

# Oracle Utilities Opower Process and File Specification for the Unsorted Print Workflow

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Oracle Utilities Opower Process and File Specification for the Unsorted Workflow

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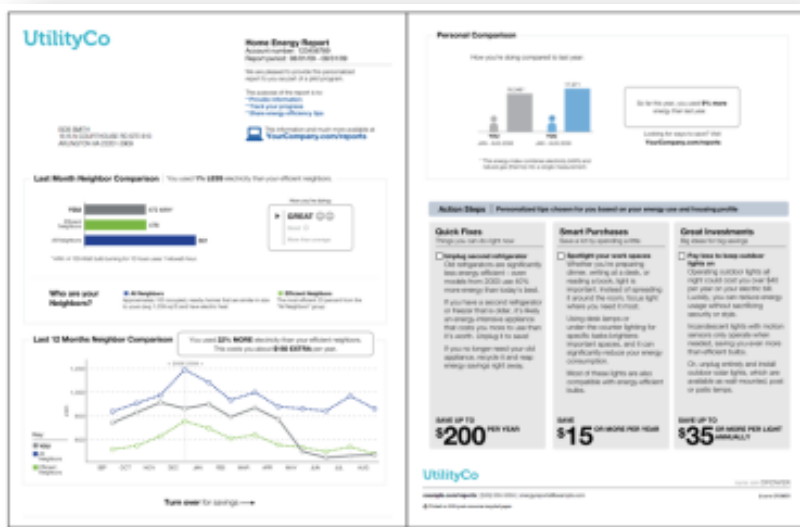
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# Introduction

The purpose of this document is to help print vendors understand the processes, files, and delivery details associated with the printing of Oracle Utilities Opower Home Energy Reports. It is intended for print vendors who have been contracted by a utility to receive and print Home Energy Reports, and who follow an *unsorted print workflow*, in which files do not need to be sorted in a particular order prior to print production. (You can learn more about the difference between the sorted and unsorted workflows on page 2.) The information in this document should help print vendors get a good understanding of what to expect when working with Oracle Utilities during the printing process.

## About Home Energy Reports

Home Energy Reports are paper reports delivered to the homes of a utility’s customers. Home Energy Reports (hereafter simply called “reports”) are usually scheduled to arrive in the mail soon after customers receive their utility bill. The reports are two pages long and consist of “modules,” or pieces of visual and textual information about a customer’s energy use. When printed out, the reports are a single page, with content on the front and back. The figure below gives a visual example of what a report may look like.



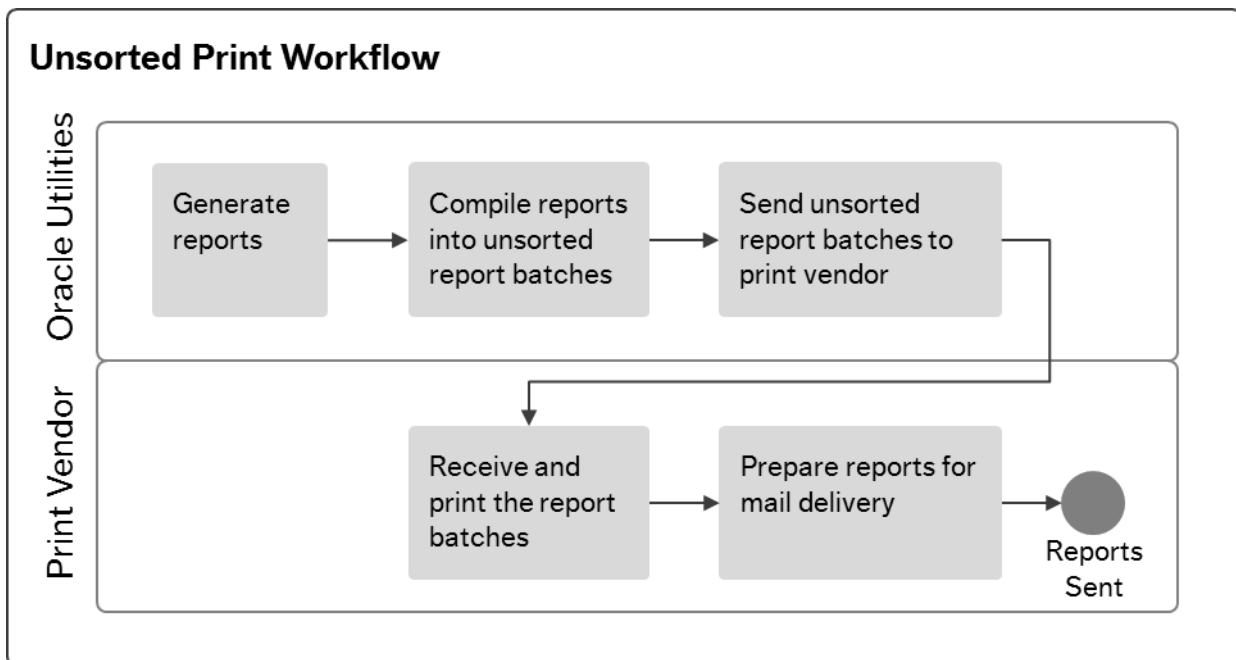
The content in the report modules is dynamic and changes based on factors such as the customer's attributes, energy usage, and even the time of year. The goals of the reports are to be relevant and easy to understand, and to inspire customers to reduce their energy use and lower their bills.

