good: Lower than Similar Homes.
- Good: About the same as Similar Homes.
- Fair: More than Similar Homes.

Customer Bill Alignment: Occasionally, the customer's previous bills do not coincide exactly in time with the previous bills of the customer's efficient homes. In order to arrive at the similar homes averages, it is necessary to align the similar homes energy use amounts with the customer's energy use amounts. In these scenarios, the application pro-rates, or "time-shifts," the similar homes bills to align with the customer bills by determining and adjusting for the amount of overlap. The time-shifted neighbor bills are then used to determine the neighbor averages.

Solar Three-bar Neighbor Comparison

The Three-bar Neighbor Comparison for <u>Solar Reports</u>. accommodates net zero and excess generation (negative) reads. The graph varies based on the benchmark state, fuel type, neighbors and similar homes language, and whether the customer has positive, negative, or net zero energy use. The module in the Solar Report differs from the Progress Report in the following ways:

This image is an example of the Three-bar Neighbor Comparison module included in the Solar Report.



Net energy is the difference between the amount of electricity your solar panels produce and amount of gas and electricity you use. Efficient homes with solar are the 20% of homes in you comparison group with the lowest net energy.

To create your comparison group, we use your home profile to look for 100 single-family home with solar in your area with a similar heating source and square footage.

A unit is a combined measurement of electricity (kWh) and gas (therms) use.

- Bar Chart: The bar chart shows a customer's net energy compared to other homes with solar. The comparison groups are informed by the same logic as the standard experience but only include other homes with solar. To help orient the customer, three increment indicators and one net zero indicator appear on the graph. A single increment indicator appears before the net zero indicator.
- Bar Graph Categories: The bar graph categories include:
 - Efficient Homes with Solar: This bar displays a usage value for the most efficient 20% of the customer's similar homes.
 - Similar Homes with Solar: This bar indicates how all the customer's neighbors with solar are doing.
 - You: This bar indicates the customers energy use.
- Graph Comparison State: The graph comparison states are determined by whether the customer has positive, negative, or net zero energy use.
 - Positive Comparison State: In a positive comparison state, all graph bars show positive readings, meaning that the customers used more energy than their panels produced.
 - Straddle Comparison State: In the straddle comparison state, the graph shows a mix of positive and negative reads. The module varies based on fuel type, language type, and whether the customer's "You" bar is positive or negative.
 - Negative Comparison State: If the customers used less energy than their panels produced, all graph bars show negative readings. The module varies depending on the customer's benchmark state and fuel type.
- Explainer Text: The explainer text section of the solar Three-bar Neighbor Comparison module includes definitions of net energy, comparison groups, and fuel used in the insights.
- Hero Insight: Some comparison state instances are paired with an alternative hero insight instead a large number call out. For example, when the large number in the sidebar reaches a value of 101% or more the number is replaced with a red "x."
- Secondary Insight: If the solar customer uses more energy than their solar panels produced, the secondary insight will display a gray exclamation point.

Electric Vehicle Three-Bar Neighbor Comparison

The Three-bar Neighbor Comparison for Electric Vehicle Reports is adapted to show the impact of electric vehicle charging on home energy use. The graph varies based on the benchmark state, fuel type, and whether the customer has similar homes or neighbors language.

This image is an example of the Three-bar Neighbor Comparison module included in the Electric Vehicle Report.

How you compare	to	others	
Aug 9 - Sep 8, 2	023		
Efficient homes			
596 kWh			
Similar homes			
1,067 kWh			
You			
700 kWh			916 k
 Home energy use (excluding EV) EV charging at home 			
Your comparison group includes 100 single-family homes your area that have a similar heating source and square f of similar homes that used the least amount of energy this	(with ar footage period	nd without ele e. Efficient ho	ectric vehicles) mes are the 20
Need to update your home profile? Take the Home Energy Survey.			
		335 ging	, was

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Heading: The heading indicates that the customer will be compared to other homes.

Billing period: The billing period dates applicable to the report.

Bar chart: The bar chart shows a customer's energy use compared to other single family homes that may or may not have electric vehicles. The comparison groups are informed by the same logic as the standard experience but includes the customer's electric vehicle charging. Bar graph categories include:

- Efficient Homes: This bar displays a usage value for the most efficient 20% of the customer's similar homes.
- Similar Homes: This bar indicates how all the customer's neighbors are doing.
- You: This bar highlights the home energy use in relation to Efficient and Similar homes. It
 includes the customer's home energy use, electrical vehicle charging, and total energy
 use, but excludes electric vehicle charging.

The appearance of the bar graph varies depending on the customer's comparison state. Possible comparison states include:

- Fair: Home energy use, excluding electric vehicle charging, was more than efficient homes or average neighbors.
- **Good**: Home energy use, excluding electric vehicle charging, was more than efficient than similar homes or average neighbors.
- Great: Total energy use, excluding electric vehicle charging, was less than efficient homes or average neighbors.
- Near: Within more or less than five percent of the average efficient homes or average neighbor value.

Legend: A legend included below the graph indicates what portions of the graph indicate home energy use excluding EV charging, and energy use for EV charging at home.

Explainer Text: The explainer text defines the comparison group and efficient homes. The explainer state and text is determined by the available customer data. For example, square footage, heating source, home type, and fuel type data.

Insights: The purpose of the normative message and insight statement are to provide information about why the bar chart appears the way it does.

Insight Statement: The insight statement appears to the right of the bar chart and provides information about why the bar chart appears the way it does. The insight states are related to the Benchmark module states of Great, Good, and Fair. The insights states are related to the Benchmark state. See the Benchmark module for more information.

Hero insight: The top insight displays a percentage for either how much more or less the customer used compared to their "efficient homes. The percentage color changes depending on whether the customer's usage is Great, Good, and Fair.

Secondary insight: The bottom insight tells the customer how their usage compared to compared to all neighbors, including efficient neighbors.

User Experience Variations

Gas-only and Dual Fuel

Gas-only and dual fuel customers see a variation in the units of energy displayed in the Three-Bar Neighbor Comparison module. The electricity unit "kWh" is replaced by "therms" for gas-only customers and "units" for dual fuel customers.

Seasonal Report

The <u>Seasonal Report</u> includes <u>Seasonal Normative Comparison</u> module instead of the three-bar Neighbor Comparison or <u>Efficiency Zone</u> by default. The Three-bar Neighbor Comparison may be used in place of the default <u>Seasonal Normative Comparison</u> module. See the <u>Seasonal Normative Comparison</u> for more information.

Annual Report

The annual version of the module differs from the <u>Progress Three-bar Neighbor Comparison</u> in the following ways:

- Heading: The heading specifies the months for which the chart covers.
- Bar Chart: The bar chart displays how much energy each group in the comparison used during the months included in the Annual Report.

Personal Tracker

The Personal Tracker is an optional module that provides customers with up to one year's comparison of their current year's usage to the previous year. It offers a range of data scenarios, displaying usage information across as few as three bills or as many as two full years of bills. The module includes an evaluative statement that assesses the customer's performance, a bar chart for visualization, seasonal helpers, and insights into why their energy use may have increased, decreased, or remained the same. The goal of the module is to provide customers with important insights into their energy use in order to help them make informed decisions about their consumption and improve their overall efficiency.

Appears in: Progress Report

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Oracle Utilities Opower Energy Efficiency Cloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Not applicable.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Progress Reports: Electric-only, gas-only, dual fuel.

Limitations

• The module can only be used in the **Progress Report**.

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User Experience

This section describes the user experience of an electric-only customer, followed by how the user experience may vary.



Header: The header informs the customer that the module is a comparison of their current energy use to the previous year.

Bar chart: The bar chart displays the customer's bills over time and provides a comparison to previous energy use if enough data is available. The chart can accommodate different reporting periods. By default it will compare the customer's energy usage month over month going as far back as the beginning of the previous year. It also supports customers that have bimonthly or quarterly bill periods.

- Unit of measurement: The unit of measurement varies by fuel type: kWh, Therms, and units.
- Legend: The legend differentiates which bars on the chart are from the current and previous year, and which bars are from the current bill and the same billing period from the previous year.
- Seasonal lcons: lcons located above the chart place indicate the season in which the bill occurred.

Insight: The insight located directly below the chart legend informs the customer if their energy use has increased or decreased since the previous bill period..

Secondary Insight: The secondary insight of the Personal Tracker module provides explanations for why their energy use may have increased or decreased compared to the previous billing period, particularly in relation to changes in temperature. The module uses weather insights calculations to determines whether the average temperature was higher or lower between the current and comparison billing periods. Based on this calculation, Personal Tracker provides suggestions as to why the customer's energy use increased or decreased.

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User Experience Variations

Fuel Type

The module varies by customer fuel type:

Dual Fuel: For dual-fuel customers, 'energy use 'is used in the module title and insights. The measurements are in units.

Gas: For gas customers, gas-specific language us used in the title and insight. The measurements are in therms.

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Energy States

The copy of the first and second insight varies depending on the customer's energy state and fuel type.

Energy State	Primary Insight	Secondary Insight
Energy use decreased compared to last billing period	What could have caused your [gas/energy/net energy] use to decrease? Changes in your household this period, like using less hot water than usual or fewer people at home, may have lowered your [gas/energy/net energy] use.	Comparing this bill period to a similar period last year, your [gas use/energy/net energy] use decreased XX [therms/units/kWh]
Energy use increased compared to last billing period	What could have caused your [gas/energy net energy] use to increase? Changes in your household this period like using more hot water than usual or a long-term guest may have contributed.	Comparing this bill period to a similar period last year, your [gas/energy/ net energy] use increased XX [therms/units/kWh]
Energy use is similar to last billing period	How could you lower your [gas/energy use/net energy] use? Upgrade to water- efficient appliances. If your appliances use less water, you won't be spending as much on water heating.	Comparing this bill period to a similar period last year, your [gas/energy/net energy] use was XX [therms/units/kWh]

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Billing

Bi-monthly Billing

If a customer has bi-monthly bills, the energy use bar will be plotted at the end of the twomonth period. This results in fewer data points compared to monthly bills. The seasonal icons above the chart are replaced with an short explainer text, "We report energy use based on the end of your bimonthly bill period."

Quarterly Billing

If a customer has quarterly bills, the energy use data bar will be plotted at the end of the three-month period. This results in fewer data points compared to monthly or bi-monthly bills. The seasonal icons above the chart are replaced with an short explainer text, "We report energy use based on the end of your quarterly bill period."

Available Data

The user experience is impacted by the amount of available data.

Less than 13 months of data available

If less than 13 months of data is available, the header changes to 'Track your progress.'

Previous year or current year

If either a usage value from the last year or current year is missing, one bar is centered on top of the associated x-axis anchor. A message below the graph explains the possible reasons for the missing data, and asterisks are included in the legend to indicate the years that are missing data.



More than 13 months of data

If the customer has more than 13 months of data, but a comparison with the previous year's billing period is not possible because data from a similar billing period from last year is missing, the comparison is completed with the previous billing period value. For example, if the energy usage value for 'Last September (2020)' is missing, the comparison is made between energy usage for 'This September (2021)' and energy usage for August 2021. The primary insight emphases that the report is comparing these bill periods being compared because it was unable to locate a similar period of data from the year before. The secondary insight indicates that the customer's usage has increased or decreased in comparison to a previous period.



Missing year over year and monthly comparison

The module fails if comparison with the last year's similar billing period and previous bill period is not possible.

Promotion Module

The Promotion module enables the utility to promote a program of their choice that is related to the available disaggregation categories: heating, cooling, water heating, appliances, lighting, and fridge. The module is designed to help the customer understand the cost and benefits of taking advantage of the program. Oracle Utilities Opower works directly with the utility to design the promotion module on the front of the report to be specific to the report promotion.

Appears in: Promotion Report

This image shows an example of the module promoting a hot water heater.

A new water heater could help you save



\$400 UtilityCo Rebate

If your water heater is over 10 years old, now's a good time to upgrade to an ENERGY STAR® heat pump water heater. According to the U.S. Department of Energy, you can save over 50% on water heating costs—for a family of 3, that adds up to \$2,610 in energy savings over its lifetime!

Though they're a little pricey, you can make up the extra cost in as little as 3 years, plus save another \$400 with a limited-time UtilityCo rebate.

Claim your rebate

Header: The header introduces the promotion and prepares the customer to learn about how they can save.

Rebate or Discount: This rebate or discount specifies how much the customer can save if they take advantage of the promotion.

Illustration: An illustration that represents the promotion.

Body Text: The body text focuses on the cost, energy-saving, environmental and comfort benefits that uptake of the promotion might offer the customer.

Call to Action: The button redirects the customer to where they can access the promotion.

Requirements and Limitations

Fuel: N/A

AMI Data Required: N/A

Data History:

- A minimum of six bills is required for Non-AMI customers.
- A minimum of 60 days of AMI reads for AMI customers.

Billing Frequency: N/A

Seasonal Normative Comparison

The Seasonal Normative Comparison module compares the customer's cooling or heating energy use from the previous season compared to other homes. This comparison motivates them to reduce cooling energy use during the upcoming extreme weather season.

Appears in: Seasonal Report

This section describes the summer Seasonal Normative Comparison experience for a customer whose program includes an Efficiency Zone.

LAST SUMMER

You used **more** on cooling than homes in the Efficiency Zone*



*Homes in the Efficiency Zone are the 20% of similar homes that used the least amount of energy from Jun 6 - Aug 30, 2020.

Normative Message Label: The label identifies the comparison season. For example, "Last Summer."

Insight: The insight summarizes the information in the bar chart.

Bar Chart: The bar chart displays how much energy each group in the comparison used.

You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.

Homes in the Efficiency Zone or Similar Homes: This bar indicates how all the customer's neighbors are doing. It is usually green. The energy use data that is shown is the mean energy use value. The bar is labeled according to the version of the normative comparison graph used in the customer's Progress Report.

Normative Insight : The insight appears above the bar chart and provides information about why the bar chart appears the way it does.

Explainer: Text to the left of the bar chart defines the season date range.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Seasonal Breakout

The Seasonal Breakout module informs the customer what percentage of their energy use the previous summer or winter went toward cooling or heating. The purpose of this module is to highlight the how large a customer's heating or cooling costs can get and prepare them for the seasonal insights and tips presented later in the report.

Appears in: Seasonal Breakout

This image shows an example of the module for a customer that receives the summer Seasonal Report.

Cooling has a big impact on summer energy bills



of your total energy use went towards **cooling*** last summer

*Can include window units, central AC, and fans

Header: The header highlights that cooling has an impact on the customer's summer energy bills.

Insight: The insight tells the customer how much of their energy use went towards cooling the previous summer.

Explainer: The explainer text below the insight clarifies that the calculation takes into account window units, central air, and fans.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Annual Secondary Insight

The Annual Secondary Insight provides customers with an overview of their energy use trends throughout the year. It includes a summary of their highest and lowest time periods by season, month, and day of the week. The goal of this module is to provide the customer with easily accessible insights about their annual use.

Appears in: Annual Report

This image shows an example of the module for an electric customer that receives an Annual Report with 12 months of data.



Header: The heading draws the customer's attention to module as an a overview of their energy use trends throughout the year. "How you used energy across the year"

High or Low Season Card: The high and low season cards highlight the seasons in which the customer used the most and the least energy.

- High and Low Season Header: "You used the most energy in" and "You used the least energy in"
- High and Low Season Illustration: Dynamic seasonally appropriate illustrations.

- High and Low Season Insight: The season insight names the seasons that the customer used the most and least energy. For example, "Summer" and "Winter"
- High and Low Season Usage: The high and low seasonal usage. Foe example, "601 units"

High or low month card: The high and low month cards highlight the months in which the customer used the most and the least energy.

