

Standard Energy Efficiency Data Platform™



U.S. DEPARTMENT OF
ENERGY

Energy Efficiency &
Renewable Energy



SEED PLATFORM™ 2.6.0

Meter Data

Created
August 5, 2019

Importing Meter Data

Two types of Meter Data

- **Energy Star Portfolio Manager Monthly Data Spreadsheet**
 - Generated from “Manage Portfolio” in ENERGY STAR Portfolio Manager
 - Imported in the Data section of SEED
 - Upload Portfolio Manager Meter Usage**
 - It will be matched to existing Property records using the PM Property ID field
 - Any records without a matched property will not be imported
- **Green Button XML Interval Data**
 - Imported in the Property Detail Meter view

Multiple meters per building

- A building can have multiple meters from different sources and fuel types

Manage Portfolio

-  [Transfer ownership](#) of a property that you manage to another Portfolio Manager user.
-  [Upload and/or update multiple properties](#) at once using an Excel spreadsheet if you are a pro. This can be done to create new properties, add use details, create meters and add meter consumption data.
-  [Download your entire portfolio to Excel](#) or create a [custom download](#).
-  [Set a portfolio baseline and/or target](#) to help measure progress.
-  [Add sample properties](#) to your account. Up to five sample properties with pre-populated data will be added to your portfolio for testing purposes.

Import Meter Data: ENERGY STAR Portfolio Manager

- Generated from “Manage Portfolio”
- Make sure to get the first tab

| | A | B | C | D | E | F |
|---|------------------------------|----------------------|--------------------|------------------|-------------------|----------------|
| 1 | My Portfolio: Test City SEED | | | | | |
| 2 | 07/30/2019 08:21 PM EDT | | | | | |
| 3 | Total Properties: 10 | | | | | |
| 4 | | | | | | |
| 5 | | | | | | |
| 6 | Property Name | Portfolio Manager ID | Street Address | Street Address 2 | City/Municipality | State/Province |
| 7 | Office | 4544232 | 120243 E True Lane | Not Available | Berkeley | California |
| 8 | Shattuck Office | 4553585 | | | | |
| 9 | Campus Building 1 | 4868144 | | | | |
| | Properties | Property IDs | | | | |

PM Property ID
These PM Property
IDs must already
exist in the database
before importing the
Meter Data

Electricity
Monthly meter data

Manage Portfolio

[Transfer ownership](#) of a property that you manage to another Portfolio Manager user.

[Upload and/or update multiple properties](#) at once using an Excel spreadsheet if you are a pro. This can be done to create new properties, add use details, create meters and add meter consumption data.

[Download your entire portfolio to Excel or create a custom download.](#)

[Set a portfolio baseline and/or target](#) to help measure progress.

| | A | B | C | D | E | F | G | H | I | J | K | L |
|----|------------------------------|----------------------|----------------------------|---------------------|-----------------|----------------------|------------|----------|---------------|----------------|---------------------------|-----------|
| 1 | My Portfolio: Test City SEED | | | | | | | | | | | |
| 2 | 07/30/2019 08:21 PM EDT | | | | | | | | | | | |
| 3 | Total Properties: 10 | | | | | | | | | | | |
| 4 | | | | | | | | | | | | |
| 5 | | | | | | | | | | | | |
| 6 | Property Name | Portfolio Manager ID | Portfolio Manager Meter ID | Meter Name | Meter Type | Meter Consumption ID | Start Date | End Date | Delivery Date | Usage/Quantity | Usage Units | Cost (\$) |
| 7 | Office | 4544232 | 15711311 | Electric Grid Meter | Electric - Grid | 634390606 | 1/1/2014 | 1/1/2015 | Not Available | 11247 | kWh (thousand Watt-hours) | 2024 |
| 8 | Office | 4544232 | 15711310 | Natural Gas | Natural Gas | 634390605 | 1/1/2014 | 1/1/2015 | Not Available | 200 | therms | 190 |
| 9 | Shattuck Office | 4553585 | 15711413 | Natural Gas | Natural Gas | 634391257 | 3/6/2011 | 4/6/2012 | Not Available | 200 | therms | 190 |
| 10 | Shattuck Office | 4553585 | 15711414 | Electric Grid Meter | Electric - Grid | 2111780535 | 4/6/2017 | 5/6/2017 | Not Available | 10234 | kWh (thousand Watt-hours) | 1520 |
| 11 | Shattuck Office | 4553585 | 15711414 | Electric Grid Meter | Electric - Grid | 2111780536 | 5/6/2017 | 6/6/2017 | Not Available | 9356 | kWh (thousand Watt-hours) | 365 |
| 12 | Shattuck Office | 4553585 | 15711414 | Electric Grid Meter | Electric - Grid | 2111780537 | 6/6/2017 | 7/6/2017 | Not Available | 13256 | kWh (thousand Watt-hours) | 2035 |

