# E-Allocation Software User Guide

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## Contents

# 1. Introduction

Eaton's E-Allocation Software is a User friendly, graphical User Interface (GUI) based Java application. It is designed to use data collected via meter to calculate and allocate utility usage for each tenant in a multi-tenant facility.

The E-Allocation software is provided free of charge by Eaton to support the Power Xpert Multi-Point Meter (PXMP Meter). This utility can be downloaded from the Eaton website at www.eaton.com/pxmp.

## 1.1 E-Allocation Software Overview

The E-Allocation software has the following key functionalities:

- E-Allocation is a Cost Allocation Report generating software that only supports the PXMP-EPM. E-Allocation supports one or more PXMP-EPM.

- Provides configuration menu for setting up Tenants, Utilities (WAGES), report logo, meter/tenant association, and manual meters.

- All configuration data is stored in various text files on the computer where E-Allocation is installed.

- Supports export of reports to Comma Delimited (*.csv) files.

- Supports email function for delivering reports to tenants.

- Reports include Source data, Metering Point Allocations, Tennant Details, Energy Allocation, Demand Allocation, utility Allocation, and Summary.

- Uses secure FTP connection to retrieve energy data files stored on PXMP-EPM.

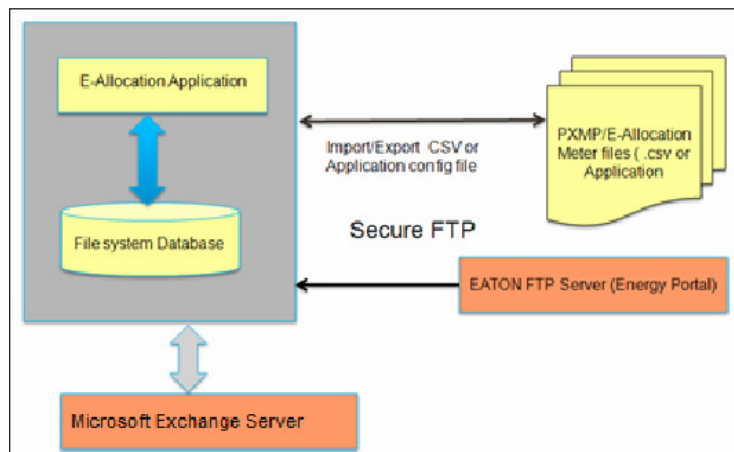**Figure 1** contains the high level block diagram of the E-Allocation software.



**Figure 1. Main Screen for Entering the Base Electrical System Information.**
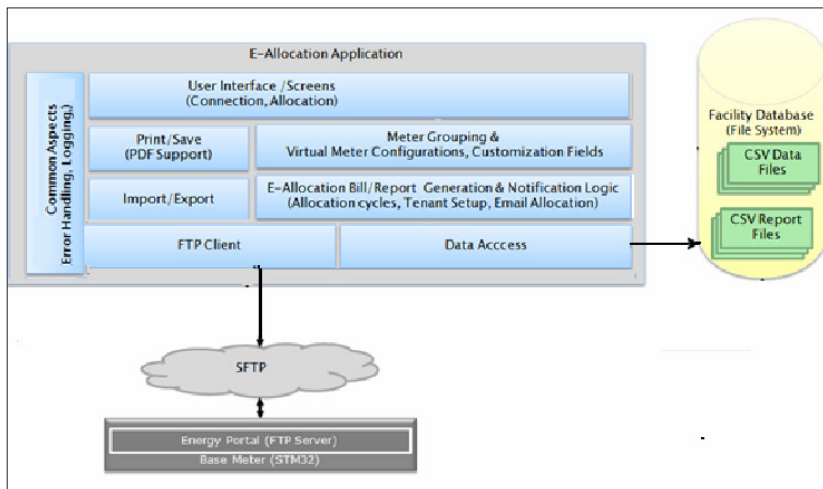
# 1. Introduction



**Figure 2. E-Allocation Software Components.**

## 1.1.1 How It Works

- The E-Allocation Software retrieves Energy data, stored in csv files, from the PXMP-EPM via a secure FTP connection and stores these files on the computer where E-Allocation is installed.

- The E-Allocation software stores configuration details about each meter and its tenant's into its own database (file system). It also stores all the data related to energy consumption into this database.

- The E-Allocation software database is a file system based database that can easily be transferred to different computer systems.

- The E-Allocation software is responsible for retrieving the required .csv files from the FTP server and synchronizing (updating) with the E-Allocation database.

- The E-Allocation software supports view, edit logs, and recovery of E-Allocation reports in case of error from E-Allocation application Database.

- The E-Allocation software sends emails to respective tenant(s) as per the configuration via Enterprise E-Mail server.

- The E-Allocation software has password recovery functionality so that the "Admin" User is able to retrieve/reset passwords.

## 1.1.2 PXMP E-Allocation v1.3

PXMP E-Allocation v 1.3 can co-exist with E-Allocation 1.2. For bill generation in case energy files are not available, then the older version of E-Allocation needs to be used.

- E-Allocation v1.3 displays Start kWh and End kWh columns and Rate Column.