## About Print Workflows

A print workflow is the process by which reports in the Oracle Utilities Opower program are generated, compiled, sent to the print vendor, produced, and delivered to customers. Two different print workflows are used: sorted and unsorted. The workflow that is used for a given utility depends on the print vendor's preferences.

- **Sorted print workflow:** Oracle Utilities generates the reports and uses an internal or external processor to sort them in a particular order before sending them to the print vendor. The sorting is based on customers' geographic locations (a zip code, for example) and is intended to simplify the mailing process. The print vendor is then responsible for printing and preparing the reports for mail delivery.
- **Unsorted print workflow:** Oracle Utilities generates the reports without sorting them in a particular order before sending them to the print vendor. The print vendor is then responsible for printing, sorting, and preparing the reports for mail delivery.

The information in this document is intended for print vendors who follow an *unsorted print workflow*. The figure below summarizes the steps that are typically followed when working with print vendors who use this workflow:



- Unsorted Workflow Notes:
- The report files that Oracle Utilities sends to print vendors are in PDF format.
- Print vendors should expect to receive multiple batches of reports from Oracle Utilities at a time.
- The files are sent on an agreed-upon frequency and are transferred via secure file transfer protocol (SFTP).

# File Specifications: What Print Vendors Will Receive

This section describes the files that print vendors who use the unsorted print workflow can expect to receive from Oracle Utilities prior to printing. Key concepts are introduced, such as report batches and report chunks. Definitions and specifications for each file in the workflow are also provided.

## About Report Batches and Chunks (Unsorted Workflow)

In the unsorted print workflow, Oracle Utilities runs print jobs on a pre-determined schedule. Each of these print jobs consists of one or more **unsorted report batches**. “Unsorted” means that the reports are not arranged in a particular order for mailing purposes. Each report batch, in turn, is broken down into one or more **report chunks**.

- **Report Batch:** A large group of reports, which may be broken down into separate chunks. Each report batch is distinguished from others by a unique combination of a report layout, one or more inserts, and a particular envelope design.
- **Report Chunk:** A specific number of reports within a report batch that have been grouped together for printing optimization. The number in each chunk is configurable and determined per print vendor. For example, some print vendors prefer 5,000 reports in each chunk, as this number is optimal for processing and printing.
- **Report Layout:** The arrangement of slots and modules in each individual report. The layout may differ between groups of customers due to factors such as whether it is the first time they will receive a report, whether a new season has started, etc. The layout may also vary due to the modules that are included, as well as the size of those modules. These details are determined by the program design established by Oracle Utilities and the utility.
- **Insert:** An additional (optional) piece of paper that may be printed and mailed with each report. There can be multiple inserts per report. Often, an insert contains introductory information describing the Oracle Utilities Opower program and the contents of the reports.
- **Envelope:** The container in which the report and the insert need to be packaged. Envelopes may have different designs or logos on the outside.