“Meter Entries” tab contains monthly meter data, which SEED reads

Import Meter Data: ENERGY STAR Portfolio Manager

In the Data view, add the meter data by clicking

[Upload Portfolio Manager Meter Usage](#)

Click
**Upload Portfolio
Manager Meter Usage**

Upload your data.

Time Period **2019 Compliance Cycle**

Manage available cycles.

Upload a Spreadsheet

Upload a GeoJSON File

Upload Portfolio Manager Data

Upload Portfolio Manager Meter Usage

Import Portfolio Manager Data

Upload BuildingSync Data

Meters are not attached to Cycles, so it does not matter what the Cycle is set to when you upload Portfolio Manager Meter Usage files

Import Meter Data: ENERGY STAR Portfolio Manager

After uploading the file, the program will present a summary of the data in the file to be uploaded

Upload Portfolio Manager Meter Readings

SEED automatically maps **Property ID** in the original ENERGY STAR Portfolio Manager file to the SEED field **PM Property ID**, so this meter data can be matched to the existing Property records

| Meter Reading Counts | PM Property ID | PM Meter ID | Type | Incoming |
|----------------------|----------------|-------------|-----------------|----------|
| | 4544232 | 15711310 | Cost | 1 |
| | 4553585 | 15711413 | Natural Gas | 1 |
| | 4553585 | 15711413 | Cost | 1 |
| | 4553585 | 15711414 | Electric - Grid | 13 |
| | 4553585 | 15711414 | Cost | 13 |

Parsed Energy Types and Units

| Parsed Type | Parsed Unit |
|------------------|---------------------------|
| Natural Gas | therms |
| Cost | US Dollars |
| Electric - Solar | kWh (thousand Watt-hours) |
| Electric - Grid | kWh (thousand Watt-hours) |

Confirm

Dismiss

Click “Confirm” if you want to continue the upload.
Click “Dismiss” if you want to cancel the upload.

Import Meter Data: ENERGY STAR Portfolio Manager

Click the Confirm button, and the program will upload the data and present the import results

Confirm → Upload Portfolio Manager Meter Readings
Uploading ESPMCityBldgs-MeterEntriesOnly.xlsx
41% Complete