- E-Allocation v1.3 only supports PXMP-EPM v2.4.0 (and greater). Upgrading E-Allocation to v1.3 on actively metering systems will require both versions of E-Allocation. E-Allocation v1.3 can co-exist with E-Allocation v1.2 (and earlier).

- Upgrading to v1.3 on actively metering systems and configured meter and tenant associations, only the Edit Meters and Edit Tenants will transfer over - everything else will need to be re-entered.
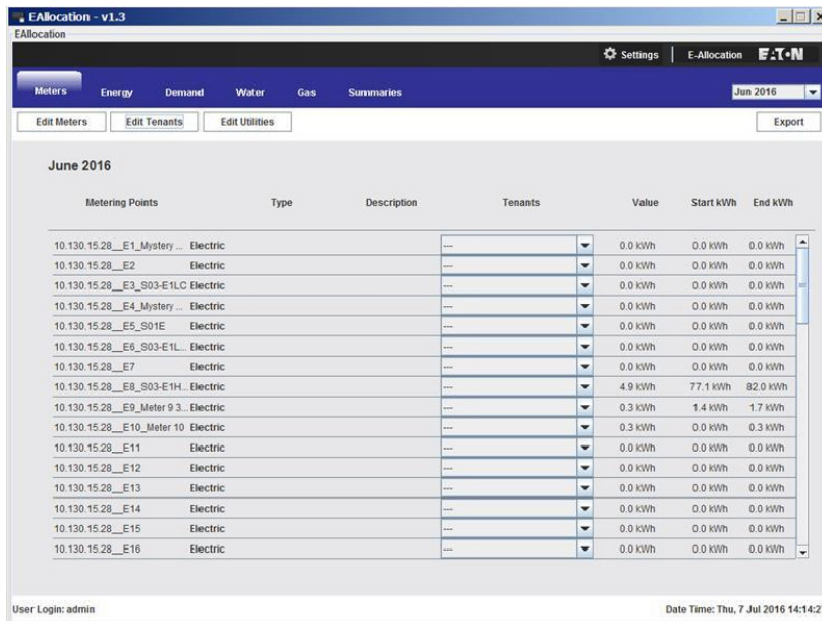
**Figure 3. The New E-Allocation v1.3 Screen.**

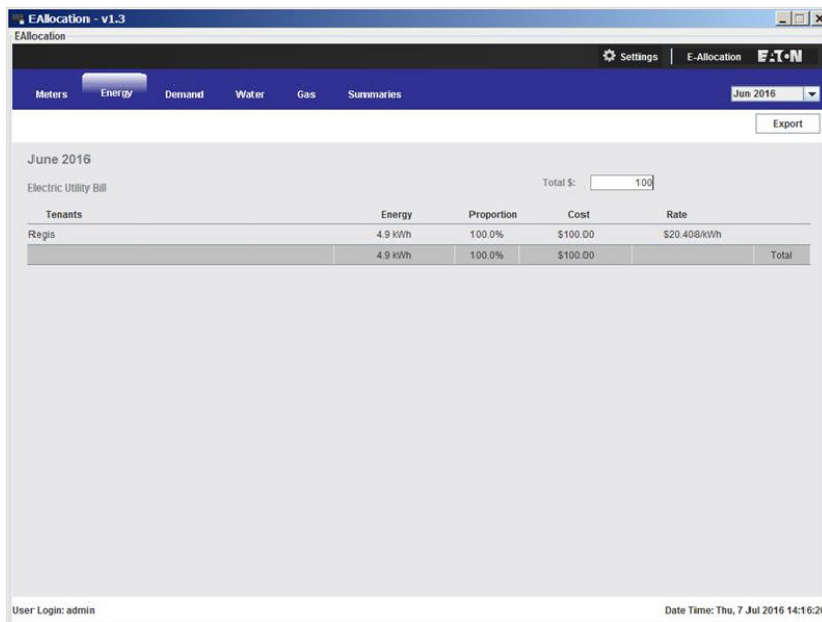- E-Allocation v1.3 Energy, Demand, Water, Gas now displays Rate column.



**Figure 4. The Rate Column on the New E-Allocation v1.3 Screen.**

# 1. Introduction

### 1.1.3 Key Features

- **Secure Login**
  Because it contains sensitive information, the facility manager can be identified as the only one with access to this software. Therefore, a username and password are required before any data can be viewed.

- **Range-based Configuration**
  Each date range has its own configuration.

- **Support for Multiple PXMP Meters**
  Multiple PXMP meters with Energy Portal Modules can be entered into the E-Allocation software. The E-Allocation software will identify the sub-meters and associated tenants for allocation purposes.

- **Support for Manual-Entry Meters**
  Additional metering points can be added as manual-entry meters. These meters can accept both positive and negative values for maximum flexibility.

- **Support for Energy, Demand, and Utilities**
  The E-Allocation software supports allocations by energy, demand, water, gas, air, and steam by default. PXMP sub-meters contain energy and demand information and PXMP Meters contain demand, water, gas, air, or steam data. Manual-entry meters also contain energy, water, gas, air, or steam data.

- **Custom Tenant Information**
  Tenants can be created and deleted at the User's discretion. Optional header fields for tenants are available. These headers are used when allocation reports are created directly from the E-Allocation software.