**Example:** Report Batch A may consist of 10,000 reports that have a particular report layout, welcome insert, and envelope displaying the utility’s logo. The report batch is then broken down into two report chunks, each of which contains 5,000 reports. By contrast, Report Batch B may consist of 10,000 reports that have the same envelope style, but a different layout and no welcome insert. This report batch is also broken down into two report chunks of 5,000 reports.

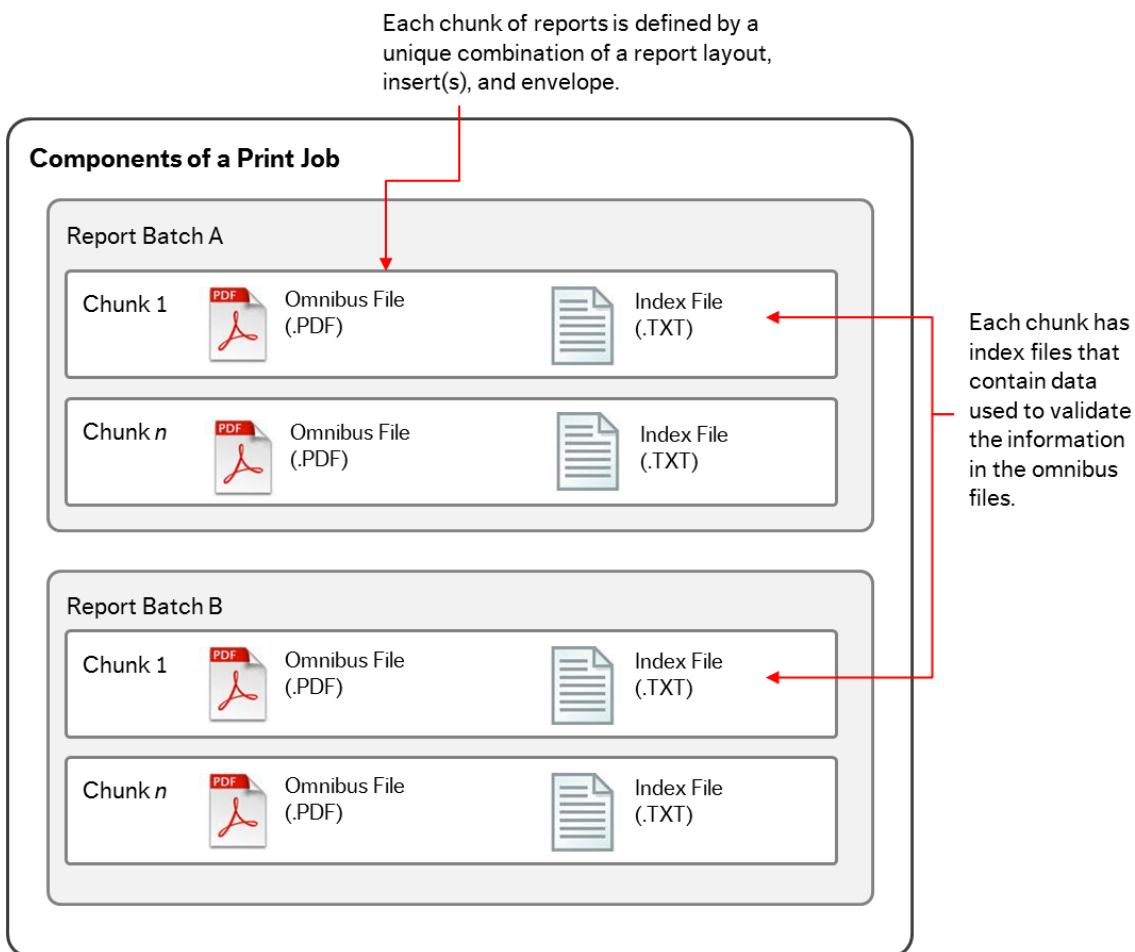
**Note:** Using the print vendor’s standard ordering process, Oracle Utilities sends in a purchase order for the inserts and envelopes that need to be printed for each batch of reports. Envelopes and inserts are thus ordered separately and are not included in the files that Oracle Utilities sends to the print vendor.