File is uploaded

Results of upload are displayed

Number of meter records is displayed for each meter

Portfolio Manager Meter Import Results

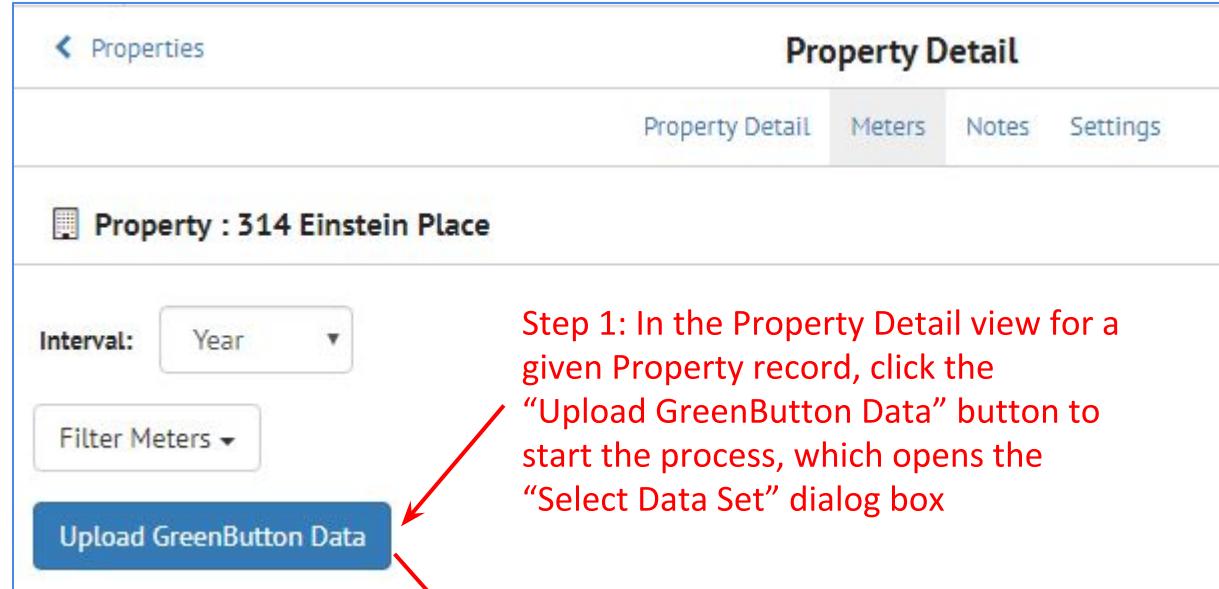
| Meter Reading Counts | | | | | |
|----------------------|----------------------------|-----------------|----------|-----------------------|--|
| PM Property ID | Portfolio Manager Meter ID | Type | Incoming | Successfully Imported | |
| 4553585 | 15711413 | Natural Gas | 1 | 1 | |
| 4553585 | 15711413 | Cost | 1 | 1 | |
| 4553585 | 15711414 | Electric - Grid | 13 | 13 | |
| 4553585 | 15711414 | Cost | 13 | 13 | |
| 4868144 | 19368261 | Electric - Grid | 12 | 12 | |

Two different meters (Natural gas and Electric-Grid) for the same building (PM Property ID)