- **Custom Meter-Tenant Mapping**
  Tenants can be associated with one or more sub-meters or manual-entry meters. A tenant may also be associated with part of one of these meters. This association is used directly for allocation.

- **Cost Allocation**
  The User may enter a cost for a utility, and that cost will be divided into each tenant according to their usage.

- **Data Export**
  The User can utilize the E-Allocation software to export data gathered at any stage in its usage. Thus the following data can be exported:

  - Source data from the PXMP meters; same format as it is received

  - Tenant details, including associated meter mapping

  - Metering point totals, as seen on the Metering Page

  - Usage and cost allocation breakdown per utility

  - Summary of each tenant's usage and allocated costs

- **Report Creation**
  E-Allocation supports the creation of PDF files that contain each tenant's custom header, usage, allocated costs, and start and end energy consumption details.

- **E-mail**
  E-Allocation can e-mail created reports to each tenant using SMTP access to an e-mail server.

- **Configuration Export / Import**
  Configuration, including the meters, tenants, meter-tenant mappings, and ranges, is transferrable between installations of E-Allocation software.

- **Persistent Data Storage**
  When a date range is selected, the pertinent data is downloaded to the PC. This data is then kept in offline storage and updated when a new range is created and the offline storage does not have complete information. The User also has a way of clearing the offline storage and reloading the data.

- **Additional Utilities**
  The E-Allocation software supports adding other utilities besides energy, water, and gas. These new utilities are treated in the same way as energy, water, or gas.

- **Manual Edit of Allocations**
  The E-Allocation software allows the User to edit any values in an allocation.

- **Tenant Merge Wizard**
  The E-Allocation software contains a guided step-by-step process that will merge two tenants together. The end result will be one tenant with all of mappings of the previous two tenants.

- **Tenant Split Wizard**
  The E-Allocation software contains a guided step-by-step process that will split a tenant into two different tenants. This can be done by ratio or by date-range.

## 1.2 Minimum System Requirements

The E-Allocation software can be run on a computer or laptop equipped with JAVA Version 7.0 or higher.

The E-Allocation software can be run on the following types of systems.

- Linux i386
- Linux x86_64
- Mac 10.5
- Windows 32-Bit
- Windows 64-Bit

## 1.3 Acronyms

| CSV | Comma Separated Values |
|---|---|
| Ft3 | Cubic Foot (Feet) |
| FTP | File Transfer Protocol |
| gal | Gallon |
| GUI | Graphical User Interface |
| kW | Kilowatt(s) |
| kWh | Kilowatt Hour(s) |
| lbs | Pounds |
| PXMP Meter | Power Xpert Multi-point Meter |
| SFTP | Secure File Transfer Protocol |
| SMTP | Simple Mail Transfer Protocol |

## 1.4 Glossary

**Manual-Entry Meter:** A metering point for Users of the E-Allocation software to enter meter data not found on the PXMP Meter. It is effectively a pulse meter with a fixed value defined by the User. It can be defined as any kind of utility.

**Metering Point:** Refers to a sub-meter, pulse meter, or manual-entry meter. A metering point can be allocated to multiple tenants.

**Pulse Meter:** A metering point defined in the PXMP meter configuration software as a pulse meter. It is trended and can be defined as any kind of utility.

**Sub-meter:** A metering point defined in the PXMP Meter configuration software as a sub-meter. It may have one, two, or three phases, but it is always considered to have a utility type of electric.

**Tenant:** The receiver of the allocation. A tenant can be associated with one or more metering points. Tenants can have an e-mail address and a header, which are needed if an allocation is created and e-mailed to the tenant.

**Utility:** A category for allocation. The main types are electric, water, and gas. Electric is sub-divided into energy and demand. A utility that is Electric is considered both energy and demand.

## 2. Installing the E-Allocation Software

The E-Allocation installation wizard installs the E-Allocation
program files onto a User's computer. The wizard
requires the User to have administrator rights to install the
E-Allocation program files.

1.   Double click the "setup.exe" file to launch the
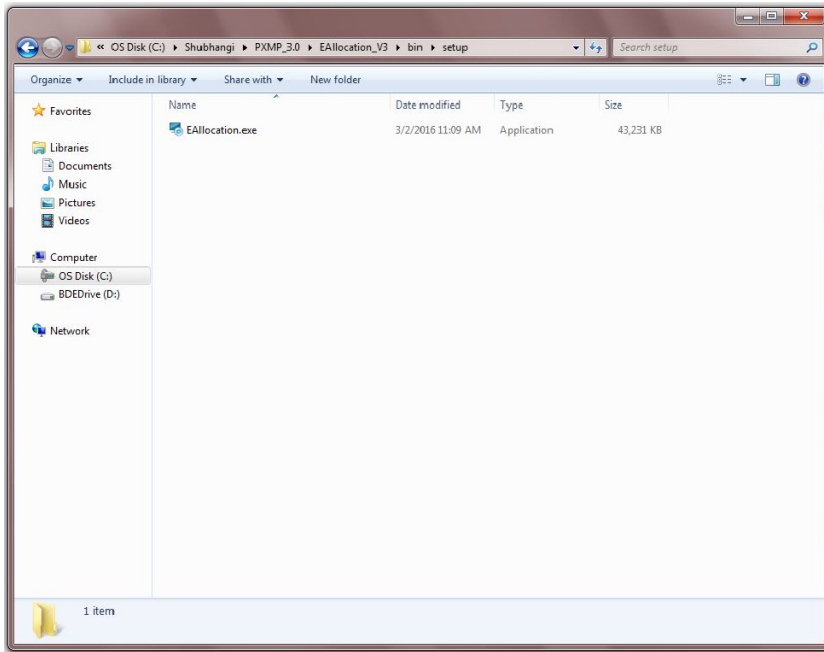     E-Allocation installation wizard.