## About the Files Generated (Unsorted Print Workflow)

For each report batch in the unsorted print workflow, Oracle Utilities generates multiple report chunks. Each report chunk, in turn, includes two electronic files to be sent to the print vendor: an unsorted omnibus file and an index file.

- **Unsorted Omnibus file:** A .pdf file that contains all the reports to be printed by the print vendor. The file contains a configurable number of two-page reports, all of which have been concatenated for printing purposes. “Unsorted” means that the reports are not arranged in a particular order for mailing purposes. Oracle Utilities typically generates multiple unsorted omnibus files for each report batch. See “About the Unsorted Omnibus File” for more information.
- **Index file:** A .txt file that contains data used to describe and validate the reports in the omnibus file. For every unsorted omnibus file, there is a corresponding index file. See “About the Index File” for more information.

The figure below provides a visual summary of the batches, chunks, and files in a print job, and how they relate to each other.



## About the Unsorted Omnibus File

The unsorted omnibus file is a .pdf file that contains all the reports to be printed by the print vendor. The file contains a configurable number of two-page reports, all of which have been concatenated for printing purposes. When printed out, the reports are a single page, with content on the front and back. “Unsorted” means that the reports are not arranged in a particular order for mailing purposes. Oracle Utilities typically generates multiple unsorted omnibus files for each report batch.

**Note:** An omnibus file can be “sorted” or “unsorted.” See “About Print Workflows” for more information.

### Format

The unsorted omnibus file is an electronic file in .pdf format. Oracle Utilities typically sends multiple unsorted omnibus files at a time.

### File Name

The file name for the unsorted omnibus file uses the following convention:

CLIENT-DATE-PRINT\_JOB\_ID-{ENVELOPE}-{INSERT-LIST}-LAYOUT-FILE-SPECIFIC-TAIL

**Note:** This is the same naming convention as the index file. Both file names may look identical, but are distinguished by their file-specific tails, which vary by file type. See the table below for the meaning of each element of the file name.

File Name Element	Description
CLIENT	Code for the utility, often an acronym.
DATE	Date (in YYYYMMDD format) that the file was generated.
PRINT_JOB_ID	Unique identifier for the print job associated with the file.
ENVELOPE	Collateral code for the envelope that will be used for this batch.
INSERT-LIST	A list of the collateral codes for inserts to be combined with the batch (hyphen separated).



File Name Element	Description
LAYOUT	The layout of the reports contained within the batch. Current options are STANDARD, LEGAL, LEGAL_PERF.
FILE-SPECIFIC-TAIL	A tail describing the information for the file, such as the print batch ID, file type, and file format. This information varies by file type.

### File Name Example

Below is an example of an unsorted omnibus file name.

AEPO-20120418-80-{AEPO\_0004\_N10\_CFL}-{GEN\_0000\_NO\_INSERT}-STANDARD-1-1-I-pdf.pdf

In this case, the file-specific extension (“1-1-I-pdf.pdf”) signifies the following:

1	Signifies the print batch ID. Subsequent print batch IDs would be 2, 3, etc.
1	Signifies the print chunk ID. Subsequent print chunk IDs would be 2, 3, etc.
I	Signifies the presort type, which may be “I” for internal presort or “E” for external presort. In this case, the “I” means that the reports were <i>internally</i> presorted at Oracle Utilities. The value “E,” by contrast, would indicate that the reports were <i>externally</i> presorted by a third-party vendor.  “Internal presorting” can mean one of two things: (a) Oracle Utilities does not presort the reports in a specific order, or (b) Oracle Utilities uses special processing software to sort the reports by geographic location. In the unsorted print workflow, the presort type will always be “I,” since Oracle Utilities does not presort the reports in a specific order and no third-party vendors are involved in presorting the reports.
pdf	Signifies the file type.
.pdf	Signifies the file format.