- High and Low Month Header: "Your use was highest in" and "Your use was lowest in"
- High and Low Month Insight: The month insight names the months the customer used the most and least energy. For example, "September" and "May"
- High and Low Month Usage: Displays the high and low monthly usage. Foe example, "601 units"

Day-Of-The-Week Insight Card: The day-of-the-week insight names the days the customer used the most and least energy

- High and Low Day Headers: "Highest use day" and "Lowest use day"
- High and Low Day Insight: The day of the week that the customer used the most and least energy. For example, "Monday"
- High and Low Day Usage: The average usage of the highest use day and lowest use day. For example, "19 units average"
- Illustration: The day-of-the-week insight card includes a calendar illustration.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: AMI data is required for the Day-of-the-Week Insight Card

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly

Subject Line, Header, and Footer

The subject line and header are used to engage the customer and brand the communication. The footer provides customers with links to manage preferences and unsubscribe from the email channel. It also contains the utility address, necessary legal text, and optional app download and social media links. The user experience varies by report type.

Appears in: All report types.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Not applicable.
Data Delivery Frequency	Not applicable.
Data Requirements	Not applicable
Data History	Data History: For the Promotion Report Header, a minimum of six bills is required for non-AMI customers, and a minimum of 60 days of AMI reads is required for AMI customers.
Data Coverage	Not applicable.
Supported Fuels	Not applicable.

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User Experience

This section describes the user experiences for the various report types.

Subject Line

The subject line is designed by Oracle Utilities to engage customers. All subject lines include a customer's name, as our research has shown that including the customer's name results in a higher open rate.

Annual Report: The default subject line is designed to shift the customer's focus to their energy use over the last calendar year. "[first name, last name], here's your [YYYY] Energy Lookback"

Electric Vehicle Report: Utilities have the choice of using a standard default subject line each time "[first name, last name] Your Home Energy Report is here."

Limited Income Report: The subject line varies by report type:

- Limited Income Welcome Report: "[first name], check out your new Home Energy Report"
- Limited Income Progress Report: Utilities have the choice of using a standard default subject line each time "[first name, last name] Your Home Energy Report is here" or choosing dynamic subject lines that vary based on customer state.

Peak Focused Report: The default subject lines are designed to acknowledge the time of use plan experience. The subject line varies by report type:

- Peak Focused Welcome Report: "[first name], check out the new Home Energy Report"
- Peak Focused Progress Report: "[first name, last name] Your Home Energy Report is here"

Progress Report: Utilities have the choice of using a standard default subject line each time " [first name, last name] Your Home Energy Report is here" or choosing a dynamic subject lines that vary based on customer state.

Promotional Report: The subject line varies by disaggregation category. For example, it may show the customer's name and ask how much they are spending on a disaggregation category such as heating, cooling, or appliances.

Seasonal Report: The default subject line is designed to shift the customer's focus to seasonal energy efficiency. "Hi [first name, last name], see how much energy you used last [winter/summer]"

Solar Report: The Solar Report includes a static subject line that emphasizes that the customer is part of a solar report experience. The subject line varies by report type:

- Solar Welcome Report: "Hi [first name] your Home Energy Report for solar households is here"
- Solar Progress Report: "Hi [first name], your Home Energy Report is here"

Time of Use Report: The default subject lines are designed to acknowledge the time of use plan experience. The subject line varies by report type:

- Time of Use Welcome Report: "[first name], check out the new Home Energy Report"
- Time of Use Progress Report: "[first name, last name] Your Home Energy Report is here"

Welcome Report: "[first name], check out your new Home Energy Report"

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Header

The report headers are distinct and appear at the top of each communication. The header of the Promotion Report header highlights three end-uses in the customer's home where their use is the highest or they may benefit from making behavioral changes and taking advantage of a utility-offered promotion. The rest of the reports provide colorful introductions to the report.

Appears in: All report types.

Annual Report

This image is an example of the Annual Report header.



Logo: A logo provided by the utility.

Utility Account Number: The inclusion of the account number makes the report more credible and signals that this is in fact a communication from the utility. Part of the account number is obscured by default.

Annual Introduction: The image provides a colorful introduction to the report.

- Heading: The heading alerts customers that now is the time to take a look back over their energy use for the previous calendar year.
- Subheading: The subheading identifies the calendar year encompassed in the report and identifies the customer's fuel type.
- Illustration: A colorful illustration that includes a laptop displaying the Efficiency Zone or three-bar Neighbor Comparison visually connects the Annual Report to the larger report experience.
Electric Vehicle Report

This image is an example of the Electric Vehicle Report header for an existing customer.



Logo: A logo provided by the utility. This is the same logo used in the Energy Efficiency Web Portal.

Utility account number: The customer's utility account number.

Electric Vehicle Introduction: The electric vehicle introduction image provides a colorful introduction to the report. It includes the customer's name and the report name. The illustration is of a home with a charging electric vehicle.

New Customers: If the customer is entirely new to the program or it is their first Home Energy Report, the text is "Sarah, Here's your new Home Energy Report" Legacy Customer: If the customer has previously received an Email Home Energy Report, the text does not include the word "new."

Limited Income Report

The Limited Income Report educates limited income customers about ways to be more energy efficient and presents opportunities for them to reduce their immediate and future bills. There are two types of LMI Reports and corresponding headers:

- Limited Income Welcome Report: See the Welcome Report header.
- Limited Income Progress Report: See the Progress Report header.

Peak Focused Report

This image is an example of the Peak Focused Report header for an existing customer.



Logo: A logo provided by the utility. This is the same logo used in the Energy Efficiency Web Portal.

Utility account number: The customer's utility account number.

Peak Focused Introduction: The header provides a colorful introduction to the report with an illustration that echoes the report theme with images of homes paired with time based rate icons.

- New Customers: If the customer is entirely new to the program or it is their first Home Energy Report, the text is "Sarah, Here's your new Home Energy Report"
- Legacy Customer: If the customer has previously received an Email Home Energy Report, the text does not include the word "new."

Progress Report

This image is an example of the header for the <u>Progress Report</u>, <u>Limited Income Progress</u> <u>Report</u>, and <u>Time of Use Progress Report</u>.



Logo: A logo provided by the utility. This is the same logo used in the Energy Efficiency Web

Portal.

Utility Account Number: Since the account number is required to register on the Energy Efficiency Web Portal, having the number on the report provides a useful reference for customers. Part of the account number is obscured by default.

Progress Introduction: The progress introduction provides a colorful introduction to the report. It includes the customer's name, program introduction, and report name.



 Sarah,

 You could be saving more on water heating, cooling and lighting.

Logo: A logo provided by the utility.

Utility Account Number: The inclusion of the account number makes the report more credible and signals that this is in fact a communication from the Utility. Part of the account number is obscured by default.

Promotion Introduction: The Promotion Introduction highlights three end-uses in the customer home where their use is the highest or they may benefit from making behavioral changes and taking advantage of a utility-offered promotion.

Seasonal Report

These images are examples of the Seasonal Report headers.



Logo: A logo provided by the utility.

Utility Account Number: The inclusion of the account number makes the report more credible and signals that this is in fact a communication from the Utility. Part of the account number is obscured by default.

Seasonal Introduction: The image provides a colorful introduction to the report deigned to motivate customers to reduce their energy use in the lead up to the extreme weather seasons of summer and winter.

Solar Report

This image is an example of the Solar Report header.



Logo: A logo provided by the utility. This is the same logo used in the Energy Efficiency Web Portal.

Utility Account Number: Since the account number is required to register on the Energy Efficiency Web Portal, having the number on the report provides a useful reference for customers. Part of the account number is obscured by default.

Solar Introduction: The solar introduction provides a colorful introduction to the report. It includes the customer's name, program introduction, and report name.

- New Customers: If the customer is entirely new to the program or it is their first Home Energy Report, the text is "Sarah, Here's your new Home Energy Report"
- Legacy Customer: If the customer has previously received an Email Home Energy Report, the text does not include the word "new."

Time of Use Report

The Time of Use Report provides customers on a Time of Use energy plan with a report experience that is focused on overall energy savings and rate education. There are two types of Time of Use Reports and corresponding headers:

- Time of Use Welcome Report: See the Welcome Report header.
- **Time of Use Progress Report**: See the **Progress Report header**.

Welcome Report

This image is an example of the header for the <u>Welcome Report</u>, <u>Limited Income Welcome</u> <u>Report</u>, and <u>Time of Use Welcome Report</u> header.



Logo: A logo provided by the utility.

Utility Account Number: The inclusion of the account number makes the report more credible and signals that this is in fact a communication from the Utility. Part of the account number is obscured by default.

Welcome Introduction: The welcome introduction image provides a colorful introduction to the report. It includes the customer's name, program introduction, and report name. The word "new" is included in the to emphasize that this is a welcome experience.

Footer

The footer is included at the bottom of every report and includes components that provide more context about the report, such as the utility's contact information and legal disclaimers.

This image is an example of the Footer module.

DuiltyCo P.O. Box 1234	
Austin, TX 12345-6789	
888-999-9999	
UtilityCo.com	
Savings are estimated for typical premises	s in the UtilityCo service area and your actual savings
may vary. UtilityCo cannot guarantee the a	amount of money or energy you may save by
implementing the recommended actions.	
Manage Preferences Unsubscribe	
Manage Preferences Unsubscribe	
Manage Preferences Unsubscribe	
Manage Preferences Unsubscribe Download the UtilityCo App	
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Manage Preferences Unsubscribe Download the UtilityCo App	Play
Manage Preferences Unsubscribe Download the UtilityCo App C Download on the App Store Follow us	Play
Manage Preferences Unsubscribe Download the UtilityCo App Download on the App Store Follow us	Play

Utility Address: The utility's mailing address. The mailing address must appear due to CAN-SPAM regulations in the US and similar regulations abroad.

Manage Preferences: A link to the Energy Efficiency Web Portal page or utility page where a customer can edit their report preferences.

Unsubscribe: A link to a page where customers can unsubscribe from Email Home Energy Reports v3. An unsubscribe link must appear due to CAN-SPAM regulations in the US and similar regulations abroad. The URL the unsubscribe link points to cannot be customized. Unsubscribing from Email Home Energy Reports v3 in this manner unsubscribes the customer from all Oracle Utilities Opower email communications. This action is permanent. A customer cannot opt in again after opting out of Email Home Energy Reports v3.

Disclaimer: This is an optional disclaimer that can be customized or removed at the request of the utility.

Legal Text: This is the copyright and any other legal text required by the utility or Oracle Utilities.

App Download and Social Media Links: Optional app download and social media links that can be added at the request of the utility.

User Experience Variations

Annual Report Header

The annual report header varies depending on the customer fuel type, and normative comparison type.

Fuel Type: The subheading changes depending on the customer's fuel type.

- Electricity: "A review of your [yyyy] electricity use and how to save more this year"
- Dual: "A review of your [yyyy] energy use and how to save more this year"
- Gas: "A review of your [yyyy] gas use and how to save more this year"

Normative Comparison Type: Customers that receive the Three-Bar Neighbor

<u>Comparison</u> variant of the report will see a 3-bar graph version of the illustration. Customers who receive the <u>Efficiency Zone</u> version of the report will see a corresponding Efficiency Zone illustration.

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Time of Day Hourly Insight

The Time of Day Hourly Insight provides the customer with additional details about when a customer is consuming electricity and how they compare to their nearest comparison group. The module displays the customer's average hourly electricity use on weekdays, the highest cost period (peak) hours, non-peak hours, and an insight to highlight to the customer in which high cost period hour they are consuming the most energy. A call-to-action button is provided to redirect the customer to where they can learn more about their Time of Day rate plan.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service
Scale	Maximum of 300,000 a week.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, quarterly.
Data Delivery Frequency	Monthly, bi-monthly, quarterly.
Data Requirements	Hourly AMI data.Hourly normative comparison data
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only.

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Limitations

- Peak Focused Report: This modules is only available as part of the <u>Peak Focused</u> <u>Report</u>.
- **Time of Use Rate Plan**: This module is only available to customers on Time of Use rate plans.
- No rate data: The no rate data variation of the module may be included in other report types.

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User Experience

This section describes the user experience for a customer with two peak periods.



Time of Day Graph: Helps the customer identify key times for energy savings by highlighting their average use during weekdays with a focus on the high-cost peak hours.

- Heading: Identifies the purpose of the graph.
- Cost Period Labels: Provide a key to the graph elements. For example, "On-peak,"
 "Off-peak," and "Average neighbors."
- Hourly Bar Graph: Defines the customer's hourly off peak and on-peak usage. Highcost peak hours are indicated in the same color as the High Consumption Time Period.
- **Comparison Group Usage Line**: Indicates the comparison group's average hourly usage. The line data varies depending on the customer's usage state.
- Cost Period Start Times: The hourly usage increments of the bar graph.
- Usage Measurement: The measurement used in the graph.

Insight Heading: Reinforces the purpose of the module as a focus on the customer's peak hour usage.

- Highest Consumption Time Period: Identifies the period during which the customer's average on-peak energy use was the highest. This element is dynamic by rate plan.
- Insight Description: Explains that the High Consumption Time Period is the period during which the customer's average on-peak energy use was the highest.
- Learn More Button: Redirects the customer to the web portal where they can learn more about their peak rates.

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User Experience Variations

Three Peak Periods

If there are three peak periods, three peak distinct periods appear in the graph and are identified in the cost period labels.



Hourly Bar Graph: The graph includes the customer's high ("on-peak"), medium ("partial-peak"), and low ("off-peak") cost periods. The colors used in the graph are designed to draw attention to the distinct cost periods:

- High-cost period: Warning color.
- Medium cost period: Medium color
- Low cost period: Cool color.

Cost period labels: Identifies the table elements and their associated colors.

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Comparison Group Usage Line Data

The type of data used for the line data on the chart varies depending on the customer's usage state:

- If the usage state is fair then average neighbors data is used for the line data on the chart.
- If the usage state is good or great then efficient homes data is used for the line data on the chart.



The module varies in the following ways:

Comparison Group Usage Line: Indicates the comparison group's average hourly usage. If customers in a good or great usage state, the line is green.

Cost Period Labels: The graph elements labels adjust to indicate the line data used:

- Good or great: "Efficient neighbors"
- Fair: "Average neighbors"

This image is an example of the module for a customer with a good or great usage state.

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Demand Charge



If the customer has demand charges, module varies in the following ways:

 Demand Charge Icon: A demand charge dollar icon appears at the max usage hour during the on-peak period in a bill period. The chart displays average usage for hours in the bill period.

Note: The max usage hour may not be the same as the highest-average hour in the bar chart due to statistical maximums and averages.

- Insight Heading: Reinforces the purpose of the module as a focus on the customer's demand charge usage.
- Highest Consumption Time Period: Identifies the period during which the customer's demand charge occurred for the period. This element is dynamic by rate plan.
- **Insight Description**: Explains that the demand charge occurred in the period identified, and encourages the customer to learn more to save more.
- Learn More Button: Redirects the customer to the web portal where they can learn more about their demand charges.

No Rate Data

When there is no available rate data, or if the module is used in another report besides the Peak Focused Report, the module shows an hourly normative comparison and emphasizes the highest average usage hour.

Note: The no rate version of the Time of Day Hourly Insight module may be included in other report types for utilities that meet additional data requirements. <u>Contact your</u> <u>Delivery Team</u> for information.



The module varies in the following ways:

Time of Day Graph: The graph helps the customer identify key times for energy savings by highlighting their average use during weekdays. Peak hours are omitted.