**Figure 5. E-Allocation Software Installation Files.**

2.  In the E-Allocation installation wizard window, click "**Next"** to proceed to the E-Allocation Software Installation Wizard Welcome Screen.



**Figure 6. The E-Allocation Software Installation Wizard Welcome Screen.**

3.  On the License Agreement screen, select "I accept the terms in the license agreement" and click "**Next"**. Administrator rights are required to proceed and install the E-Allocation program files.  Click "**Install"** to continue.
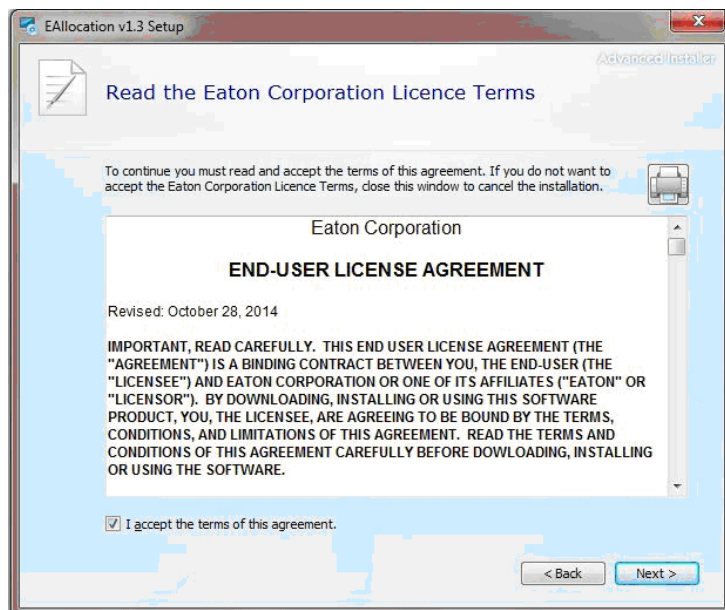


**Figure 7.  License Agreement for the Installation of the EAllocation Set Up.**

## 2. Installing the E-Allocation Software
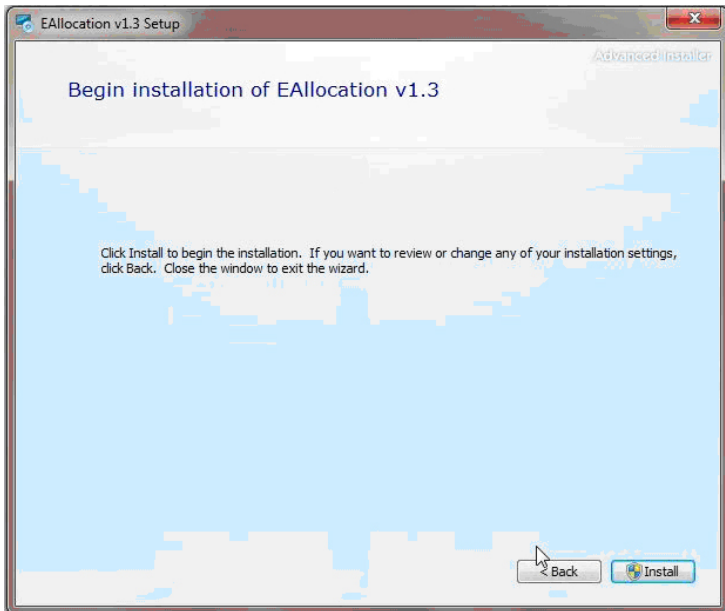


**Figure 8. The Ready to Install the Program Screen.**

4. Click **"Yes"** in the User Account Control screen to continue with the installation. The installation wizard will guide the User through the rest of the installation process.
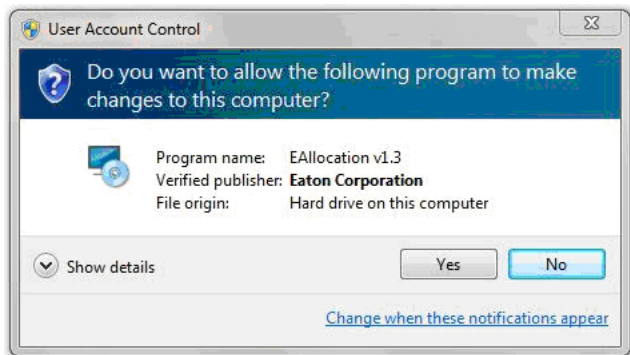