The rest of the file name will be identical to the corresponding index file.

## Fields

Not applicable.

## About the Index File

The index file is a .txt file that contains data used to describe and validate the reports in the omnibus file. For every unsorted omnibus file, there is a corresponding index file. It can be used by the print vendor to sort the reports in the report batch, and to validate the information in the batch for quality control purposes. For example, the data in the index file, such as the customer's name and mailing address, can be used to validate that it matches the information in the reports. Moreover, the index file specifies which insert(s) and envelope are to be associated with the reports in the report batch.

## Format

The index file is an electronic file in .txt format. It contains tab-separated values and uses UTF-8 encoding.

## File Name

The file name for the index file uses the following convention:

CLIENT-DATE-PRINT\_JOB\_ID-{ENVELOPE}-{INSERT-LIST}-LAYOUT-FILE-SPECIFIC-TAIL

**Note:** This is the same naming convention as the index file. Both file names may look identical, but are distinguished by their file-specific tails, which vary by file type (i.e., whether the file is an index file in text format or an omnibus file in PDF format). For more information on the meaning of each element in the naming convention, see "About the Unsorted Omnibus File," under "File Name."

## File Name Example

Below is an example of an index file name.

AEPO-20120418-80-{AEPO\_0004\_N10\_CFL}-{GEN\_0000\_NO\_INSERT}-STANDARD-1-1-addresses.txt

In this case, the file-specific tail ("1-1-addresses.txt") signifies the following:

1	Signifies the print batch ID. Subsequent print batch IDs would be 2, 3, etc.
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1	Signifies the print chunk ID. Subsequent print chunk IDs would be 2, 3, etc.
addresses	Signifies the file type. In this case, “addresses” refers to the unsorted list of addresses found in the index file.
.txt	Signifies the file format.

The rest of the file name will be identical to the corresponding unsorted omnibus file.

## Fields

The table below specifies the columns in the index file and what they mean.

Column Name	Description
report_id	Unique identifier for the report batch.
utility_customer_id	Unique identifier for each utility customer in the report batch.
form_code	Unique code for each report. Matches the serial number printed on the bottom of each report.
num_pages	Number of pages per report.
insert_code	Comma-separated list of codes for one or more inserts to be included with the reports in a given report batch.
envelope_code	Code for which envelope to use for the reports in a given report batch.
name	Name of addressee for each report.

Column Name	Description
mailing_address_line_1-6	Mailing address components arranged as they should appear on the reports. For example, in the US, line 6 = City, State Abbrev, and ZIP. In the UK, line 6 = Postal Code. Empty lines will be skipped when stamped.