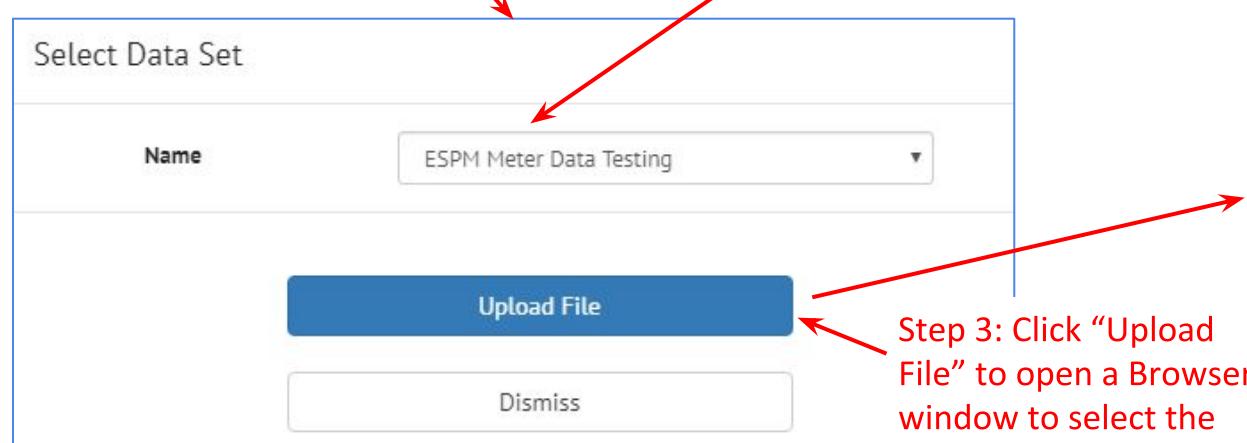
Dismiss

Import Meter Data: Green Button XML

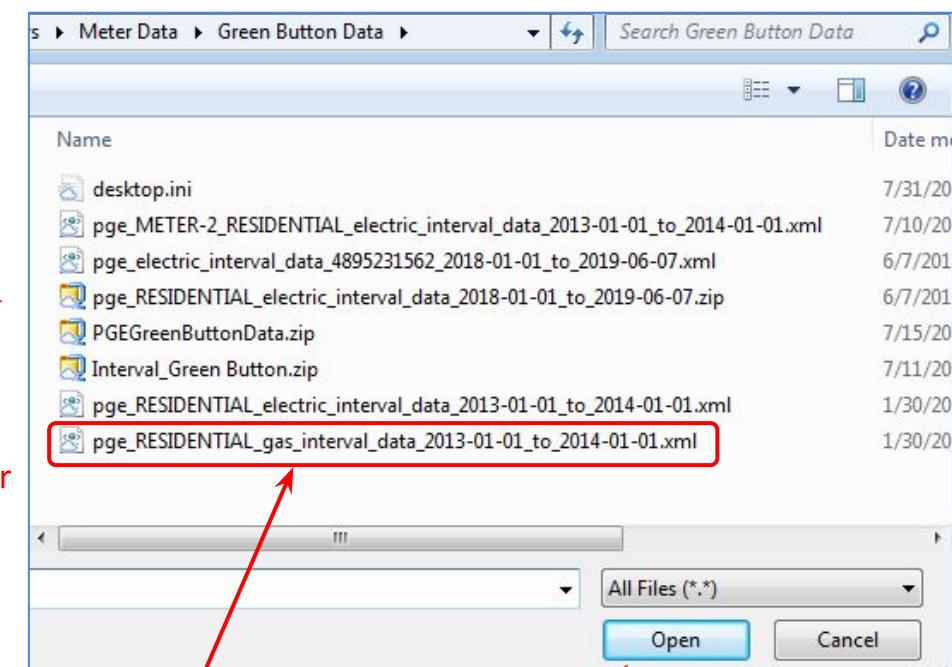
From the Property Detail view for a record, click the “Upload GreenButton Data” button



Screenshot of the Property Detail view for a record. The top navigation bar shows 'Properties' and tabs for 'Property Detail', 'Meters', 'Notes', and 'Settings'. Below the tabs, the property address is listed as 'Property : 314 Einstein Place'. On the left, there is an 'Interval:' dropdown set to 'Year' and a 'Filter Meters' button. A prominent blue button labeled 'Upload GreenButton Data' is located at the bottom left. Red annotations provide instructions: 'Step 1: In the Property Detail view for a given Property record, click the "Upload GreenButton Data" button to start the process, which opens the "Select Data Set" dialog box' points to the blue button; 'Step 2: Select the appropriate Dataset name' points to the 'Name' dropdown menu which contains the value 'ESPM Meter Data Testing'; 'Step 3: Click "Upload File" to open a Browser window to select the GreenButton XML file to upload.' points to the blue 'Upload File' button.



Screenshot of the 'Select Data Set' dialog box. It has a 'Name' dropdown menu containing 'ESPM Meter Data Testing'. At the bottom are two buttons: 'Upload File' (highlighted with a red arrow) and 'Dismiss'. Red annotations provide instructions: 'Step 2: Select the appropriate Dataset name' points to the 'Name' dropdown; 'Step 3: Click "Upload File" to open a Browser window to select the GreenButton XML file to upload.' points to the 'Upload File' button.



Step 4: Select the appropriate file and click Open

Import Meter Data: Green Button XML

From the Property Detail view for a record, click the “Upload GreenButton Data” button

Confirm GreenButton File Contents

| Meter Reading Counts | | |
|------------------------|-------------|----------|
| GreenButton UsagePoint | Type | Incoming |
| 4864658 | Natural Gas | 365 |

Parsed Energy Types and Units

| Parsed Type | Parsed Unit |
|-------------|-------------|
| Natural Gas | therms |

Confirm **Dismiss**

- Step 5: SEED displays a dialog box with a summary of the GreenButton data. Review this summary
- Click “Confirm” if you want to continue the upload.
 - Click “Dismiss” if you want to cancel the upload.

Uploading File

Uploading pge_RESIDENTIAL_gas_interval_data_2013-01-01_to_2014-01-01.xml

0% Complete

Dismiss

Step 7: Results of upload are displayed

Upload Complete

| Meter Reading Counts | | | |
|----------------------|-------------|----------|------------------------|
| GreenButton Usage... | Type | Incoming | Successfully Import... |
| 4864658 | Natural Gas | 365 | 365 |

Complete and Refresh Page **Dismiss**

Step 8: Click the Complete and Refresh Page button

Step 9: The data is added to the Meter view in Property Detail

- “GB” is added as a prefix to the meter number for GreenButton data

Filter Meters

| | |
|---------------------------------|-------------------------------------|
| Natural Gas - GB - 4864658 | <input checked="" type="checkbox"/> |
| Cost - PM - 46643762 | <input checked="" type="checkbox"/> |
| Electric - Grid - PM - 46643762 | <input checked="" type="checkbox"/> |
| Cost - PM - 46643764 | <input checked="" type="checkbox"/> |
| Natural Gas - PM - 46643764 | <input checked="" type="checkbox"/> |