**Figure 9. The User Account Control Screen.**

5. The InstallShield Wizard Completed screen appears upon a successful completion of the installation. Click **"Finish"** to exit the wizard.
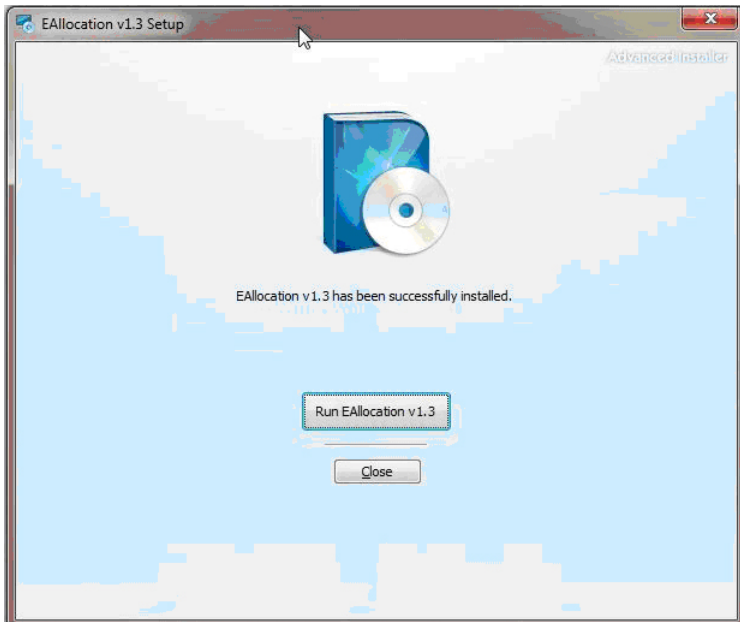
**Figure 10. The Install Shield Wizard Completed Screen.**

## 3. Running the E-Allocation Software

The E-Allocation software provides an easy to use User interface to allocate multiple utilities and their associated costs among various tenants. The software's main screen, as it appears the first time a User logs in, is shown in **Figure 11**.
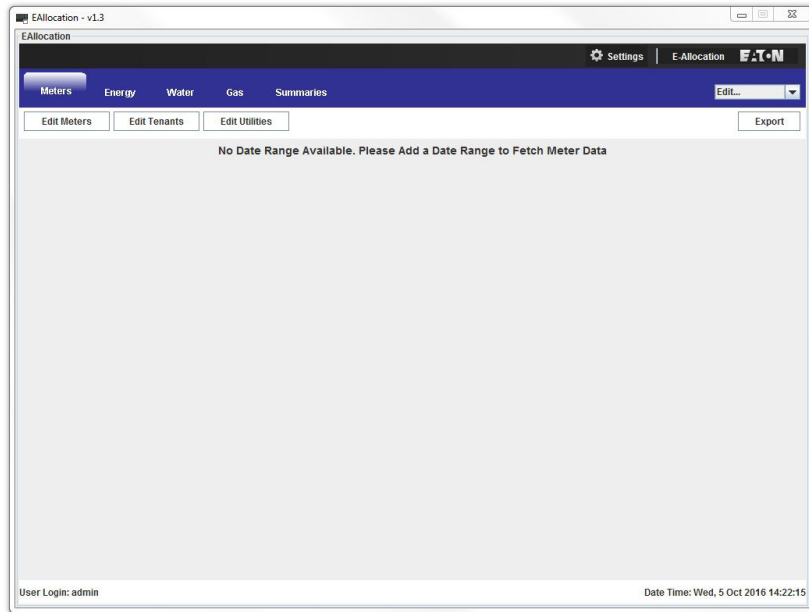


**Figure 11. Main Screen of the E-Allocation Software.**

To add or edit meters, tenants, and utilities, the User clicks the corresponding buttons on the top left side of the screen. The User can also perform those tasks by clicking on the "Settings" icon on the bar across the top of the screen. A "Settings" dialog box appears after the User clicks on the "Settings" icon (see **Figure 12**).
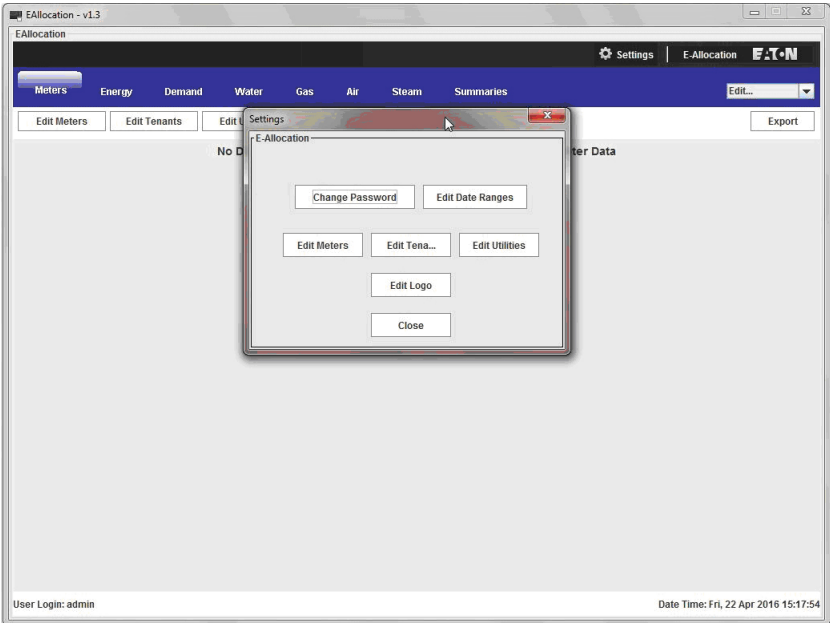
**Figure 12. The Settings Dialog Box.**