- Cost Period Labels: Provides a key to the graph elements. Only "Your use" and "Average Neighbors" are included.
- Hourly Bar Graph: Defines the customer's hourly usage. The highest use hour is indicated in the same color as the High Consumption Time Period. The graph displays 12am, 6am, 12pm and 6pm by default on the x-axis.
- **Comparison Group Usage Line**: Indicates the comparison group's average hourly usage. The line data varies depending on the customer's usage state.
- Cost Period Start Times: Defines the hourly usage increments of the bar graph.
- Usage Measurement: Defines the measurement used in the graph.

Insight Heading: Reinforces the purpose of the module as a focus on the customer's usage.

- **Highest Consumption Time Period**: Identifies the period during which the customer's energy use was the highest. This element is dynamic by rate plan.
- Insight Description: Explains that the customer's use was the highest in this period.
- Learn More Button: Redirects the customer to the web portal where they can learn more about their peak rates.

Missing or No Data

If data is missing or not available, then the module indicates the periods for which there is missing or no data. The following image is an example is of the Time of Day Hourly Insight module for a demand charge customer with missing data.



The module varies in the following ways:

- Asterisk: An asterisk is located above the graph period for which there is no data.
- Cost Period Labels: A cost period label identifies the asterisk as "Zero usage or missing data."

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Tip Modules

Tip modules present actionable energy savings tips for customers to follow. Tip module designs vary by report type as well as available customer and utility data.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy EfficiencyCloud Service
Scale	There is no limit on the number of customers per utility.

Customer Requirements

Category	Description
Billing Frequency	Not applicable
Data Delivery Frequency	Not applicable
Data Requirements	AMI data, Appliance Detection and Disaggregation data.
Data History	Not applicable
Data Coverage	Not applicable
Supported Fuels	Electric-only, gas-only, and dual fuel.

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Limitations

Report type: The availability tips is limited by report type. See the individual module descriptions.

User Experience

This section describes the user experience for tips in the different report types.

Progress Report Tips

Appears in: Progress Report

The <u>Progress Report</u> includes one or up to three tip modules that highlight personalized aspects of the tip experience.

This image is an example of the progress report tip design.



Heading: The heading indicates that this tip has been personalized for the customer.

Context: The progress report tip includes context to help the customer understand why that tip has been selected for them. Tip contexts are shown randomly with the exception of the "recent HEA completion context" which is shown in the report immediately following Home Energy Analysis completion. Availability of contexts is dependent on available customer AMI data and whether the customer completed the Home Energy Analysis. See <u>Home Energy Analysis</u>.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Promotion Report Tips

Appears in: Promotion Report

The <u>Promotion Report</u> tips use disaggregation data and/or <u>Home Energy Analysis</u> data to provide customers with low or no-cost alternative actions to the promotion. They include two actions that relate to the customer's top end uses or the promotion use case.

This image is an example of a promotion report tip.

More ways you can save right now

Cooling



Use fans instead of AC

Because fans are targeted to a specific area, they can be more cost effective than cooling your entire home. To save electricity, raise the thermostat setting by 4°F and use fans to keep cool.

Save up to \$28 per year

Lighting

of your total use last year

Spotlight your work spaces

Overhead bulbs often provide more light than you need. Using a kitchen counter light while preparing dinner—or a small lamp when reading a book—brings better light to the task at hand and saves energy. **Heading:** The heading "More ways you can save right now" builds off of the promotion on the front of the report "X could help you save." The language is state-agnostic and will be used regardless of where these specific categories fall in the customer's disaggregation breakdown.

End Use Category 1: The first end use shows the customer one of their top end uses, depending on the promotion use case.

End Use Category 2: The second end use shows the customer a second top end uses, depending on the promotion use case.

Usage Insight: The tip is paired with an insight showing the percent of the customer's overall use that the specific category makes up.

Insight Label: The insight label identifies that the insight shown is an annual insight. Note that the insights provided is always an annual insight.

Tip Title: The tip title focuses on future savings to help motivate the customer to act.

Tip Body: The tip body provides information to help customers act.

Savings Estimate: The savings estimate calculates a savings estimate for the customer based on their personal energy use data.

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Seasonal Report Tips

Appears in: Seasonal Report

The Seasonal Report tips provide customers with two seasonally relevant tips to help them lower their summer or winter energy use. The first tip is dedicated to saving on cooling or heating and the second helps them save on another end use. The module also points customers to more tips on the web.

This image is an example of tips included in the summer version of the Seasonal Report.

More ways to save this summer

These low-cost tips were chosen for you based on how you use energy in your home.



Schedule maintenance for your central AC

If your AC system isn't properly maintained, it will cost more to run and require more frequent repairs. Schedule an inspection each spring to ensure your cooling system is running safely and efficiently before summer.



Select efficient home office equipment

If you have a home office, choosing an efficient printer, copier or scanner could cut its energy use by 30%. Choose ENERGY STAR® models and use low-power modes to reduce your bills.

Save up to \$60 per year

Heading: The heading indicates that these tips have been selected to help the customer.

Context: The context helps the customer understand why tips have been selected for them.

Tip Title: Pulls in existing title from Tip Manager, depending on the tip shown

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: Pulls in existing body copy from Tip Manager, depending on the tip shown; leverage email-length tips

Savings Estimate: Calculates a savings estimate for the customer, based on their personal energy use data and information in Tip Manager

Call to Action: The Call to Action links to the utility's summer tip guide.

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Welcome Report Tips

Appears in: <u>Welcome Report</u>

The <u>Welcome Report</u> includes up to three tip modules that highlight personalized aspects of the tip experience.

This image is an example of the Welcome Report tips design.

Top recommended tips for you

Based on your smart meter, your energy use was highest in heating, refrigerator, and clothes drying.



Run ceiling fans in reverse during the winter to circulate warm air

Warm air rises and collects near ceilings. In the winter, you can run your ceiling fan in reverse on a low setting to circulate warm air more evenly. Then lower your thermostat to save on heating costs.





Make sure your refrigerator door seal is tight

If the seal on your refrigerator or freezer door isn't doing its job, your appliance could be leaking some of the cooled air it produces. To fix the problem, replace your leaky seal with a new one.

Save up to \$13 per year

Heading: The heading indicates that this tip has been personalized for the customer.

Context: The progress report tip includes context to help the customer understand why that tip has been selected for them. Tip contexts are shown randomly with the exception of the "recent HEA completion context" which is shown in the report immediately following Home Energy Analysis completion. Availability of contexts is dependent on available customer AMI data and whether the customer completed the Home Energy Analysis. See <u>Home Energy Analysis</u>.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Annual Report Tips

Appears in: Annual Report.

The Annual Report includes tips that are designed to help customers take stock of their energy use from the past year, and to share new insights about their energy use in order to inspire customers to take action to save energy.

Top tip: The first tip promotes an energy assessment program or includes a tip from the utility tip library. Possible energy assessment program promotions include:

- In-person energy audit
- Utility's virtual audit program
- Oracle UtilitiesOpower's Home Energy Analysis

Second tip: The second tip includes an easy tip that the customer can act on right away to save energy.

This image is an example of the Annual Report tips design for customers that receive a utility virtual home energy assessment program tip and a generated tip in their report.

Prepare for a year of energy savings

Start the new year off right-try these tips



Schedule a virtual home energy assessment

You could save up to 30% on your energy bill by making upgrades identified in a home energy assessment. Sign up for <u>a no-cost virtual home energy assessment</u> today so we can help you start saving right away.



ave up to \$20 per vea

Heading: The heading indicates that these tips will help the customer save in the year ahead.

Context: The context encourages the customer to take action to save energy.

Tip 1: The top tip either encourages customers to complete an energy assessment program or includes a tip from the utility tip library.

- **Image**: The tip contains an illustration that correlates to the utility's home energy assessment program.
- **Tip Title**: The title encourages the customer to schedule their home energy assessment.
- Tip Body: The text encourages the customer to sign up for their utility's virtual home energy assessment. The text includes a link that redirects the customer to the utility website where they can sign up.

Tip 2: A tip from the utility tip library that is applicable year-round and is easy for the customer to complete.

- Image: The tip contains an illustration that correlates to the presented tip.
- **Tip Title**: The title focuses on future savings to motivate the customer to act.
- **Tip Body:** The body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers an idea of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The Find More Ways to Save texts link to the utility's tip guide.

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Time of Use Report Tips

Appears in: Time of Use Reports

The <u>Time of Use Progress Report</u> includes three rotating tip modules that highlight personalized aspects of the tip experience that can help customers on time of use plans save energy and money. Possible tip modules include:

- Disaggregation Tip Module: Provides the customer with one or two AMI context tips focused on general energy efficiency.
- Large Appliance Tip Module: Highlights four large appliances that typically consume a lot of electricity when run, and provides a link to where customers can learn more about saving energy.
- **Two Tip Module**: Provides the customer with a peak-savings tip and an anytime-savings tip.

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Disaggregation Tip Module

The disaggregation tip includes one or two AMI context tips focused on general energy efficiency. The tips shown are determined by the customer's top energy use category.

This image is an example a disaggregation tip module containing two tips:



Heading: The heading indicates that these tips have been selected for the customer.

Context: The context helps the customer understand why tips have been selected for them.

Tip 1: An AMI context tip focused on general energy efficiency.

- **Tip Title**: The title related to the tip shown that motivates the customer to act.
- Image: Contains an illustration that correlates to the presented tip.
- **Tip Body**: Provides information to help customers act on the tip.
- Savings Estimate: The savings estimate showing potential savings for the customer based on their energy use data.

Tip 2: An AMI context tip focused on general energy efficiency

- **Tip Title**: The title related to the tip shown that motivates the customer to act.
- Image: Contains an illustration that correlates to the presented tip.
- **Tip Body**: Provides information to help customers act on the tip.
- Savings Estimate: The savings estimate showing potential savings for the customer based on their energy use data.

Call to Action: The "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Large Appliance Tip Module

The Large Appliance tip highlights four large appliances that typically consume a lot of electricity when run, and provides a link to where customers can learn more about saving energy. The module is designed to help educate customers on TOU rate plans about the types of appliances that they should try to avoid during peak hours when electricity is highest in demand. The module has two, season-specific states:

- Hot Weather: The hot weather state includes the spring and summer seasons.
- Cold Weather: The cold weather state includes the fall and winter seasons.

These images are examples of the Large Appliance Tip design for hot and cold weather.

Hot Weather	Cold Weather


Heading: The heading prepares the customer to learn where they can save the most electricity during peak hours.

Body Text: Echoes the headings message that the customer can save the most energy and money on their bill by using the featured appliances only during off-peak hours.

Appliance Images: This section includes four, seasonally appropriate recommendations for appliances that the customer should avoid using in peak hours.

- Hot Weather: The Hot Weather state is the spring and summer seasons combined. By default, Cooling - Thermostat, Pool pump, Clothes dryer, and Dishwasher are included in the hot weather module.
- Cold Weather: The Cold Weather state is the fall and winter seasons combined. By default, Heating - Furnace, Clothes dryer, Oven, and Dishwasher are included in the cool season module.

Call to Action: The Call to Action "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Two Tip Module

The two tip provides the customer with a peak-savings tip and an anytime-savings tip. The peak tip is identified as such so that the customer knows when to act on that tip. The general energy-efficiency tip leverages tip targeting to provide the customer with the most relevant tip from any end use category. The module includes a tip cost label that shows the general level of financial effort involved in following a tip to help the customer focus on their rate plan as a signal for if and when to act on a tip.

This image is an example of the two tip module.



Heading: The heading indicates that the tips has been selected for the customer and can be used to save energy during peak and off peak hours.

Illustration: An illustration that compliments the tip is pulled from the tip illustration library.

Tip Title: The first tip is specific to peak usage and can pull from the list of available peak tips. The second tip leverages standard tip targeting logic to present the customer with a general savings tip most relevant for their household. Body: Echoes the headings message depending on the tip shown.

Cost Category: The cost category is displayed in a green highlight below the illustration to helps the customer understand the financial impact of the tip. Possible cost categories include free, low cost, and great investment.

Call to Action: The Call to Action "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Limited Income Report Tips

Appears in: Limited Income Report

The Limited Income Report includes one or up to three tip modules that highlight personalized aspects of the tip experience.

This image is an example of the Progress Report tips design.



Heading: The heading indicates that this tip has been personalized for the customer.

Context: The progress report tip includes context to help the customer understand why that tip has been selected for them. Tip contexts are shown randomly with the exception of the "recent HEA completion context" which is shown in the report immediately following Home Energy Analysis completion. Availability of contexts is dependent on available customer AMI data and whether the customer completed the Home Energy Analysis. See <u>Home</u> Energy Analysis.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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Paired Tips

Appears in: Limited Income Report, Electric Vehicle Report

The Paired Tips module use disaggregation data and/or <u>Home Energy Analysis</u> data to provide customers with a tip related to the energy use highlighted in the <u>What Uses Most</u> module.

Note: Paired tips must be combined with the What Uses Most module.

This image is an example of an air leak tip selected to pair with a top energy use highlighted in the <u>What Uses Most</u> module.



Heading: The heading indicates that this tip has been personalized for the customer.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Title: The module title focuses on future savings to motivate the customer to act, and corresponds directly to the customer's highlighted energy use in the <u>What Uses Most</u> module.

Tip Body: The tip body provides information to help customers save energy.

Savings Estimate: The savings estimate gives customers a concrete sense of how much money they can save by doing the tip. It is designed to provide extra motivation for the customer to act.

Call to Action: The "Find more ways to save" button redirects customers to the web portal where they can view additional energy saving tips.

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Energy Literacy and Tip

Appears in: Peak Focused Report

The Energy Literacy and Tip module educates customers about why they are consuming energy during the high cost peak period, and provides guidance on what they can do to make a difference in their energy consumption. The module includes a list of two or three appliance categories that were detected during the high cost period, and a tip related to one of the categories that the customer can use to help reduce their energy consumption.



Heading: The heading invites customers to learn about their best opportunities to save energy.

Disaggregation: The disaggregation section provides the customer with information about what appliance categories consume the most energy during peak hours. It includes the following elements:

- Disaggregation category image and label: Labeled illustrations of the top three appliances detected during the highest cost period are ordered by highest to lowest energy consumer. Possible disaggregation categories include heating, cooling, dishwasher, dryer, electric vehicle, oven, pool pump, refrigerator, and water heater. The top three appliances are ordered by highest to lowest energy consumer.
- Disaggregation education: Text explaining that the customer is using the listed high energy consumers during on-peak hours, and encouraging them to target them to reduce their bill and overall energy use.

Tip: The tip provides the customer with an action they can take to reduce their energy use. The tip does not have to be Time of Use plan related, but it is directly related to one of the saving opportunities listed in the disaggregation section. For example, the "Use fans instead of Air Conditioning" tip could be included when Cooling is listed as an energy saving opportunities. A tip is not repeated until all other relatable tips have been rotated through.

- **Tip label**: The tip label draws the customer's attention to the tip action.
- **Tip title**: The tip title clearly states the change the customer should make.
- **Tip body**: The tip body provides justification for the recommended change and provides the customer with a clear action that they can take to apply the tip.

Solar Report Tips

Appears in: Solar Report

The <u>Solar Report</u> includes one or up to three tip modules that highlight personalized aspects of the tip experience. Recipients of the Solar Report are eligible to receive solar tips in addition to the standard tips used in other report types.

This image is an example of the Solar Report tips design for a module that includes three tips.



Heading: The heading indicates that this tip has been personalized for the customer.

Context: If the customer completed their Home Energy Analysis since their last report was generated, the tip acknowledges the recent survey completion and its impact on their report.

Note: Solar customers are not eligible for AMI tip context.

Tip Title: The module title focuses on future savings to motivate the customer to act.

Image: The tip contains an illustration that correlates to the presented tip.

Tip Body: The tip body provides information to help customers save energy.