Property Detail: Meter Data

To see the imported meter data:

Go to the **Inventory** view, **View by Property** tab, select the appropriate **Cycle**, click the **Info icon** to get to the **Property Detail** view, click the **Meters** link

The screenshot shows the 'INVENTORY' view with a red arrow pointing from the 'INVENTORY' button to the 'Meters' link in the navigation bar below. Another red arrow points from the 'Info' icon (an 'i' inside a blue speech bubble) in the 'View by Property' grid to the 'Property Detail' view below.

| | | Cycle: | 2019 Compliance Cycle |
|------------------|--|-----------------|----------------------------|
| View by Property | | View by Tax Lot | |
| | | PM Property ID | Property Type - Self-Sel.. |
| | | 4544232 | Office |
| | | 4553585 | Office |
| | | 4868144 | College/University |

The screenshot shows the 'Property Detail' view for property 6455438. A red arrow points from the 'Meters' tab in the navigation bar to the 'Upload GreenButton Data' button. Another red arrow points from the 'Upload GreenButton Data' button down to the data table below.

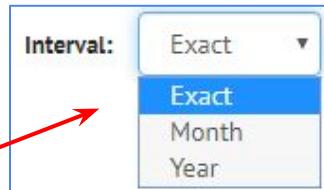
| Start Time ▲ | End Time ▼ | Natural Gas - PM - 46643726 (kBtu (thousand Btu)) ▼ | Electric - Grid - PM - 46643731 (kWh (thousand Watt-hours)) ▼ | Cost - PM - 46643731 (US Dollars) |
|---------------------|---------------------|---|---|-----------------------------------|
| 2014-12-12 00:00:00 | 2015-01-11 00:00:00 | | 160,627.60 | 12,047.07 |
| 2015-01-01 00:00:00 | 2015-01-31 00:00:00 | 544,000.00 | | |
| 2015-01-11 00:00:00 | 2015-02-10 00:00:00 | | 163,273.20 | 12,245.49 |
| 2015-02-01 00:00:00 | 2015-02-28 00:00:00 | 464,000.00 | | |
| 2015-02-10 00:00:00 | 2015-03-12 00:00:00 | | 169,400.90 | 12,705.07 |
| 2015-03-01 00:00:00 | 2015-03-31 00:00:00 | 368,000.00 | | |

Property Detail: Meter Data

Property : 314 Einstein Place

Interval: Year

Filter Meters ▾



Filter Meters ▾

| | | |
|----------------------|----------|-------------------------------------|
| Natural Gas - GB | 4864658 | <input checked="" type="checkbox"/> |
| Cost - PM | 46643762 | <input type="checkbox"/> |
| Electric - Grid - PM | 46643762 | <input type="checkbox"/> |
| Cost - PM | 46643764 | <input type="checkbox"/> |
| Natural Gas - PM | 46643764 | <input type="checkbox"/> |

The program will aggregate data based on the Interval selected.

- **Exact:** Shows the actual data as it was imported from the original source
- **Month:** Aggregates the data by month. If the data spans more than one month, the program cannot display the monthly aggregated data. The one exception is an end time of one month could be the beginning of the next month. For example, August 1 00:00:00 (but not 00:00:01) is an acceptable end time for an entry contained within the month of July.
- **Year:** Aggregates the data across each year of data. Similar to monthly aggregation, yearly aggregation accepts data with an end time of January 1 00:00:00 as part of the previous year.

It is possible to import multiple meters for a building. In this case, the “Filter Meters” option allows the data for each meter to be selected or not.

- GB is added as a prefix to the meter number for meters associated with GreenButton data
- PM is added as a prefix to the meter number for meters associated with ENERGY STAR Portfolio manager data

Property Detail: Meter Data

In this case, the monthly data spans more than one month, i.e., 1-11-2014 to 2-10-2015 is defined as one month.