It is useful to set date ranges before adding or modifying other information. To do so, click the "Edit Date Range" button in the "Settings" dialog box (see **Figure 13**). The User can create multiple date ranges, modify start and end dates of each date range, and delete date ranges that are no longer useful.
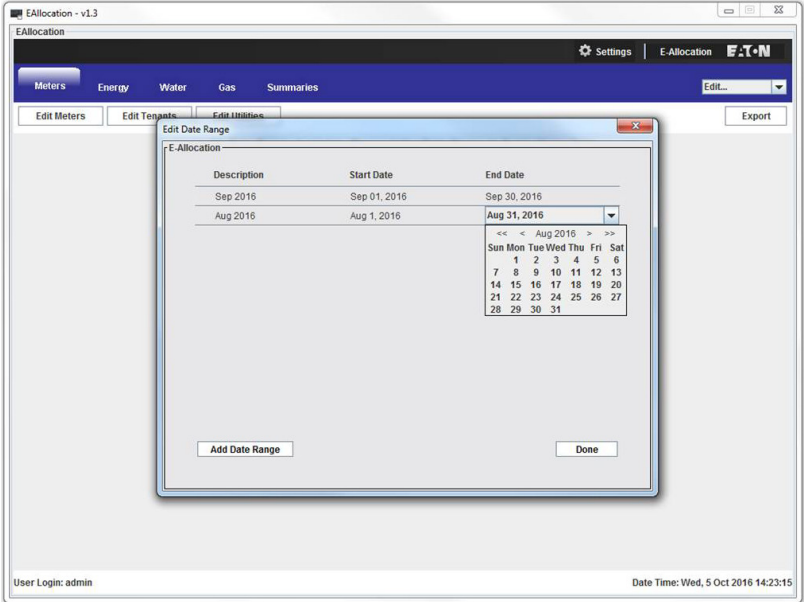


**Figure 13. Setting and Modifying Date Ranges.**

# 3. Running the E-Allocation Software

The date ranges that are created in the "Edit Date Range" dialog box can be accessed directly from the software main screen using the pull-down list on the top right (see **Figure 14**).
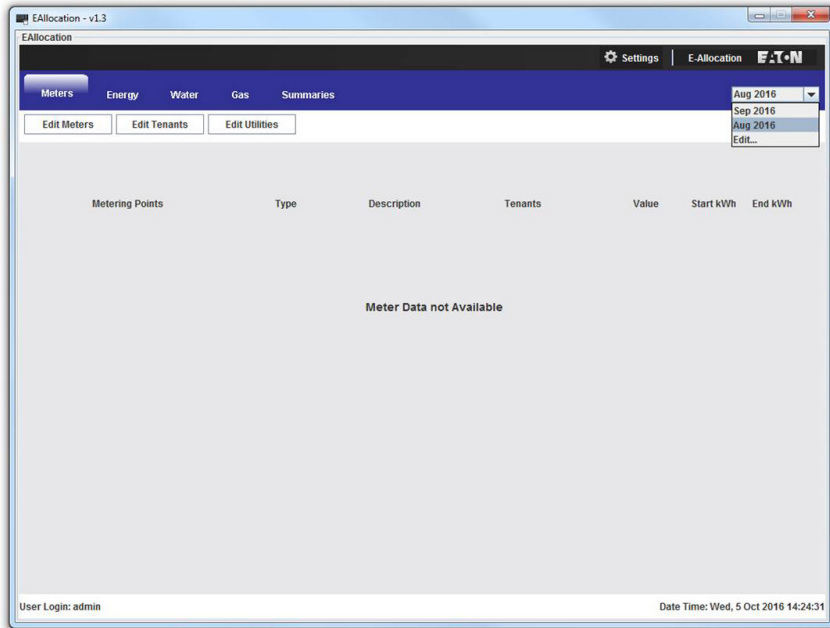