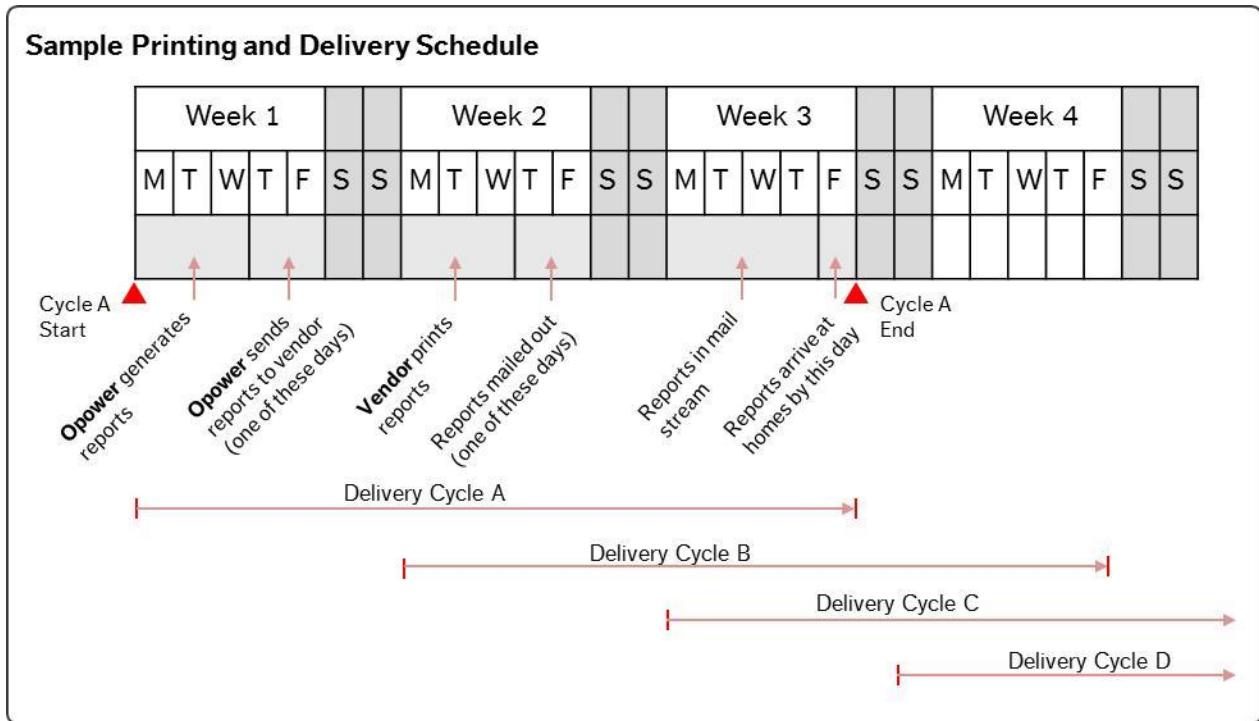
## File Delivery: When and How Files Are Sent

This section describes the details of file delivery: *when* Oracle Utilities sends files to print vendors and *how* the files are sent. Note that the details of file delivery are subject to the terms of each Service Level Agreement (SLA) between Oracle Utilities and the utility.

### Frequency of Delivery

The frequency with which Oracle Utilities sends files to the print vendor is primarily determined by how often reports are expected to arrive at customers' homes. Generally speaking, customers receive a report at their home once a month, once every two months, or once every quarter. (The details of home delivery are subject to the terms of the.) However, regardless of the home delivery frequency, print vendors usually still need to print and mail reports *once a week* to different groups of customers, rather than sending *all* reports to *all* customers at the same time. Therefore, report files are usually sent to the print vendor on a *weekly basis*. In terms of the overall mailing schedule, the weekly files are usually sent about *two weeks prior* to the day by which they are expected to arrive at customers' homes.

**Example:** The figure below gives an example of a common report generation, printing, and delivery schedule. In this example, the utility requires reports to be sent out on a weekly basis to different groups of customers.



**Note:** While the most common delivery schedule is for report files to be sent once a week, this may vary from print vendor to print vendor, and is subject to the terms of the SLA.

### Method of Delivery

The standard method Oracle Utilities uses to deliver files to the print vendor is via secure file transfer protocol (SFTP) to a server maintained by the print vendor. For this method, Oracle Utilities requires access to the print vendor’s server. The files are then uploaded on an established frequency, the details of which are subject to the terms of each SLA. See “Frequency of Delivery” for more information.

### Quality Assurance

This section explains how Oracle Utilities ensures that printed reports are verified. Three methods are used: form codes, seeds, and retains.

- **Form Code:** A form code is a unique alphanumeric identifier that appears on the lower left corner of reports. The form code is used to verify envelope and insert usage, provide sequencing information in case reports get out of order, and allow reports to be pulled and recreated very easily.
- **Seeds:** Seeds are reports that are printed and mailed to an Oracle Utilities address for inspection. For example, one seed may be printed for every 5,000 reports. The purpose is

for Oracle Utilities to verify that the correct report and insert (if applicable) were put into the correct envelope. Other inspection activities may be performed, such as checking color accuracy, color consistency, logo quality, and so on.

- **Retains:** Retains are reports that are printed and kept on site at the print vendor's facility for inspection. For example, one retain may be printed for every 5,000 reports. The purpose is for the print vendor to verify that the correct report and insert (if applicable) were put into the correct envelope. Other inspection activities may be performed, such as checking color accuracy, color consistency, logo quality, and so on.