Call to Action: The Call to Action "Get more savings tips" button redirects customers to the web portal where they can view additional energy saving tips.

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User Experience Variations

Annual Report Tips

In-home Utility Home Energy Analysis

If the utility elects to run an in-home Home Energy Analysis program, the top tip encourages the customer to schedule their in-home home energy analysis appointment.

Oracle Utilities Opower Home Energy Analysis

If the utility elects to use the Oracle Utilities Opower Home Energy Analysis, the top tip encourages the customer to complete their <u>Home Energy Analysis</u> to improve their tip experience.

Two Tip Library Tips

If the utility elects to omit and home energy analysis program tip from the report, both tips are pulled from the utility's tip library.

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Energy Literacy and Tip

Two Appliances Detected

If two appliances are detected in use during the highest cost period, they are ordered by the highest energy consumers.

Electric Vehicle Detected

If an electric vehicle is detected as one of the two or three highest energy consumers during the highest cost period it is included in the list of appliances.

One Appliance Detected

If only one appliance can be detected during the highest cost period, then the module displays two or three appliances detected for all usage. The heading is "Your top energy consumers."

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Limited Income Report Tips

AMI and Appliance Detection and Disaggregation

If the utility has AMI and appliance detection and disaggregation data, the tip is related to the customer's highest disaggregated end use energy category. For example, if the customer spends the most energy on heating, the tip will be focused on heating.

Completed Home Energy Analysis

If the customer completed their Home Energy Analysis in the past and there is existing survey data, the tip copy indicates that the tips are personalized based on the results of the customer's survey.

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Progress Report Tips

AMI and Appliance Detection and Disaggregation

If the utility has AMI and appliance detection and disaggregation data, the tip is related to the customer's highest disaggregated end use energy category. For example, if the customer spends the most energy on heating, the tip will be focused on heating.

Completed Home Energy Analysis

If the customer completed their Home Energy Analysis in the past and there is existing survey data, the tip copy indicates that the tips are personalized based on the results of the customer's survey.

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Promotion Report Tips

Utility selects one end use

Tips are displayed for the top two end uses (excluding the promotion end use).

Utility selects heating and cooling combined

Tips provide free and low-cost ways to save for heating and cooling as an alternative to the promotion on the front, which is likely a larger investment.

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Seasonal Report Tips

Contexts

Context helps the customer understand why specific tips have been selected for them. All contexts are shown randomly, with the exception of the "recent Home Energy Analysis completion context" which is always shown if a customer has completed Home Energy Analysis since their last report was generated. The context statement that appears for a customer varies as follows:

- AMI customers who have completed Home Energy Analysis can receive any context.
- AMI customers who have not completed Home Energy Analysis can receive the AMI context or the cost category/no information context.
- Non-AMI customers who have completed Home Energy Analysis can receive both Home Energy Analysis contexts and the cost category/no information context.
- Non-AMI customers who have not completed Home Energy Analysis can only receive the cost category/no information context.

Winter Experience Variation

The tips module for the winter Seasonal Report provides customers with two seasonally relevant tips to help them lower their winter energy use. The first tip helps them save on heating and the second tip helps them save on another targeted end use. The module also points customers to more tips on the web, ideally to a winter tip guide when available, so that they can learn more.

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Welcome Report Tips

AMI and Appliance Detection and Disaggregation

If the utility has AMI and appliance detection and disaggregation data, the tip is related to the customer's highest disaggregated end use energy category. For example, if the customer spends the most energy on heating, the tip will be focused on heating.

Completed Home Energy Analysis

If the customer completed their Home Energy Analysis in the past and there is existing survey data, the tip copy indicates that the tips are personalized based on the results of the customer's survey.

Welcome Report - Legacy Customer, Limited Income Report - Legacy Customer

The upper right corner of the module includes a number that corresponds to the "Better tips and insights" highlight in the <u>Welcome</u> module.

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Time of Use Report Tips

There are no supported user experience variations.

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Paired Tips There are no supported user experience variations.

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Solar Report Tips

AMI and Appliance Detection and Disaggregation

Solar customers are not eligible for AMI tip context.

Completed Home Energy Analysis

If the customer completed their Home Energy Analysis in the past and there is existing survey data, the tip copy indicates that the tips are personalized based on the results of the customer's survey.

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Thermostat Adjustment

The Thermostat Adjustment module provides customers with a recommended thermostat adjustment for the season. It also includes an additional recommendation to purchase a smart thermostat in order to automate seasonally appropriate savings on heating or cooling.

Appears in: Seasonal Report

This image shows an example of the Thermostat Adjustment experience for a customer that receives the summer Seasonal Report.

THIS SUMMER

When you're out for a few hours, turn up your thermostat for easy energy savings



Make it easier: Installing a smart thermostat lets you switch between home and away temperature settings using your smartphone. If you're away at regular times during the week, you can set your thermostat to adjust automatically based on your schedule.

Module label: The label identifies the season applicable to the thermostat adjustment.

Header: The header encourages customers to adjust their thermostat setting while away from the home to save energy.

Image: An Illustration is paired with large number call out of degrees to raise the thermostat.

Recommended Adjustment: The recommended adjustment tells the customer how they should modify their thermostat as recommended by a source. For example, the Department of Energy.

Details: The details encourage the customer to make saving energy easier by purchasing a smart thermostat so that they can automate their thermostat adjustment.

Requirements and Limitations

Fuel: Electric-only, gas-only, dual fuel

Data Required: Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion

Data History: A minimum of one historical bill

Billing Frequency: Monthly, bi-monthly, or quarterly

Time of Use 101

The Time of Use 101 module educates customers about when electricity is most expensive based on their time of use rate plan. The module provides customers with information such as:

- Whether electricity prices differ on weekdays and weekends
- How much more expensive peak prices are than off-peak prices
- The hours during which electricity is most expensive
- A visual time line that displays off-peak, partial-peak, and peak hours

The module serves the dual purpose of educating customers about their specific rate plan at the specific time the report is generated and providing educational information about why saving during peak is especially important. It includes a heading, weekday graph, weekend graph, explainer, call-to-action, and seasonal details where applicable.

Appears in: Time of Use Report

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy EfficiencyCloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly or bi-monthly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Modeled Rates

Category	Description
Data History	Not applicable
Data Coverage	Not applicable.
Supported Fuels	 Time of Use Report: Electric-only, gas-only, dual fuel. Peak Focused Report: Electric-only.

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Limitations

- Number of Rates: A maximum of three rate types (peak, mid-peak, off-peak or super peak, peak, and off-peak) can be displayed at a given time.
- Off-Peak Hours (Welcome Report only): For the purpose of this report, Super Offpeak and Super Saver rates are included in a single off-peak timeline category. For example, a customer with multiple off-peaks or multiple on-peaks will see all off-peaks represented as a single off-peak category on the timeline.
- Peak Focused Report: The Peak Focused Report is only available for the electric fuel type.

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User Experience

This section describes the user experience for the Time of Use 101 module for a customer with a single weekday peak, no weekend peak hours, and a seasonal variation.



Heading: Tells the customer that they can save money by using less energy during peak hours.

Weekday Subheading and Graph: The weekday subheader is dynamic by rate plan and tells customers how much more their energy costs during the peak hours. The graph notes the price ratio and relevant peak hours:

- Weekday Price Ratio: The weekday price ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekday Peak Hours: The weekday peak hours displays the most expensive period for the week.

Weekend Subheading and Graph: The weekend subheader notes whether or not there are peak hours on weekends.

- Weekend Price Ratio: If the utility has weekend peak hours, the ratio is dynamic by rate plan and compares the most expensive rate to the least expensive rate.
- Weekend Peak Hours: If the utility has weekend peak hours, the peak hours displays the most expensive period for the weekend.

Graph labels: The graph labels identify which periods in the graphs fall into peak, mid-peak, or off-peak hours.

 Peak hours: The high cost period label displays the most expensive time range. It is dynamically rendered based on the customer's rate plan details.

- Mid-peak hours: The medium cost period label displays neither the most or least expensive time range. It is dynamically rendered based on rate plan details..
- Off-peak hours: The low cost period label displays the least expensive time range. It is dynamically rendered based on rate plan details.

Explainer: The details section explains to the customer why it matters when they use energy.

Seasonal Details: The seasonal details section notes the dates that apply to the TOU schedule if the rate plan includes seasonal variations. For example, "This Time-of-Use schedule lasts [May 1-Sep 30]." If the rate plan does not include a seasonal variation, the seasonal details section is omitted.

Call to Action: The call to action invites the customer to view their full plan details and provides a link to the utility's rate plan page.

Requirements and Limitations

Fuel: Electric-only, gas-only, and dual fuel.

Data History: A minimum of one historical bill.

Billing Frequency: Monthly, bi-monthly, or quarterly.

User Experience Variations

Timeline subheading

The timeline subheading text varies based on the customer's rate plan and the type of days displayed in the sliding scale. The following table shows examples of the insight statement variations for different rate plans and day scenarios.

Peak Type	Peak Period	Timeline subheading
Single Peak	Daily	Every day, electricity costs <i>X</i> from [X am/pm] - [X am/pm].
	Week day	On weekdays, electricity costs X from [X am/pm] - [X am/pm].
	Weekend	On weekends, electricity costs X from [X am/pm] - [X am/pm].
Double Peak	Daily	Every day, electricity costs X from [X am/pm] - [X am/pm] and [X

		am/pm] - [X am/pm].
	Week day	On weekdays, electricity costs X from [X am/pm] - [X am/pm] and [X am/pm] - [X am/pm].
	Weekend	On weekends, electricity costs X from [X am/pm] - [X am/pm] and [X am/pm] - [X am/pm].
No Peak	Weekend - Same All Day	On weekends, there are no peak hours.
	Weekend - Multiple Off-Peak Rates	

Welcome

The Welcome module introduces new and existing customers to the Email Home Energy Report v3 experience. The report is designed to meet the needs of new and legacy customers:

Legacy customers: Customers that have received earlier versions of the reports in the past are considered legacy customers. The welcome module for legacy customers acknowledges how the report has changed.

New customers: Customers that have never received an Email Home Energy Report v3 are considered new customers. The welcome module introduces new customers to the report insights.

Appears in: <u>Welcome Report</u>, <u>Limited Income Report</u>, <u>Time of Use Report</u>, <u>Solar Report</u>, Peak Focused Report.

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy Efficiency Cloud Service

Category	Description
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Not applicable.
Data Requirements	Appliance detection and disaggregation, heating and cooling disaggregation and/or simple disaggregation with Home Energy Analysis completion.
Data History	A minimum of one historical bill.
Data Coverage	Not applicable.
Supported Fuels	Electric-only, gas-only, dual fuel.

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Limitations

 Welcome experience only: This module is only available as part of a report welcome experience.

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User Experience

This section describes the user experience for a new customer in the Welcome Report.



Heading: The heading draws the customer's attention to the purpose of the report.

Introduction Text (New Customer Only): The introduction text explains that the purpose of the report is to help them save energy, which can lower their bill.

Welcome Highlights: A list of three features explains how the report will help the customer save energy and lower their bill. The listed highlights focus on broad benefits instead of specific features, including energy use insights, personalized ways to save, and timely, tailored advice.

Welcome Report - Legacy Customers

The Welcome module in the Welcome Report varies for legacy customers in the following ways:

- Heading: The heading draws the customer's attention to what has changed in their report.
- Introduction text: Not applicable.

- Welcome highlights: The welcome highlights list how the report changes improve their report experience to help them save energy and lower their bills. The number next to each highlight corresponds to the related module:
 - 1. Energy use at a glance: This highlight refers to the Efficiency Use Benchmark.
 - 2. The Efficiency Zone: This highlight refers to the Efficiency Zone.
 - 3. Better tips and insights: This highlight refers to the tip modules.

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Limited Income Welcome Report - New Customers

The module language acknowledges aspects of the report experience that are beneficial to limited-income customers, while primarily focusing on energy efficiency and introducing the report.

The module varies for new limited income customers in the following ways:

- Introduction text: The introduction text frames the report as a tool to educate and reduce stress about the customer's energy bills.
- Welcome highlights: The welcome highlights list how the report changes improve their report experience to help them save energy and lower their bills:
 - 1. Energy use insights: This highlight refers to the Energy Use Benchmark.
 - 2. **Personalized ways to save**: This highlight refers to the <u>Efficiency Zone</u> or <u>Neighbor</u> <u>Comparison</u>.
 - 3. **Savings and assistance programs**: This highlight refers to the <u>tips module</u> with special focus on savings and assistance programs for limited income customers.

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Limited Income Welcome Report - Legacy Customers

The module varies for legacy limited income customers in the following way:

- Introduction text: Not applicable.
- Welcome highlights: The welcome highlights list how the report changes improve their report experience to help them save energy and lower their bills.
 - 1. Energy use insights: This highlight refers to the Energy Use Benchmark
 - 2. **Personalized ways to save**: This highlight refers to the <u>Efficiency Zone</u> or <u>Neighbor</u> <u>Comparison</u>..
 - 3. Better tips and insights: This highlight refers to the <u>tips modules</u> with special focus on potential savings.

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Time of Use Welcome Report - Legacy Customer

This module varies for legacy customers on a time of use plan in the following ways:

- Introduction text: Not applicable.
- Welcome highlights: The Time of Use Report welcome highlights for legacy customers include:
 - 1. Energy use insights: This highlight refers to the Energy Use Benchmark.
 - 2. **Personalized ways to save**: This highlight refers to the <u>Efficiency Zone</u> or <u>Neighbor</u> Comparison.
 - 3. Better tips and insights: This highlight refers to the <u>Time of Use 101</u> module.

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Time of Use Welcome Report - New Customer

This module varies for new customers on a time of use plan in the following ways:

- Introduction text: The introduction text explains that the purpose of the report is to help them save energy, which can lower their bill.
- Welcome highlights: The Time of Use Report welcome highlights for new customers include:
 - 1. Energy use insights: This highlight refers to the Energy Use Benchmark.
 - 2. **Personalized ways to save**: This highlight refers to the <u>Efficiency Zone</u> or <u>Neighbor</u> Comparison.
 - 3. Timely, tailored advice: This highlight refers to the <u>Time of Use 101</u> module.

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Solar Report - All Customers

All solar customers, regardless of new customer or legacy customer type, receive the same Welcome module in their first report. The module varies for solar customers in several ways:

- Heading: Why are you receiving this?
- Introduction text: The introduction text explains that the purpose of the report is to help them save energy, which can lower their bill.
- Welcome highlights: The Time of Use Report welcome highlights for new customers include:
 - 1. Energy use insights: This highlight refers to the Energy Use Benchmark.
 - 2. Personalized ways to save: This highlight refers to the Neighbor Comparison.
 - 3. Timely, tailored advice: This highlight refers to the solar tips.

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Peak Focused Report - New Customers

The new customer version of the module for the Peak Focused report includes:

• Heading: Why are you receiving this?

Introduction text: The introduction text explains that the purpose of the report is to help them save energy, which can lower their bill, and that it takes the customer's Time of Use plan into account to provide them with the best information.

- Welcome highlights: A list of three features explains how the report will help the customer save energy and lower their bill:
 - 1. Your on-peak energy use compared to others: This insight refers to the Mini Time of Use Reminder.
 - 2. Personalized ways to save: This insight refers to the <u>Peak Focused Normative</u> Comparison.
 - 3. Timely, tailored advice: This insight refers to the Energy Literacy and Tip.

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Peak Focused Report - Legacy Customers

The legacy customer version of the module for the Peak Focused report includes:

Heading: What's new in your report

Highlights: A list of three features explains how the report will help the customer save energy and lower their bill:

- 1. Time-of-Use rate reminder: This insight refers to the Mini Time of Use Reminder.
- 2. Updated comparison graph: This insight refers to the <u>Peak Focused Normative</u> Comparison.
- 3. Better tips and insights: This insight refers to the Energy Literacy and Tip.