**Figure 14. Select a Date Range from the Main Screen.**

The E-Allocation software can be configured to access multiple PXMP Meters. To do so, from the "Settings" dialog box, click the "Edit Meters" button, and then click the "Add Power Xpert Multi-Point Meter" button. In the "address" field, the User needs to specify corresponding IP addresses when adding PXMP Meters (see **Figure 15**).
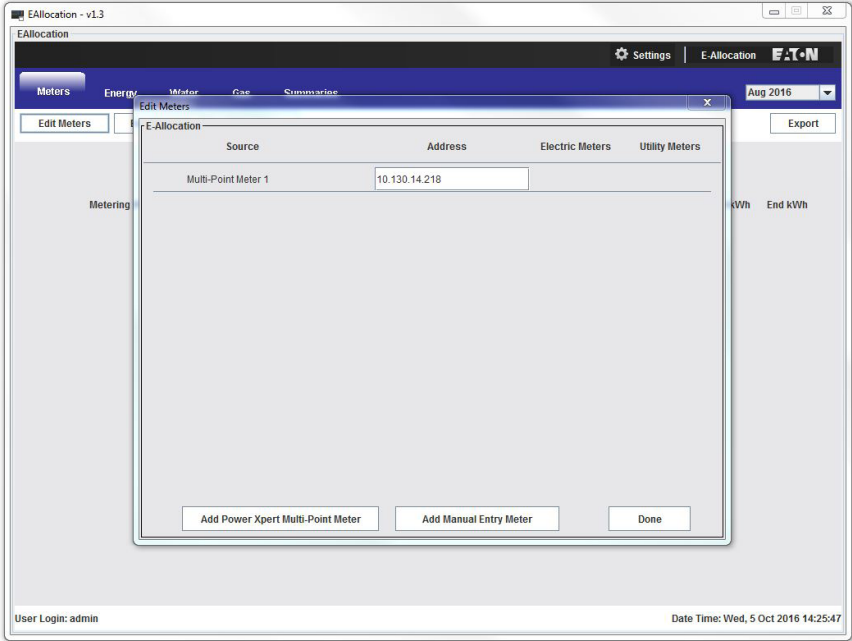
**Figure 15. Adding a PXMP Meter.**
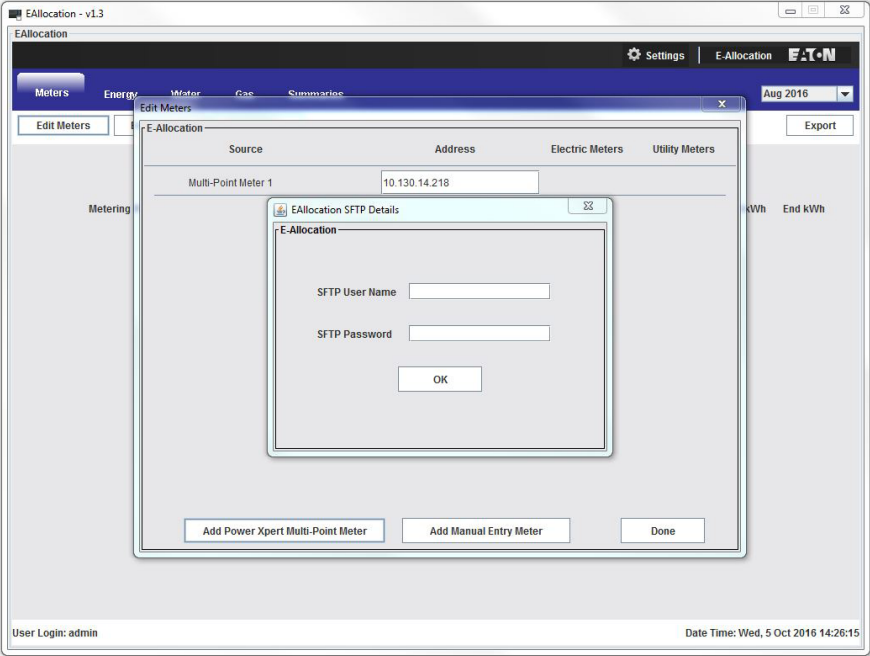


**Figure 16. Specifying a User Name and Password.**

# 3. Running the E-Allocation Software

The User may create manual entry meters without physi-
cally connecting to the PXMP Meters. To do so, click the
"Add Manual Meter" button in the "Settings" dialog box.  In
**Figure 17**, a total of six manual meters have been entered
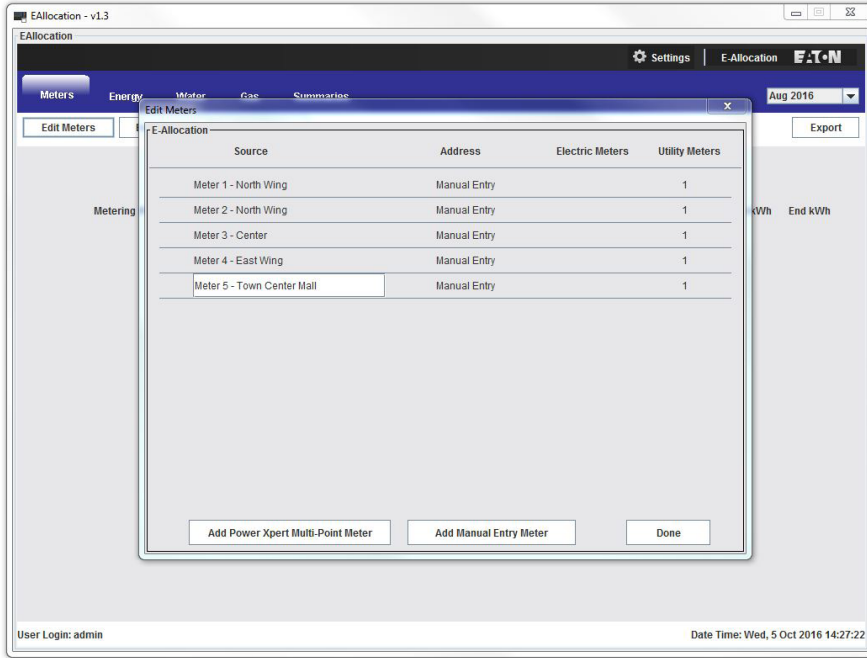in the "Edit Meters" dialog box.