## Appendix A: Sample Unsorted Omnibus File (Screenshot)

The sample screenshot below depicts what an omnibus file (also called a “report chunk”) looks like when it is opened in Adobe Acrobat. Each report is two pages long, and all the reports are concatenated. See “About the Unsorted Omnibus File” for more information.

**Note:** The file name that a print vendor sees will be different. A simpler file name was used in this case for illustration purposes. Also, names in the image have been redacted.

reports\_sampleOmnibus.pdf - Adobe Acrobat Pro

File Edit View Window Help

Create [Icons]

1 / 10 [Navigation Icons] 25% [Zoom]

Tools Comment Share

Page Thumbnails

1

2

3

4

**EnergyCo**

**Home Energy Report**  
 Estimated cost: \$2,500/yr  
 Report period: 12/01/11-01/2012

We are pleased to provide this personalized report to you as part of our energy saving program.

The purpose of this report is to:

- Provide information
- Track your progress
- Show energy-saving tips

This information and more available at [www.energysave.com](http://www.energysave.com)

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**Last Month Neighbor Comparison** | Tracked 436,148 kWh electricity (over your all-time neighbors)

Yours: 436,148 kWh  
 All Neighbors: 436,148 kWh

Who are your neighbors?  
 All Neighbors (Approximately 436,148 homes)  
 My Neighbors (Approximately 100 homes)

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**Last 12 Month Neighbor Comparison** | Tracked 5914,926 kWh electricity (over your all-time neighbors)

This compares you to 5914,926 homes.

Time series for usage

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**Personal Comparison**

How you're doing compared to last year

2011: 436,148 kWh  
 2012: 436,148 kWh

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**Action Steps** | Personalized tips chosen for your home

**Smart Investment**  
 A big one for big savings

☑ **Buy ENERGY STAR** and help the world reduce the energy footprint of its buildings. Buy energy-efficient or smart appliances and electronics, and the cost can be offset by federal tax credit. In your report you learn about the federal tax credit and other ways to save money on these smart buys.

THE ENERGY STAR APPLIANCE CAN SAVE AN AVERAGE HOUSEHOLD AN AVERAGE OF \$100 PER YEAR ON ENERGY BILLS. ENERGY STAR APPLIANCES ARE AVAILABLE AT MANY STORES AND ONLINE.

**\$600<sup>ST</sup>**

**Smart Investment**  
 A big one for big savings

☑ **Choose an efficient water heater.** The cost of an efficient water heater can be offset by federal tax credit. In your report you learn about the federal tax credit and other ways to save money on these smart buys.

THE ENERGY STAR WATER HEATER CAN SAVE AN AVERAGE HOUSEHOLD AN AVERAGE OF \$100 PER YEAR ON ENERGY BILLS. ENERGY STAR WATER HEATERS ARE AVAILABLE AT MANY STORES AND ONLINE.

**\$2,500<sup>ST</sup>**

**Smart Investment**  
 A big one for big savings

☑ **Choose an efficient air conditioner.** The cost of an efficient air conditioner can be offset by federal tax credit. In your report you learn about the federal tax credit and other ways to save money on these smart buys.

THE ENERGY STAR AIR CONDITIONER CAN SAVE AN AVERAGE HOUSEHOLD AN AVERAGE OF \$100 PER YEAR ON ENERGY BILLS. ENERGY STAR AIR CONDITIONERS ARE AVAILABLE AT MANY STORES AND ONLINE.

**\$15**

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**EnergyCo**

**Home Energy Report**  
 Estimated cost: \$2,500/yr  
 Report period: 12/01/11-01/2012

We are pleased to provide this personalized report to you as part of our energy saving program.

The purpose of this report is to:

- Provide information
- Track your progress
- Show energy-saving tips

This information and more available at [www.energysave.com](http://www.energysave.com)

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**Last Month Neighbor Comparison** | Tracked 436,148 kWh electricity (over your all-time neighbors)