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Peak Focused - Legacy Customer with Demand Charges

The <u>Peak Focused Report</u> supports demand charges. The Welcome module for legacy customers with demand charges includes:

- Heading: What's new in your report
- Welcome highlights: A list of three features explains how the report will help the customer save energy and lower their bill:
 - 1. **Time-of-Use with demand charge rate reminder:** This insight refers to the Mini <u>Time of Use Reminder</u>.

- 2. Updated comparison graph: This insight refers to the <u>Peak Focused Normative</u> <u>Comparison</u>.
- 3. Better tips and insights: This insight refers to the Energy Literacy and Tip.

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What Uses Most

The What Uses Most module educates customers about the top five energy uses in their home for the report period. One of the customer's top five energy uses is highlighted at the top of the module. The highlighted usage category heading varies depending on the highlighted category and module state (highest energy use, second highest energy use, most above regional average). It is immediately followed by the <u>Paired Tip</u>, which provides a related energy-saving tip.

Note: While this module was designed for the limited-income customer experience, it can be used for other audience segments as well. <u>Contact your Delivery Team</u> to discuss module options.

Appears in: Limited Income Report, Electric Vehicle Report

Requirements

Utility Requirements

Category	Description
Required Cloud Service	Energy EfficiencyCloud Service
Scale	Not applicable.

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, or quarterly

Category	Description
Data Delivery Frequency	Not applicable.
Data Requirements	 Minimum: Weather data and at least six historical bills. AMI Requirements: There are additional AMI data requirements to show advanced insights such as an appliance-level breakdown. Generally speaking, this requires about a years' worth of AMI data at hourly or sub-hourly resolutions.
Data History	A minimum of six bills is required for Non-AMI customers. A minimum of 60 days of AMI reads for AMI customers.
Data Coverage	Not applicable.
Supported Fuels	Electric-only, gas-only, dual fuel

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Limitations

Report Type: This module is available for the <u>Limited Income Report</u>, and <u>Electric Vehicle</u> <u>Report</u> by default, but may be included in other report experiences. Contact your <u>Delivery</u> <u>Team</u> for more information.

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User Experience

This section describes the user experience for the What Uses Most module. The module varies by usage factors. See the <u>User Experience Variations</u> for additional information.

This image is an example of the module for a customer with water heating as the highest energy use in the billing period.



What Uses Most: The top portion of the module educates customers about the top five energy uses in their home for the report period. The value for each category is an estimate based on the customer's past energy use, weather patterns, and home characteristics.

- Heading: The heading identifies the energy use state of the highlighted energy category.
- Highlighted Category : A rotating set of algorithms select the customer's top uses to highlight in each report. The highlight category appears in a blue box at the top of the module, followed by the percent of energy used by that category.
- Energy Breakdown Subheader: The subheading prepares the customer to learn about their other top energy uses.
- Usage Categories: An additional four energy use categories and their energy use percentages are listed. The categories are ordered from highest to lowest.
 - Other Categories Detail: Text explains what percentage of the customer's energy use was made up of energy use categories not listed in the highlighted category or energy breakdown.

Paired Tip: The What Uses Most disaggregation is immediately followed by an energysaving tip related to the energy use highlighted in the module. See <u>Paired Tip</u>s.

User Experience Variations

Highlighted Usage Category

The highlighted usage category heading varies depending on the highlighted category and module state (highest energy use, second highest energy use, most above regional average). The following table includes examples of the possible heading variations for heating as the highlighted category.

Highlighted category	Module State - Highest energy use	Module State - Second highest energy use	Module State - Most above regional average
Heating	Heating was your highest energy use this period	Heating was one of your highest energy uses this period	You used more on heating than average for our region

Electric Vehicle Report

The What Uses Most module for the <u>Electric Vehicle Report</u> includes electric vehicle charging as one of the possible top five energy uses. The goal of the electric vehicle usage

category is to acknowledge the impact of a customer's electric vehicle charging on their home energy use, and to encourage the customer to focus on reducing their home use in the categories that they have the most control over. For example, most customers do not have much control over how much they need to drive or charge their electric vehicle, but they can easily sealing air leaks around their home.

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Providing Customer Support

Customer Service Representatives can do the following in the Customer Service Interface (CSI):

- Find and open a customer's accounts
- Access a customer's Energy Efficiency web portal account
- View sent Email Home Energy Reports
- Manage a customer's report preferences
- Update information about a customer's home

See the <u>Oracle Utilities Opower Customer Service Interface - Program Management</u> <u>Product Overview</u> for details.

Delivery

Oracle Utilities coordinates with a third-party email platform to send Email Home Energy Reports. This platform provides Oracle Utilities with information on send, bounces, opens, opt-outs, unsubscribes, and click-throughs. Oracle Utilities does not track the web behavior of a customer after they have clicked on a link in the Email Home Energy Report.

For programs that include both email and paper reports, [Email Home Energy Reports are usually generated during the same week as the corresponding paper [Home Energy Reports are generated.

Content is delivered directly in the email message with no attachments. This makes it more convenient for customers to quickly view the information, and it makes the emails less likely to be blocked by spam filters.

Delivery Cadence

Oracle Utilities supports the following delivery frequencies for Email Home Energy Report programs: monthly, bi-monthly, and quarterly. Because the reports are generated from data from the latest utility bill for each customer, the delivery cadence will depend on each customer's billing dates and the program design specified in your statement of work.

Delivery Options

For programs that include both email and paper reports, Email Home Energy Reports are usually generated during the same week as the corresponding Home Energy Reports. Email Home Energy Reports are typically sent on Friday afternoons so that customers will have time to review the reports over the weekend. However, delivery may be configured for days other than Friday. Ask your Service Delivery Manager which delivery options are best suited to your program.

Enrollment

Customers can be enrolled to receive Email Home Energy Reports through an opt-in or optout program. In an opt-in program, customers are given the option to sign up, rather than being automatically enrolled. In such cases, customers can sign up for Email Home Energy Reports by using settings available in the Energy Efficiency Web Portal. In an opt-out program, customers are automatically enrolled if they meet the eligibility criteria.

Energy Efficiency Web Portal

The Energy Efficiency Web Portal is a dynamic web experience that allows utilities to provide their customers with personalized energy data, insights, and recommendations on how to save energy. The web experience is delivered through modular, mobile responsive widgets.

Requirements and Limitations

There are multiple Oracle Utilities Opower Digital Self Service cloud services. Each cloud service comes with a set of data requirements and limitations. The requirements must be met for a utility and a customer to participate in the program.

General Requirements

- Cloud Service Requirements: The Digital Self Service Energy Management cloud service is a prerequisite for all other cloud services listed on this page. 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.
- Active Account: Customers must be associated with a premise that has an active account with the utility. An active account means that the customer has signed up with the utility for at least one service point for one fuel type at an address.
- Screen Resolution: A minimum width of 320 pixels is required for devices to display widgets.
- Supported Browsers: The customer must use a supported web or mobile browser. Oracle Utilities Web products adhere to the <u>Oracle Software Web Browser Support</u> <u>Policy</u>.
- **Configuration**: Configurations are limited to the utility logo, primary and secondary colors, and up to 10 configurable text changes.

Digital Self Service - Energy Management Cloud Service

Utility Requirements

- Cloud Service Requirement: Utilities must purchase the Digital Self Service Energy Management cloud service.
- Data Integration: Data must be sent to Oracle Utilities in the right schema and according to the established data specifications. Your Oracle Utilities Delivery Team will work with you to identify which data specifications are applicable to your situation.

Single Sign-On: Oracle Utilities recommends that utilities use single sign-on (SSO), as outlined in the Oracle Utilities Opower SSO Configuration Guide. If the utility uses SAML-based SSO, third-party cookies must be enabled on the customer's web or mobile browser to view Oracle Utilities Opower embedded web features. Third-party cookies authenticate the customer's account using a session identifier, which allows embedded widgets to display the correct data for the customer. Third-party cookies are not required for OpenID Connect-based SSO.

Customer Requirements

 Data History: For most features to have meaningful insights, a customer must have more than one bill of historical billing data in the form of monthly, bi-monthly, or quarterly read data. Additional data requirements vary by feature.

Digital Self Service - Energy Management AMI Cloud Service

Utility Requirements

 Cloud Service Requirement: In order to purchase the Digital Self Service - Energy Management AMI cloud service, utilities must also purchase the Digital Self Service -Energy Management cloud service.

Customer Requirements

 Data History: For most features to have meaningful insights, a customer must have more than one bill of historical billing data in the form of subdaily, daily, monthly, bimonthly, or quarterly read data. Additional data requirements vary by feature.

Rates Engagement

Utility Requirements

- Cloud Service Requirement: In order to purchase the Rates Engagement cloud service, utilities must also purchase the following cloud services:
 - Digital Self Service Energy Management
 - Digital Self Service Energy Management AMI
- Rates Data Transfer: The utility must send rates data to Oracle Utilities in the correct schema and at the appropriate frequency. See <u>Oracle Utilities Opower Rates Data</u> <u>Transfer</u> for details.
- Rates Modeling: Rates modeling is required during initial program setup, and is not included in the cost of the cloud service. See <u>Rate Modeling</u> for more information.

Customer Requirements

- Billing Frequency: Customers must be billed on a monthly, bimonthly, or quarterly basis.
- AMI Data: Customers must have daily or sub-daily AMI reads.

Rate Engine Plus

Utility Requirements

- Cloud Service Requirement: In order to purchase the Rate Engine Plus cloud service, utilities must also purchase the following cloud services:
 - Digital Self Service Energy Management
 - Digital Self Service Energy Management AMI
 - Rates Engagement
- Rates Data Transfer: Rates data must be sent to Oracle Utilities in the correct schema and at the appropriate frequency. See the <u>Oracle Utilities Opower Rates Data Transfer</u> <u>Standards</u> for details.
- Rate Validation: The utility must purchase a one-time fee to cover rate validation and related set up tasks. This process ensures that the Rate Engine Plus has correctly modeled rates for utility customers. To perform this process, Oracle Utilities compares energy cost information calculated by the Rate Engine Plus to customer utility bill amounts.

Customer Requirements

- Billing Frequency: Customers must be billed on a monthly, bimonthly, or quarterly basis.
- AMI Data: Customers must have daily or sub-daily AMI reads.

Customer Experience Overview

The Energy Efficiency Web Portal offers an integrated web experience for utility customers through a series of features and widgets.

Features and Widgets

A widget is a modular piece of content or functionality that a customer can use and that can be embedded within a utility website. The Energy Efficiency Web Portal widgets include information related to a customer's energy use patterns, comparisons to neighbors or similar homes, and tips for lowering one's energy use. The purpose of the widgets is to help customers understand their energy use and get actionable insights on how they can save energy and money. See "Features and Widgets" on page 427 for more information.

Responsive Design

The layout and design of widgets is responsive so that the functionality can display correctly on mobile as well as desktop displays. This design allows for a single version of a website that automatically adjusts based on the customer's screen size and orientation. Note that the responsive design can cause user experience variations because the components of a widget may be hidden or adjusted. For example, separate navigation options can be combined into a single drop-down list on smaller screen sizes.

The Energy Efficiency Web Portal supports the use of media queries to implement the responsive design. For example, the responsive layout for a widget is defined using up to four screen size breakpoints.

Note: A minimum width of 320 pixels is required for devices to display widgets.

Features and Widgets

The Energy Efficiency Web Portal consists of multiple features and widgets. A widget can be complex, providing dynamic information about a customer's energy use. It can also be simple, containing a static image and hyperlinks. See each widget description for details.

Welcome

A welcome experience is displayed when a customer has not signed in yet. Customers can sign in to their account, create a new account, or access tips on how to save energy.

Sign In: Customers can sign in to their account with their email address and password. There is a link to create an account if they have not already done so. There is also a link to recover a password if they forgot it.

Language Selector: A link at the top of the page allows the customer to select a preferred language for the content in the interface. Customers will only see options for languages that have been localized for their utility.

Your Energy Use Menu: The Your Energy Use menu includes links to the <u>Smart</u> <u>Dashboard</u>, <u>Data Browser</u>, and <u>Bill Comparison</u> widgets. Customers are prompted to sign in before they can access these features. Ways to Save Menu: The Ways to Save menu includes links to the <u>Home Energy Analysis</u> and <u>Ways to Save</u> widgets. Customers are prompted to sign in or provide some uniquely identifying information before they can access the Home Energy Analysis. The Ways to Save page is accessible whether or not the customer has signed in. However, the tips are not personalized until the customer has signed in.

Authentication

Authentication refers to the ways that a customer can access the Energy Efficiency Web Portal securely. There are two methods for authentication: single sign-on and stand-alone account management.

Single Sign-On (SSO)

SSO allows customers to use the same username and password to access the web portal and any other web applications provided by a utility. All usernames and passwords are created, maintained, and updated on the utility's web site. Oracle Utilities uses Security Assertion Markup Language (SAML) 2.0 to implement SSO with utilities. Moreover, Oracle Utilities supports Identity Provider (IdP) Initiated and Service Provider (SP) Initiated SSO using HTTP POST binding. As part of the SSO implementation process, the utility must provide a SAML Metadata file and a SAML insertion with required information. This allows Oracle Utilities to identify the customer and authenticate the request. See the <u>Oracle Utilities</u> <u>Opower SSO Configuration Guide</u> for details.

SSO requires that all authentication is handled by the utility's website. After a customer has authenticated using the utility website sign-in options, the customer has access to all features and pages of the Energy Efficiency Web Portal.

Note: Since SSO credentials are maintained by the utility's web site, customers cannot use the Account Center in the Energy Efficiency Web Portal to change their password.

Stand-alone Account Management

Stand-alone account management requires customers to create an Energy Efficiency Web Portal account (including a user name and password) that is separate from any other utilityprovided web applications or accounts. When stand-alone account management is implemented, customers can access the Energy Efficiency Web Portal by navigating directly to it and creating a new account once they get there.

The following account management options are available for stand-alone authentication customers.

Account Creation

The landing page of the Energy Efficiency Web Portal provides customers an option to create a new account. New customers are often directed to this landing page through communications such as Home Energy Reports.

Customers creating a new account must provide their name and account number exactly as it appears on their Home Energy Report or utility bill. If a customer provides incorrect information, error messages are displayed which help guide the user in how to provide the information accurately.

After a customer provides accurate account information, they must provide an email and password for their new account. Completing this step sends a confirmation email to the email address the customer supplied, which the customer then uses to verify the email address.

Account Sign In and Sign Out

Customers who have created their account can use their account email address and password to sign in from the landing page. A standard link is available throughout the Energy Efficiency Web Portal for signing out. By default, the session lasts for 30 minutes before timeout, at which point the user is automatically signed out.

Password Reset

Customers can request a password reset to help if they have forgotten their current password. To complete this process, a customer first selects the forgotten password option included with the account sign-in options. The customer is prompted to enter their utility account email address, to which a reset password email is sent. The email includes a link that directs the customer to a reset your password page, which prompts the customer to create and confirm their new password.

Note: If a customer knows their password and wants to change it, they can use the Account Center rather than using the password reset feature. See "Account Center" on page 431 for more information.