This is shown by setting Interval == Exact

| Interval: | Exact | Start Time ▲▼ | End Time ▲▼ | Electric - Grid - PM - 46643762 (kWh (thousand Watt-hours)) ▲▼ | Cost - PM - 46643762 (US Dollars) |
|-----------|-------|---------------------|---------------------|--|-----------------------------------|
| | | | | | |
| | | 2015-01-11 00:00:00 | 2015-02-10 00:00:00 | 116,431.70 | 8,732.38 |
| | | 2015-02-10 00:00:00 | 2015-03-12 00:00:00 | 122,951.50 | 9,221.36 |
| | | 2015-03-12 00:00:00 | 2015-04-15 00:00:00 | 122,491.00 | 9,186.83 |

Therefore, choosing Interval=Month results in no data being displayed

| Interval: | Month | No Data |
|-----------|-------|---------|
| | | |

Exception:

If the data spans more than one month, the program cannot display the monthly aggregated data. The one exception is an end time of one month could be the beginning of the next month. For example, August 1 00:00:00 (but not 00:00:01 is an acceptable end time for an entry contained within the month of July).

| Year ▾ | Electric - Grid - PM - 46643762 (kWh (thousand Watt-hours)) ▾ | Cost - PM - 46643762 (US Dollars) |
|--------|---|-----------------------------------|
| | | |
| 2014 | 1,449,570.80 | 108,717.82 |
| 2015 | 1,427,786.70 | 107,084.02 |
| 2016 | 1,397,457.80 | 104,809.37 |
| 2017 | 381,000.00 | 29,390.00 |

Property Detail: Meter Data

In this case, the monthly data is fully contained within one month

Interval = Exact

All the data is displayed

| Start Time | End Time | Natural Gas - PM - 46643764 (kBtu (thousand Btu)) | Cost - PM - 46643764 (US Dollars) |
|---------------------|---------------------|---|-----------------------------------|
| 2014-01-01 00:00:00 | 2014-01-31 00:00:00 | 406,140.00 | 3,533.42 |
| 2015-01-01 00:00:00 | 2015-01-31 00:00:00 | 383,580.00 | 3,337.15 |
| 2015-02-01 00:00:00 | 2015-02-28 00:00:00 | 541,520.00 | 4,711.22 |
| 2015-03-01 00:00:00 | 2015-03-31 00:00:00 | 372,300.00 | 3,239.01 |

Interval = Month

Data is aggregated by month

| Month | Natural Gas - PM - 46643764 (kBtu (thousand Btu)) | Cost - PM - 46643764 (US Dollars) |
|---------------|---|-----------------------------------|
| January 2014 | 406,140.00 | 3,533.42 |
| February 2014 | 564,090.00 | 4,907.58 |
| March 2014 | 394,860.00 | 3,435.28 |
| April 2014 | 180,510.00 | 1,570.44 |
| May 2014 | 5,640.00 | 49.07 |

Exception:

If the data spans more than one month, the program cannot display the monthly aggregated data. The one exception is an end time of one month could be the beginning of the next month. For example, August 1 00:00:00 (but not 00:00:01) is an acceptable end time for an entry contained within the month of July.

Interval = Year

Data is aggregated by year

| Year | Natural Gas - PM - 46643764 (kBtu (thousand Btu)) | Cost - PM - 46643764 (US Dollars) |
|------|---|-----------------------------------|
| 2014 | 2,309,610.00 | 20,093.62 |
| 2015 | 2,031,110.00 | 17,670.66 |
| 2016 | 1,965,360.00 | 17,098.63 |
| 2017 | 1,090,000.00 | 8,910.00 |

Meter Data: Display Units

The units for the data in the Property Detail Meter view are controlled in the Organization / Settings view

The screenshot shows the 'Organizations' settings for 'LBNL 101'. The 'Settings' tab is selected. A modal window titled 'Meter energy display units (change one at a time)' is open, showing a dropdown menu for selecting an energy type and another for selecting a display unit.

Step 1:

- Select the energy type
- The current energy units setting will be displayed in parentheses

Step 2:
Select the “display unit” if you want to change it, in this case from kBtu to therms

Step 3: Click the Save Changes button

Step 4: In Property Details / Meters, the Natural Gas data is now displayed in therms

| Start Time | End Time | Natural Gas - GB - 4864658 (therms) |
|---------------------|---------------------|-------------------------------------|
| 2014-01-01 00:00:00 | 2014-01-02 00:00:00 | 0.00 |
| 2013-12-31 00:00:00 | 2014-01-01 00:00:00 | 2.08 |