Smart Dashboard

The Smart Dashboard displays an overview of customers' energy use and utility account tools and can be used as the initial page for users who have signed in. It combines multiple insights and experiences on a single page to help customers engage with the tools and information in their account.
📀 This March, you us	ed about the same amount o	of energy as last March.
1500		
1000		
ruits		
500		
0 Mar 2014		Mar 2015
	EXPLORE IN DETAIL	
You're using 50% more electric	city than your efficient neighbors.	
SEE ENERGY DE IALS		
Efficient neighbors	50 kWh	
You		75 kWh
All neighbors		100 kWh
Feb 28, 2020 - Mar 29, 2020 Efficient neighbors are the 20% who use the least amount of	f enorgy.	
Who are my neighbors?		
See how you use energy	у	
Learn how much you spend on heat	ing, water heating, lighting, and more.	
TAKE THE HOME ENERGY CHEC	CKUP	
Recommended summer tips for	ryou	
One when working from	Hann to make using home	On and an and a family of
home	more comfortable	home
6 tins	13 tins	34 fins
~ up/2	. o upo	or the
	SEE MORE TIPS	

Features of the dashboard for non-AMI customers include:

- "Energy Use Overview" on page 453
- "Neighbor Comparison" on page 441
- "Home Energy Analysis" on page 457
- "Tips Light" on page 464

Data Requirements and Limitations

• Feature-Specific Requirements: Additional data requirements vary by feature. See the applicable feature descriptions for more information.

Account Center

The Account Center allows customers to view and change information about their utility account, their alert preferences, and the communications they receive from the utility.

Communications and Alerts

The Communications and Alerts section includes one area for managing communication preferences, and another area for managing communication recipients.

Communication and Alert Recipients

The Communication and Alert Recipients area allows users to view and modify the recipients associated with a customer account. At a minimum, information for the primary account is displayed. Recipients are users who can be selected to receive communications and alerts related to the account.

Recipient Details: The contact details for each recipient are provided. Any recipient other than the primary recipient can be removed. The name, email address, SMS (text) number, and voice message number can modified for each recipient. Additionally, each recipient must have a name and at least one communication type. The communication type determines which communications and alerts a recipient can select to receive. For example, an email address is required in order for a customer to select to receive email energy reports.

Create New Recipient: Customers can specify other recipients to receive alerts. A customer can add up to nine additional recipients. Basic validation is performed to ensure that the phone numbers and email addresses resemble real values, but these values are not tested or verified.

Communications and Alerts

The Communications and Alerts section provides a list of the communications and alerts that recipients for the utility account are set to receive.

Products Displayed: Depending on what report options are available from the utility, customers are provided options related to mail and email reports. For printed reports, only the primary mailing address for the account can be selected and additional recipients cannot be added.

If the utility supports alerts, customers can manage preferences for available alert types.

Adding Recipients: Customers can select to add a recipient for a product. When adding a recipient, a drop-down list allows the customer to select from available recipients that have been created in their utility account. Each applicable channel can then be selected or cleared for each recipient of a product. If all applicable recipients are included for a product, the option to add more recipients is hidden.

Note: Contact method and recipient must both be created.

Home Energy Reports

Home Energy Reports (HERs) 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. HERs sent through standard mail can only be sent to the primary mailing address for the utility account. For more information about HERs, see the Oracle Utilities Opower Energy Efficiency Cloud Service Product Overview .

Weekly Energy Updates

Weekly energy updates are email notifications compare the energy use for a premise to that of neighbors. For more information on Weekly Energy Updates, see the <u>Oracle Utilities</u> <u>Opower Proactive Alerts Cloud Service Product Overview</u>.

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 <u>Oracle Utilities Opower Proactive Alerts</u> <u>Cloud Service Product Overview</u>. 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 <u>Oracle Utilities Opower Behavioral Demand Response Cloud</u> <u>Service Product Overview</u> and the <u>Oracle Utilities Opower Peak Time Rebates Cloud</u> <u>Service Product Overview</u>.

Login Details

For utilities that do not implement SSO authentication, customers can update their login email address and password.

Bill Comparison

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. A statement indicates whether the customer is spending more, less, or about the same as the compared bill.

Bill Comparison Time Basis

The bill comparison can show a comparison between the current bill period against the previous bill period, or the same bill period from the previous year. A time menu allows customers to select which comparison to use. If data from the previous year is not available, only an analysis against the previous bill period can be shown.

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 a previous bill comparison.

Bill Comparison Chart

The chart presents a visual comparison for customers so that they can see at a glance how their two bills compare. Annotations on the bars in the comparison graph identify the bill date, the number of days, and the cost amount of the compared bills. The bar for the current bill

uses the "you" color, which is blue by default. The bar for the previous bill or last year's bill uses a gray color by default.

The cost of the difference is displayed above the chart, if applicable. In some cases, there is no significant cost difference, and so none is shown. The dollar figures are rounded to the nearest dollar. For example, \$1.51 would be rounded to \$2, \$1.50 would be rounded to \$2, and \$1.49 would be rounded to \$1.

Fuel or Resource Menu

The fuel menu allows customers to select which fuel to view a bill comparison for. By default, the **Electricity** fuel label and data is shown. An additional gas menu only appears for dual fuel customers.

Reasons for Differences

Comparisons for a higher or lower bill can include the most likely reason for the cost difference. Customers can view a list of insights explaining the difference, along with the contribution of each insight to the overall change.

Days in Bill Period Insight

Differences due to a different number of days in the bill periods being compared. For example, one bill period might be 6/1-6/30/2020, whereas the other might be 6/10-7/9/2019. A bill period that has fewer days in it usually costs less than a bill period with more days. The calculation for determining the cost impact of this difference is as follows:

(Reference Bill Length - Compared Bill Length) / (Compared Bill Length)) * Compared Bill Amount

For example, suppose that the reference bill length (this month) is 29 days, and the compared bill length (the bill from last month or the same month last year) is 30 days. Let's also say that in the compared bill period, the customer's bill was \$105. This means the calculation would be:

(29-30)/30 * 105 = -3.49999

Rounding is then applied to the nearest hundredth decimal point, which in this case would bring the number to -\$3.50. This means the messaging would say that the customer used \$3.50 less in the reference bill period than in the compared bill period.

Weather Insight

If sufficient weather data is available, the bill comparison can show differences due to changes in the weather. In the standard bill comparison experience, Oracle Utilities calculates the adjusted total usage for the earlier bill period using a weather normalization algorithm that is based on Heating Degree Days, Cooling Degree Days, and weather

sensitivity coefficients defined on a utility-wide basis. However, if the customer meets the appropriate AMI data requirements, customer-specific rather than utility-wide heating and cooling coefficients are used, resulting in a more accurate, personalized weather insight. The cost of what the adjusted usage would have been is calculated and compared to the actual usage. The difference is attributed to weather.

Peak Energy Savings Insight

Rebates received during peak events can be included in the list of cost differences when comparing bills. Peak energy savings credits reduce the total bill and are displayed as a negative, credit value. Due to the nature of peak events, it is common that only one of the compared bills includes a peak energy savings credit.



Rate Plan Insight

The rate plan insight highlights cost differences in bills due to the customer switching rate plans. This information can only appear if the customer's rate plan is different for the two bills, and both rate plans have been modeled in the <u>Rate Engine</u>. The cost of the reference period's usage on the previous rate plan is calculated and subtracted from the cost during the reference period on the actual rate plan to determine the difference. Note that differences in prices between bills charged on the same rate plan are not called out separately.

A rate plan in the Oracle Utilities Opower system has two parts: a base plan and one or more components added onto it. For example, a base plan may be an electricity plan for residential customers in a utility's territory, but different versions of that plan could be: (1) electricity residential customers on a community assistance program, and (2) electricity residential customers on a solar plan. The rate plan change insight can be triggered if a customer moves from one of these combinations to another, even though the base plan—electricity residential customer—is the same.

Rate Tier Insight

For customers on a tiered rate plan, the bill comparison can display cost differences due to being on a cheaper or more expensive rate tier between bill periods. The switch between rate tiers depends on how much energy the customer uses.

This Bill Previous Bill \$30 \$38 Jun 11 - Jul 9, 2015 \$38 29 days \$30 days	
FELECTRICITY & GAS	
Reasons your electricity charges are about \$8 less	
You likely used less electricity for cooling due to cooler weather.	- \$3.00
You likely used less electricity because this bill period was 1 day shorter.	- \$2.75
Due to decreased electricity use, your state and local taxes were lower.	-\$0.56
The cost of electricity decreased due to seasonal rate changes. 🕚	-\$0.26
Other reasons. 🚯	- \$1.18
	Total: \$7.64 less
Vou were in the less expensive Tier 1 rate because you used less electricity. Vou were in Tier 3 during your previous bill period. Learn more about tiers.	

Time of Use Insight

Information about a customer's energy costs due to time-of-use rates can be displayed below the cost difference information, if a utility applies different rates during different times of day.



Appliance Disaggregation Insight

Appliance Detection and Disaggregation insights can be displayed below the cost difference information. These insights explain how much of the cost difference between bills was due to changes in large appliance use (such as electric vehicle charging, water heating, or HVAC systems). This allows customers to better understand how their behavior affects their utility bill. Customers can increase the accuracy of the cost comparison by completing the <u>Home</u> <u>Energy Analysis</u>.



Solar Insights

Differences due to the use of solar technology. While negative bills can be shown in the interface whether or not a customer has solar technology, additional solar insights can be displayed if the utility has purchased the Distributed Energy Resources cloud service. See <u>Solar Messaging in Bill Comparison</u> for details.

Non-Usage Insight

Differences due to changes outside of a customer's normal energy consumption, such as taxes, flat fees, and adjustments. This information allows the bill comparison to better match the amounts that customers see in their bills. Displaying this information may require additional setup and configuration. <u>Contact your Delivery Team</u> if you have any questions.

Other Factors

Differences due to factors not explained by the above reasons. Such reasons could include being on vacation, buying a new appliance, or having additional people at home.

Customer Feedback

A customer feedback module is displayed at the bottom of the Bill Comparison. See "Customer Feedback" on page 465 for more information.

Data Requirements and Limitations

- Billing Cadence: Customers must be billed on a monthly, bi-monthly, or quarterly basis. Utilities that use quarterly bills must send both energy use and cost data for the same billing period. (They cannot, for example, send monthly usage data and quarterly cost data.)
- Billing History: The customer must have two historical bills to compare energy use between bill periods. Billing data from the previous year's bill period is required for the year-over-year comparison. 100% coverage of billing data is required for the bill periods being compared.
- Weather Data: Weather data is required for the weather insight to appear. The customer must have a minimum of nine months of historical AMI usage data with 75% coverage in order to calculate customer-specific rather than utility-wide heating and cooling coefficients.
- Peak Event Data: Peak event data (day and time of peak event, as well as rebate amounts) is required for the peak energy credit insight. The utility must also purchase the Peak Management: Time Rebates cloud service.

- AMI Data: AMI data is required for AMI-based insights to appear. AMI data requires the Digital Self-Service Energy Management AMI cloud service. See <u>Getting Started</u> for details.
- Estimated Bills: If one of the compared bills was estimated (meaning the bill was designated by the utility as "estimated" during the data transfer process), the bill comparison will still show it. However, there will be no indicator in the interface that the bill was estimated.
- Rates Data: The <u>Rates Engagement</u> cloud service must be purchased and customers' <u>rates must be modeled</u> for rates insights (such as rate plan changes, time-of-use information, and appliance use insights) to display.
- Supported Fuels: Customers with electric, gas, or dual fuel are supported.

Neighbor Comparison

The Neighbor Comparison compares the customer ("You") to two groups: "Efficient Neighbors" and "All Neighbors." The results are displayed in a horizontal bar graph, and a message explains how the customer compares to their efficient neighbors. The customer can fall into one of three states: "Great," "Good," or "Using more than average". "Efficient Neighbors" are defined as the most efficient 20% of the customer's neighbors. An informational section below the bar graph provides details about the comparison.

Requirements

Utility Requirements

Required Cloud Service	Same as listed in the product-wide requirements.
Scale	No applicable scale requirements.

Customer Requirements

Billing Frequency	Monthly, bi-monthly, or quarterly.
Data Delivery Frequency	Monthly, bi-monthly, or quarterly.
Data Requirements	Billing data is required. Additionally, some third-party data (geospatial data and parcel data, for example) is required to select

	other similar neighbors or households for the comparison. The feature will not display if it is unable to select the minimum number of neighbors. The minimum threshold may vary depending on your utility's setup and configuration. <u>Contact your Delivery Team</u> if you have any questions.
Data History	A single bill from the last bill period or previous to last bill period.
Data Coverage	Not applicable. Data at the bill level is used.
Supported Fuels	Electricity, gas, and dual fuel.

Limitations

- Web Versus Printed Reports: The neighbor comparison on the web may be slightly different than the neighbor comparison in printed Home Energy Reports (HERs). Note, however, that both report types depend on the same set of neighbors selected for a customer.
- Dynamic Calculations: A new set of neighbors is not dynamically calculated whenever a customer signs in to their web account and views the neighbor comparison. This is because the neighbor selection algorithm is an intensive matching process that takes a non-trivial amount of time to run, and so the web version of the feature would take a very long time to load. This also means that if customers update their home information on the web (for example, by using the <u>Home Energy Analysis</u> survey), they will not see an updated neighbor comparison until Oracle Utilities systems are able to run neighbor reselection processes at a time later.
- Dual Fuel: Dual fuel customers see a combined "Energy" view as the default view in the neighbor comparison. If a customer has no gas data, but is part of a dual fuel utility, the customer will still see a neighbor comparison for electricity (and vice versa). Additionally, note that for dual fuel customers, the neighbor selection process selects neighbors based on all the home characteristics, but performs a comparison for each fuel independently. The gas values are calculated based on the gas bill periods, not the electric bill periods (and vice versa).
- Customers with Electric Vehicles or Heat Pumps: The neighbor comparison will not be impacted if custom survey questions about electric vehicles (EVs) or heat pumps are added to the <u>Home Energy Analysis</u>. In other words, customers who have these

attributes will not be compared to other customers who have these attributes, because the data on these attributes is not widely available. Even if these specific questions were added as new rules in the neighbor selection process, most customers would end up matching with neighbors based on standard information about a premise (such as square footage), unless a very high number of people completed the Home Energy Analysis survey and provided enough data to affect the selection.

User Experience

The user experience described in this section is for customers who have a desktop screen, a single fuel (electricity), and "neighbor" terminology as opposed to "similar homes" terminology.



Insight Statement: The insight statement above the chart ("You used x% more [fuelType] than your neighbors") provides information about why the bar chart appears the way it does. Specifically, it displays a percentage for how much more or less the customer used compared to their "efficient neighbors", or how much more or less the customer used compared to "all neighbors" (including efficient neighbors).

How You're Doing Icon: This icon highlights whether the customer is doing "Great," "Good," or "Using more than average." The icon represents a summary of the different states of the normative message. There are different states for the icon, including a different icon and text for when the customer is using more than their neighbors.

See Energy Details: A link is provided to take customers to the <u>Data Browser</u> to explore their historical energy costs.

Bar Chart: The bar chart displays how much energy each group in the comparison used. The order of the bars should be: the bar with the smallest value on top and the bar with the largest value on the bottom.

- You: This bar indicates how the customer is doing. This is often a color that corresponds to the utility brand color.
- Average Neighbors: This bar indicates how all the customer's neighbors are doing. It is usually a gray or neutral color.
- Efficient Neighbors: This bar displays a usage value for the most efficient 20% of the customer's neighbors. It is usually colored green because green is commonly associated with energy efficiency. Note that the efficient neighbors value that appears in the module is not an average of the top 20% of neighbors. A threshold value—the 20th percentile neighbor—is used to determine the efficient neighbors value.

Date Range: The date range displays the time period that is covered by the comparison. The comparison always covers the last completed billing period. The year accompanies both the start date and end date (for example, Dec 20, 2019 - Jan 20, 2020).

Who Are My Neighbors: When clicked, information about the characteristics that match between the customer's home and the homes they are being compared to is displayed. This information may include:

- Number of homes in the comparison
- Average distance of neighbors
- Average square feet of neighbors
- Percentage of neighbors with the same home type
- Average number of occupants
- Percentage of neighbors with the same heat type

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 <u>Energy Costs</u>, <u>Energy Use</u>, and <u>Neighbors</u> are available in the feature. If applicable, customers can also use menus to switch between multiple accounts or service points.

Requirements

Utility Requirements

Customer Requirements

Category	Description
Billing Frequency	Monthly, bi-monthly, and quarterly.
Data Delivery Frequency	Monthly, bi-monthly, and quarterly.
Data Requirements	Billing Data : Customers must have a minimum of one historical bill to view data in the Year view.
	Weather Data : Weather data is required for the weather line graph to display.
	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.
	Rates Data : The Rates Engagement cloud service must be purchased and <u>rates must be modeled</u> in order for rates or cost insights to display in certain parts of the <u>Energy Costs View</u> .
Data History	A minimum of one historical bill is required for data to display in the Year view.
	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 .
Data Coverage	Not applicable. By default, all graphs and views of the Data Browser display any data that is available, even if some reads are missing.
Supported	Electricity, gas, and dual fuel. Customers with two fuels can switch

Category	Description
Fuels	between electricity and natural gas views. A combined view, which combines electricity and natural gas use, can also be enabled.

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.
- 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 <u>see a tooltip</u> containing more information about it. The major views available are:

- <u>Energy Costs View</u>: The cost of energy usage over time, alongside factors such as a weather and solar power (if applicable).
- <u>Energy Use View</u>: The amount of energy usage over time, alongside factors such as a weather and solar power (if applicable).
- <u>Usage Breakdown View</u>: The top costs of energy by disaggregation categories over time.
- <u>Neighbors View</u>: The amount of energy use compared between the customer and their neighbors.

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



(missing or bad snippet)

For more information on how the feature behaves and displays data, see <u>General Display</u> <u>Rules</u> 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 <u>tooltip</u> 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	The abbreviated month and final day for each bill is displayed. 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. Labels appear across the X-axis for every bill. Labels are hidden in a manner to

Display Rules
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.
The abbreviated day of the week and numeric day for each daily read is displayed.
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.
Time of day intervals are displayed, such as 12am, 6am, 12pm, and so on. 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.

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.

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.

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 <u>Usage Breakdown</u> 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 <u>Neighbors</u> 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 <u>Energy Costs</u> and <u>Energy Use</u> 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 <u>Estimated Bills and Usage Reads</u> 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 <u>single sign-on</u>, 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 <u>Year View</u> and <u>Day View</u>, 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 <u>Customer Feedback</u> for more information.

Energy Use Overview

The Energy Use Overview compares customers' energy use from their most recent bill period to their energy use in the same bill period from the previous year. An analogy insight may appear to help customers understand how their usage relates to real-world examples. The analogies compare energy use to common energy use scenarios. For example, energy use can be expressed in the number of days it would take to light a customer's home.

Energy use is combined and expressed in energy units for dual-fuel customers, while an applicable energy unit of measurement is used for single-fuel customers. A link to explore energy use in detail sends customers to the Data Browser for additional energy use analysis. See "Data BrowserThe 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, and Neighbors are available in the feature. If applicable, customers can also use menus to switch between multiple accounts or service points. RequirementsUtility RequirementsCustomer RequirementsCategoryDescriptionBilling FrequencyMonthly, bimonthly, and guarterly. Data Delivery FrequencyMonthly, bi-monthly, and guarterly. Data Requirements Billing Data: Customers must have a minimum of one historical bill to view data in the Year view. Weather Data: Weather data is required for the weather line graph to display. 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. 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. Data HistoryA minimum of one historical bill is required for data to display in the Year view. 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.Data CoverageNot applicable. By default, all graphs and views of the Data Browser display any data that is available, even if some reads are missing. Supported Fuels 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. LimitationsTaxes 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. 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 ExperienceThe

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). 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. The image below is an example of the Energy Use view.(missing or bad snippet)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 ViewRules 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 guarter. 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 ViewDaily 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 ViewSubdaily 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 AxisThe 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-AxisThe labels on the X-axis of the graph represent an interval of time (months, days, or hours). ViewDisplay RulesYear viewThe abbreviated month and final day for each bill is displayed. 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. 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. Bill view The abbreviated day of the week and numeric day for each daily read is displayed. 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. Day view Time of day intervals are displayed, such as 12am, 6am, 12pm, and so on. 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-AxisThe 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 ReadsUtilities 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.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 TooltipsA 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. 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, 2020Bill View: The tooltip shows details about a day in a bill period. Example: Thurs, May 8, 2020Day View: The tooltip shows an hourly or sub-hourly interval in a bill period. Example: 9:00 -

10:00amEnergy 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. 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 BillsA 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 DataThe 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 DataAny 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 \sim 40 kilometers from the customer. Daily average temperatures are based on hourly temperatures.Multiple AccountsThe 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 DataAs 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 FeedbackA 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." on page 1 for more information.

Data Requirements and Limitations

- Data History: A total of 12 bill periods or more is required to compare the most recent bill
 period with that of the previous year. Customers with less data see a comparison to the
 previous bill, only energy use for the current bill period, or a message that indicates
 additional information will be displayed once the required data is available.
- Multiple Service Points: Bill level reads from at most two service points are required, with start and end dates not differing by more than three days. If there is a difference of more than three days between each service point's data, a message is displayed to explore energy use in detail using the Data Browser, along with a link to the tool.

Home Energy Analysis

The Home Energy Analysis is a visual, interactive survey that prompts customers to answer simple questions about their home attributes and energy habits. This information is used to provide customers with a more detailed breakdown of how they use energy. Additionally, utilities can use this information for more targeted Oracle Utilities campaigns and promotions.

There are two versions of the Home Energy Analysis. If you need help identifying which version is applicable to you, <u>contact your Delivery Team</u>.

- Home Energy Analysis v1
- Home Energy Analysis v2

Ways to Save

Ways to Save presents a personalized selection of energy saving tips. Customers can browse through the available tips to learn how they can save energy.

Tip Guides

Ways to Save displays a collection of tip guides to customers. Tips are organized into behavior-oriented, seasonal, and end-use guides that provide customers with relevant costsavings recommendations. For example, the "How to avoid an expensive summer" guide is displayed to customers during summer months. An applicable promoted tip guide is displayed at the top of the landing page above all other tip guides. A tip guide is only shown if tips are included in the guide after tip filtering is applied.

Note: Customers can access Ways to Save without logging in to their account. For more information on how this scenario changes the customer experience, see <u>Tip</u> <u>Filtering</u> and <u>Tip Actions</u> below.

Customers can view applicable tips by browsing the provided tips guides or by selecting filters to identify all available tips that meet the filter criteria.

Utility	/Co		Your Energy Use	Ways to Save	
Top 2	Oppon your shades on winter days for natural light and warm. We use to 200 prever	Sched assess Save up	lule a home energy sment to \$480 per year		
Get m Easy to d	o Cost type V Bessonal V App	Sliances and more \parallel $ imes$			
25 Wa	tips nt more relevant tips for your home? TAKE THE HOME EP	NERGY SURVEY		2	
	ays to save at no cost to you ups				
O Sn 2 1	nart ways to save on hot water				
	prove the lighting in your home				
Ho 9 10	w to avoid an expensive winter				
7 ti	eating tips to help you save				
Hi 9 1	gh cooling bills? Here's how to cut back				
O Dr 9 5	ive more savings with your electric vehicle				
6 Ha 4 10	ive a pool? Here's how to save				

List of Tips for a Guide

Customers can select a tip guide to view the list of tips included in that guide. From this list of tips, customers can review high-level information about each tip, and select a tip to view additional details. Information available for a tip from this list includes the following:

- An illustration allows customers to quickly recognize the concept or purpose of a tip.
- A short title that describes the tip.
- The estimated annual savings if the customer completes the tip.
- The number of utility customers who have completed the tip.

Get more energy-saving advice				
Easy to do	Easy to do Cost type V Seasonal V Appliances and more V			
Clear Filters These tips an	d savings estimates are personalized based on what you told us about your home ar	id your energy use patterns.		
Easy 1	o do tips			
O	Hang laundry to dry Save up to \$80 per year A& 136,410 people do this	\sim 1 \times		
T	Open your shades on winter days for natural light and warmth Save up to \$20 per year As 41,411 people do this	\sim 1 \times		
	Use LED holiday lights Save up to \$15 per 100 bulbs per season As 33,309 people do this	\sim 1 \times		
	Insulate outlets and light switches Save up to \$10 per year As 18,480 people do this	\sim 1 \times		
	Install a programmable thermostat 28. 136,410 people do this	\sim 1 \times		
	SHOW MORE TIPS			

Customers can select a tip in the list to view additional details about the tip, or mark a tip with an applicable tip action. See <u>Tip Actions</u> below for details.

Tip Details

Customers can select a tip to view reasons why they should complete a tip. An option to **Read More** about the tip displays all available information for the tip. This can include the following information.

- The tip title is displayed at the top, along with the tip illustration
- A list of financial incentives related to the tip, such as cost savings or tax incentives. By default, a maximum of three of the available financial benefits are displayed. If more than three financial benefits are available for the tip, a link is displayed to show or hide the additional financial benefits.
- Links to utility programs and incentives, if applicable.
- Why a customer would perform the tip.

- Information on what actions a tip includes or how to complete a tip can be provided. This
 optional information is commonly provided for tips that are not as straightforward as
 simple tips.
- Customers can save a tip to a list of tips to review later, or mark a tip as something they have completed.



Tip Filtering

Tips are automatically filtered for customers based on the characteristics of their home. These characteristics may include the home type, whether they own or rent, the heating system and type (for electric systems), the type of air conditioning, and the number of fireplaces. Customers can view applicable tips by browsing the provided tips guides or by selecting filters to identify all available tips that meet the filter criteria.

Customers can access Ways to Save without logging in to their account. Automatic tip filtering is not applied in this scenario, which displays all tip guides available for a utility to the customer.

The Home Energy Analysis allows customers to answer questions about their energy use, including whether they live in an apartment and if they rent or own their home. A customer's responses to these questions are key to tip filtering and lead to tips that are more relevant to the customer. A message is displayed just above the tip guides for customers who have completed the survey, which explains that the tip guides were selected based on the customer's responses to the survey, and provides a link to their Home Energy Analysis energy use breakdown. See Home Energy Analysis for more information.

Tip Actions

Tip actions allow customers to save a tip or mark a tip as completed. Customers can view all saved tips and all completed tips in separate tip guides. The number of other utility customers who have completed the tip is displayed to encourage the customer to also complete the tip. If a customer is viewing Ways to Save without being logged in to their account, the customer is prompted to log in to their account to complete any tip actions.

Green Button

The Green Button allows customers to export their billing data into CSV or XML format. It is typically located beneath the <u>Data Browser</u>. When a customer clicks the Green Button link, a **Download my data** section displays and allows the customer to choose between downloading their data in CSV or XML format.

Requirements

- Billing Frequency: The customer must be billed monthly, bi-monthly, or quarterly.
- Data History: A customer must have one historical bill.
- AMI Data: AMI data is required for additional download options to appear. AMI data requires the Digital Self-Service Energy Management AMI cloud service. See <u>Getting</u> <u>Started</u> for details.
- Rates Data: The <u>Rates Engagement</u> cloud service must be purchased and customers' <u>rates must be modeled</u> for cost information to display for interval AMI data reads in the exported file.
- Enhanced Solar Data: Utilities must be on the latest data transfer specifications in order for enhanced solar data IMPORT and EXPORT columns to display in the exported file. Your Delivery Team will work with you to identify which data transfer specifications you need.

User Experience

This section describes the user experience for dual fuel customers who have non-AMI data and no rates modeled.

Green Button

Customers can select the **Green Button** link to download their billing or AMI data to CSV or XML formats.

The Green Button link is based on an initiative called the "Green Button initiative," an industry-led effort that responds to a <u>White House call-to-action</u> to provide electricity customers with easy access to their energy usage data. The idea is that customers should be able to go to their utility web site and securely download their own detailed energy usage information in a platform-neutral format (specifically, XML). Customers can then send this data to third-party web apps or developers to create visualizations or perform additional analysis. See <u>The Green Button for Residential Use</u> for more information on how this data is intended to be used.

Download My Data

When a customer clicks the Green Button link, a **Download my data** section displays and allows the customer to choose between downloading their data in CSV or XML format. The customer can then click **Export** to download the file. Depending on which web browser they are using, they may be prompted to save the file to their desktop rather than seeing an automatic download to their Downloads folder.

Downloaded File Contents: The data within the download includes the fuel and resource types, applicable dates, energy use and costs, 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 <u>Oracle Utilities Opower Premise Data Transfer</u> <u>specification</u>.

Solar Data and Multi-Register Meters: The downloaded spreadsheet may have additional columns for customers with multi-register meters and solar technology. See <u>Solar Data and</u> <u>Multi-Register Meters</u> below for details.

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.

AMI Data: Customers with AMI data have additional data download options. Such customers can also see virtual bills, which provide in-progress billing information since their last bill period.

Download my data	CLOSE
Time Period	Format
 Export all bill totals 	CSV
Export usage for a bill period	XML
Since your last bill: Dec 01, 2010 - ▼	
Export usage for a range of days From To 11/30/2010 IIII 12/31/2010 IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	
CANCEL	

- Export Usage 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.
- Export Usage for a Range of Days: A start and end date can be selected to define the range of days.

Cost Information: If the utility has <u>rates modeled</u>, customers can download a file containing AMI data and cost information. The customer may see daily or subdaily cost information, depending on the granularity of their AMI data. For example, customers with daily AMI data will see daily cost values, while customers with subdaily AMI data will see cost values broken down into the appropriate intervals, such as per hour, half hour, or quarter of an hour.

User Experience Variations

Multiple Accounts and Service Points

If a customer has multiple accounts, the customer can download a file for each account. Note, however, that the feature does not display a menu for switching between accounts. Users must switch between their accounts by clicking an account selector hosted on the utility website.

Dual fuel customers can download data separately for their gas and electricity usage. If a customer has two or more service points of the same fuel type (for example, a customer with one for regular electric usage and one for an electric vehicle), then the user can download data for the service point that is being currently viewed in the <u>Data Browser</u>. If a dual fuel customer is in the combined view in the Data Browser and clicks to download data, then two files are generated: one file for electricity and one file for gas.

Solar Data and Multi-Register Meters

The downloaded spreadsheet may have additional columns for customers with multi-register meters and solar technology. This is because multi-register meters can provide more details about energy use within an interval of time, such as the amount of energy consumed from the grid, as well as the amount sent back to the grid due to solar power.

When support for multi-register meter customers is enabled, the downloaded spreadsheet displays columns for IMPORT (energy consumed from the grid) and EXPORT (energy sent back to the grid). The spreadsheet also displays columns for the start and end time of each interval if the customer has subdaily AMI data.

Tips Light

Tips Light displays the top three tip guides for the customer's household. These tip guides promote customer interest in tips and lead them to more detailed tip information. This widget typically appears on the Smart Dashboard.

Selecting a tip guide sends customers to the Guide Details widget. A **See More Tips** button appears below the tip guides. Selecting this button sends customers to the Ways to Save landing page. See "Ways to Save" on page 458 for more information.

Recommended summer tips for you				
Save when working from home	How to make your home more comfortable	Smart upgrades for your home		
6 tips	13 tips	34 tips		
SEE MORE TIPS				

Resources

The following resources are available for customers to access and review as needed. Links to these resources can be included in a footer that is displayed on all pages.

Help and Contact Information

Oracle Utilities develops Frequently Asked Questions (FAQs) drawn directly from customer feedback. The list is kept small so that customers can quickly find the information that they need.

Frequently asked questions			
About the neighbor comparison			
Who are my neighbors? Your energy use is being compared to the usage patterns of a group of about 100 neighbors whose homes are close and similar in size.	Answer	•	
How did you choose the homes used in my neighbor comparisons?	Answer	•	
What if there are good reasons that my household uses more energy than my neighbors?	Answer	•	

Customers who cannot find the answer to their questions in the provided FAQs can use the contact information to contact the utility. The contact information is specified by the utility.

Terms of Use

The customer must agree to the Oracle Utilities Terms of Use before creating an account.

Privacy Policy

The Privacy Policy is available to all 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 <u>Data Browser</u>, <u>Bill Comparison</u>, <u>Bill or Usage Forecast</u>, and <u>Home</u> <u>Energy Analysis</u>. Depending on each utility's setup and configuration, some of these widgets may or may not be available. Contact your Oracle Utilities Opower <u>Delivery Team</u> 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.

Peak Time Rebates

The Peak Time Rebates program consists of web features as well as print and digital communications that encourage utility customers to reduce energy during peak event days in the summer or winter seasons, thereby lowering energy demand on a large scale. The program offers customers monetary credits towards their next bill when they reduce their energy use during peak events.

The Peak Time Rebate widget allows customers who are enrolled in Peak Time Rebates to view their historical peak event day rebate and energy saving information in a user-friendly graph.

Depending on what options are available from the utility, customers can view the following information:

- **Bill Credits**: This graph displays how much money a customer has earned by saving energy on peak rebates event days.
- Average Homes: This graph displays how much money a customer has saved compared to homes within 100 miles of them and who saved energy on an energy savings day. Average homes data is only available for the money comparison and peak rewards experiences.
- Tool tip: When hovering over the Bill Credits or Average Homes graphs, pertinent information about the day is displayed including date and day of the week, specific event hours and average temperature during that period, how much energy the customer saved compared to their baseline, and the rebate amount is displayed.
- Total Bill Credits: This section calculates the customer's cumulative rebate amount for the selected season.

See the <u>Oracle Utilities Opower Peak Time Rebate Product Overview</u> for more information about the product's requirements and features.

Providing Customer Support

Customer Service Representatives (CSRs) with the proper permissions have the ability to access customer web accounts in the Oracle Utilities Opower web portal from a link in the Oracle Utilities Opower Customer Service Interface. CSRs are prompted to confirm that they have permission from the customer to view the account.

After logging in, the web portal appears to the CSR much like it does to the customer. If a customer has a question about the web portal or their usage, this allows the CSR to

reference what the customer can see. The only differences are that a CSR cannot modify the customer's email address or password.

CSRs can access the web portalfor every utility in the Oracle Utilities Opower program, regardless of whether the customer has created a web account. If a CSR and customer are making modifications at the same time, the changes are preserved for the last person that commits their changes.

See the <u>Oracle Utilities Opower Customer Service Interface - Program Management</u> <u>Product Overview</u> for more information.

Energy Efficiency Web Portal v3

The Energy Efficiency Web Portal is a dynamic web experience that allows utilities to provide their customers with personalized energy data, insights, and recommendations on how to save energy. The web experience is delivered through modular, mobile responsive widgets.

This section lists modules that are specific to the web experience for customers enrolled in Home Energy Reports v3 and Email Home Energy Report v3. See the <u>Energy Efficiency</u> <u>Web Portal</u> to learn about the product requirements and features applicable to all web portal experiences.

Efficiency Zone

The Efficiency Zone replaces the Neighbor Comparison in Digital Self Service - Energy Management for customers who receive the Efficiency Zone module in their Home Energy Report or Email Home Energy Report v3 experience. The Efficiency Zone module is designed to motivate customers to save energy based on how they see themselves in relation to similar homes. It reframes the Efficient Homes concept from the <u>Neighbor</u> <u>Comparison</u> to improve customer satisfaction without heavily compromising energy efficiency. The module is comprised of a bar graph that compares customer and similar homes usage against an Efficiency Zone, and insights that place the customer's usage in context. Usage below or up to the threshold is considered in the "efficiency zone." The Efficiency Zone threshold is the average use of the 20th percentile of similar homes during that bill period and will change with each report.

Comparison mode includes the <u>Neig</u> l	ule the Digital S nbor Comparis	Self Service - Energy Manage <u>on</u> .	ement experience also	
How You Compare				
📀 Your electricit	y use was 33	% lower than the Efficienc	y Zone's upper limit.	
You used less electricity th	nan similar homes.			
SEE ENERGY DETAILS				
	Efficiency Zone: Up to	75 kWh		
You			50 kWh	
All neighbors				100
Feb 28, 2020 - Mar 29, 2020				
▼ What is the Efficiency Z	one?			
The Efficiency Zone re for 100 similar homes ir	presents the 20% o n your area with a sin	f similar homes in your comparison grou milar heating source and square foota	up that used the least energy th ge .	is period. To create this group, we lool
UPDATE HOME ENE	RGY ANALYSIS			

Heading: The heading invites the customer to explore their normative comparison and learn about their energy use in more detail.

Note: If the utility opts to replace the Efficiency Zone module with the Neighbor

Threshold: The label above the graph introduces the maximum Efficiency Zone threshold (for example, Up to 500 kWh). The threshold is the average use of the 20th percentile of similar homes during that bill period. A green tinted rectangle and darker vertical line indicate the range and upper boundary of the Efficiency Zone, enabling customers to quickly see whether they are in the zone. The threshold is recalculated and changes with each report.

Graph: The bar chart displays how much energy the customer (You) used in comparison with Similar Homes. The Similar Homes bar indicates the average use of the customer's neighbors.

Hero Insight Statement: The hero metric conveys the customer's status relative to the Efficiency Zone or to Similar Homes. The icon varies, depending on their state. If the customer is within the Efficiency Zone, a check mark icon before the insight is green. If the customer is not within the Efficiency Zone, the exclamation icon before the insight is grey.

Secondary Insight: The secondary insight presents the customer with their status relative to the other comparison group, either Similar Homes or the Efficiency Zone, depending on their status.

Date Range: The date range displays the time period that is covered by the comparison. The comparison always covers the last completed billing period. The year accompanies both the start date and end date (for example, Dec 20, 2019 - Jan 20, 2020).

What is the Efficiency Zone: When clicked, information about the characteristics that match between the customer's home and the homes they are being compared to is displayed.

Home Energy Analysis Call to Action: Clicking this button takes the customer to the <u>DSS</u> <u>EM Home Energy Analysis - HEA</u> so that they can provide the latest details about their home and make the efficiency zone more accurate.

Data Requirements and Limitations

- The customer must be billed on a monthly, bi-monthly, or quarterly basis.
- The customer must have monthly, bi-monthly, or quarterly data reads.
- The customer must have a single bill from the last bill period or previous to last bill period.
- The customer must have a minimum number of neighbors.

Video Home Energy Reports

Video Home Energy Reports are short, personalized videos sent through the email channel to inform utility customers about their home energy use or a utility energy efficiency program. The emails include a video thumbnail and link to the video. The video can include personalized information and insights, such as details about the customer's energy use and how they can save energy in the future. The video experience is highly customized and varies widely depending on the utility's goals, setup, and implementation.

Requirements and Limitations

The following data requirements and limitations apply to all utilities and customers in the Oracle Utilities Opower Video Home Energy Report program. These requirements must be met for a utility and a customer to participate in the program.

Utility Data Requirements and Limitations

- Scale: Scale restrictions may apply. The actual number of communications sent may be affected by attrition, opt-outs, customer eligibility, and data availability.
- Localization: Not all languages and locales are supported at this time. Contact your Oracle Utilities Sales Representative to confirm that Oracle Utilities Opower Video Home Energy Report are available in your market.
- Data Integration: Data must be sent to Oracle Utilities in the correct schema and at the appropriate frequency. See the Oracle Utilities Opower Legacy Billing Data Transfer Standards for details.
- Billing Frequency: The utility must bill their customers on a monthly, bi-monthly, or quarterly basis.

Customer Data Requirements and Limitations

- Customer Type: The customer must be residential.
- Data History: The required data history Varies depending on the content, configuration, and design of the video. For example, at least one bill period of billing data history is required if the video compares customer's energy use to that of their neighbors.
- Billing History: The required billing history varies depending on the content, configuration, and design of the Oracle Utilities Opower Video Home Energy Report. For example, billing data is required if the video compares customer's energy use to that of their neighbors. However, there are no data requirements if the video does not contain data-driven insights.
- Contact Information: The customer's current email address must be available.
- Supported Devices: Oracle Utilities supports email clients that may be native to a specific device, such as the installed email client on the iPhone 6, as well as email client applications that may be accessed from any device or computer. Oracle Utilities supports and optimizes for the following email clients to view the Oracle Utilities Opower Video Home Energy Reportemail:
 - iPhone internal email client (iOS 10.0 and greater)
 - iPad internal email client (iOS 10.0 and greater)
 - Apple Mail (Mac OS X 10.10 and greater)
 - Android internal email client
 - Microsoft Outlook (2010 and greater)
 - Outlook.com
 - Yahoo! Mail
 - Gmail.com
 - Samsung Mail

For email clients that support multiple versions operating at the same time (for example, Apple iOS10 on iPhone5 or Microsoft Outlook 2010, 2012, and 2013), Oracle Utilities

generally supports the most current major release as well as a number of previous major releases. For email clients that only provide a single version (for example, Gmail.com), Oracle Utilities supports the currently available version. Other email clients are not officially supported or tested by Oracle Utilities. Customers viewing Email Home Energy Reports on unsupported devices or applications may see user experience variations in their reports.

Customer Experience Overview

The Video Home Energy Reports include an email inviting customers to view their video, a landing page that hosts the video, and a short, personalized video that the customer can watch to learn about an aspect of their program.

Email

The first part of the Video Home Energy Report user experience that the customer interacts with is an email inviting them to view their video report. The email tells the customer what they can expect to see in the video and invites them to go to the video landing page where they can view the video and learn more. The email is highly customized and varies widely depending on the utility's goals. The following example is a video email communication for a report focused on adopting a new technology.



Header: The report headers appear at the top of each communication. It includes the following:

- Logo: A logo provided by the utility.
- Utility Account Number: The customer's utility account number is displayed. For security purposes, only four characters of the account number are shown, and the rest of the numbers are replaced with asterisks (**).
- Service Location: The service location to which the video report applies. This information is especially helpful to customers who own multiple properties.

Body: The email body identifies the purpose of the email and prepares the customer for what they will see in their video report. The body includes the following:

- Title: The title identifies the focus of the video report.
- Body Text: The body text informs the customer that they can access their personalized energy insights access offers and programs designed to help them save energy and money.
- Video thumbnail: An image of the video provides a colorful introduction to the video report experience.
- Call to Action: The call to action button redirects the customer to a page where they can view the full video. For security purposes, this link expires after 180 days.

Footer: The footer is included at the bottom of every report and includes components that provide more context about the report. The footer includes the following:

- Utility Address: The utility's mailing address. The mailing address must appear due to CAN-SPAM regulations in the US and similar regulations abroad.
- Unsubscribe: A link to a page where customers can unsubscribe. An unsubscribe link must appear due to CAN-SPAM regulations in the US and similar regulations abroad. The URL the unsubscribe link points to cannot be customized.
- Legal Text: This is the copyright and any other legal text required by the utility or Oracle Utilities Opower.

Landing Page

The landing page hosts the full video email report. It includes a link to the utility's web portal where customers can access additional information about the utility program featured in the report.

UtilityCo					
	Reduce your energy use this winter With the recent increase in natural gas prices globally, we want to help you manage your energy use while keeping you comfortable this winter. Play your personalized video to learn more.				
	Find more energy-saving tips, rebates, and services to help you manage your natural gas use this season.				
N	sighbor comparisons shown in this video are based on approximately 100 nearby homes similar to yours in size and heating type.				

Header: The header appears at the top of the landing page and includes the utility logo and any relevant branding colors.

Heading: The landing page heading emphasizes the main benefit of the report to the customer. For example, "Conserve energy and save money this winter."

Video: See the Video section for more information.

Call to Action: The call to action echoes the theme of the video and redirects the customer to the utility web portal where they can access additional resources.

Footer: The footer is included at the bottom of the bottom of the landing page. The footer includes the following:

- Legal Text: This is the copyright and any other legal text required by the utility or Oracle Utilities Opower.
- Explainer Text: The explainer text describes what data goes into the personalized insights included in the video.

Video

The final piece of the report is a personalized video designed to engage utility customers about a utility program. For example, the video could promote energy efficiency programs, rebates, or new technology. The following example is for a video focused on customer's energy use.



The video is made up of several customizable scenes that vary depending on the featured utility program. For example, a video focused on energy efficiency could include the following video scenes:

Customer Welcome: A fully personalized welcome message greets the customer by their first name.

Utility Goals: This scene tells the customer why their utility is providing them with the video insights. For example, "[Utility] wants to help you be comfortable while saving energy and money, so that together we create a better, cleaner energy future."

Personalized insights: A series of personalized insights provide the customer with information about their energy use and how they fit into the video theme. For example, a video report with a winter seasonal focus might include data about the customer's heating use and how it compares to their neighbors.

Tips: This gives customer relevant tips designed to help them lower their energy use and save money. For example, in a video report with a winter seasonal focus, the first tip is dedicated to saving on heating. Personalized tips can be offered if sufficient data is available.

Call to Action: The video ends with a call to action message that encourages the customer to take advantage of their utility's energy efficiency programs. An arrow icon redirects the customer to the utility's website where they can learn more.

Delivery

Oracle Utilities Opower uses their email platform to send email reports. This platform provides Oracle Utilities with information on send, bounces, opens, opt-outs, unsubscribes, and click-throughs. Oracle Utilities does not track the web behavior of a customer after they have clicked on a link in the email.

Content is delivered directly in the email message with no attachments. This makes it more convenient for customers to quickly view the information, and it makes the emails less likely to be blocked by spam filters.

Delivery Cadence

Oracle Utilities supports the following delivery frequencies for email: monthly, quarterly, and seasonally. Because the reports are generated from data from the latest utility bill for each customer, the delivery cadence will depend on each customer's billing dates and the program design specified in your statement of work.

Delivery Options

Email reports are typically sent on Friday afternoons so that customers will have time to review the reports over the weekend. However, delivery may be configured for days other than Friday. Ask your Service Delivery Manager which delivery options are best suited to your program.

Enrollment

Customers can be enrolled to receive Oracle Utilities Opower Video Home Energy Report through an opt-in or opt-out program. In an opt-in program, customers are given the option to sign up, rather than being automatically enrolled. In such cases, customers can sign up for Email Home Energy Reports by using settings available in the Energy Efficiency Web Portal. In an opt-out program, customers are automatically enrolled if they meet the eligibility criteria.

Inside Opower

The Energy Efficiency Cloud Service includes access to Inside Opower. Inside Opower is an online, utility-facing suite of tools to help users across a utility stay informed of and manage their Oracle Utilities Opower program. Utility users can access key data such as program insights, analytics, reports, contact information, and documentation. See the <u>Oracle Utilities</u> <u>Opower Inside Opower Product Overview</u> for details.

Customer Service Interface - Program Management

The Energy Efficiency Cloud Service includes access to Customer Service Interface -Program Management tool. The Customer Service Interface (CSI) is an online support tool that provides utility support staff with the information and functionality they need to manage the Oracle Utilities Opower program and answer customer questions. See the <u>Oracle</u> <u>Utilities Opower Customer Service Interface - Program Management Product Overview</u> for details.