**Figure 17. Adding Manual Entry Meters.**

Next, the tenant information needs to be entered into the E-Allocation software. To do so, click the "Edit Tenants" button in the "Settings" dialog box. In the example in **Figure 18**, a total of three tenants have been added to the tenants list. The tenant information can also be modified or deleted from the "Edit Tenants" dialog box.
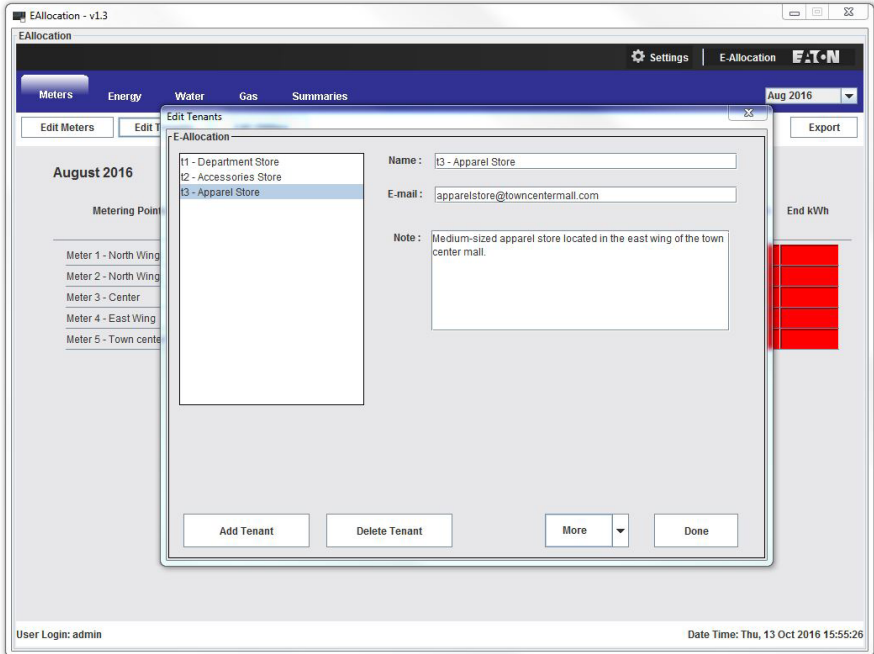


**Figure 18. Adding/Editing Tenant Information.**

The E-Allocation software allows the User to split the following utilities and their associated costs among multiple tenants.

- Energy;
- Demand;
- Water;
- Gas;
- Air; and
- Steam.

# 3. Running the E-Allocation Software

To choose one or more utilities from the list shown in **Figure 18,** click the "Edit Utilities" button in the "Settings" dialog box.  In the example shown in **Figure 19**, the electric energy, water, and natural gas have been selected.  The selected utilities will appear as separate tabs on the main screen, in the same line as the "Meters" and "Summaries" tabs.
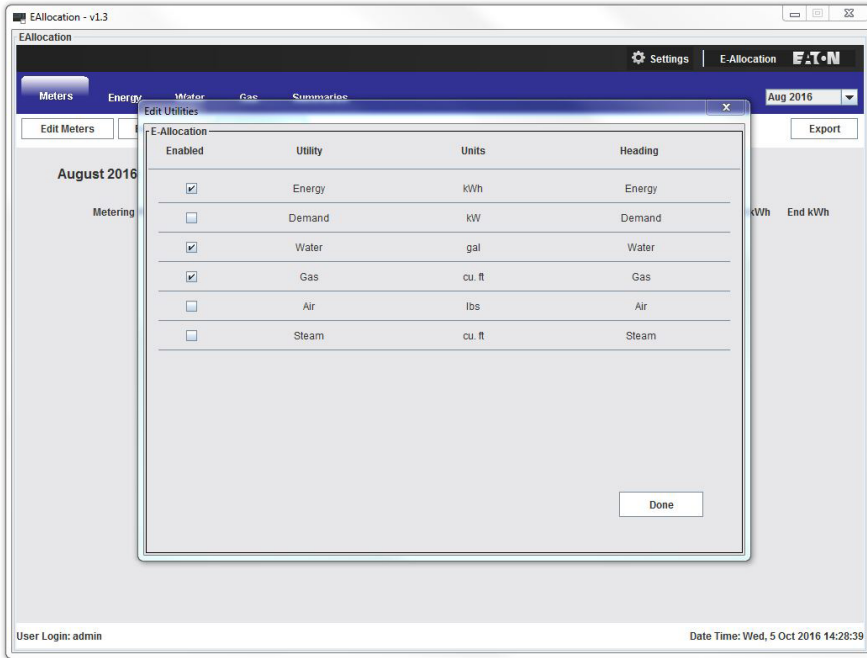


**Figure 19. Editing Utilities Information.**

Once this process is completed, the meters entered in the "Edit Meters" dialog box will appear on the E-Allocation software's main screen under the "Meters" tab.  Each meter is associated with a meter type.  For a manual meter, the user can modify its type, description, tenants, value and start and end kWh by editing the appropriate fields (see **Figure 20**).
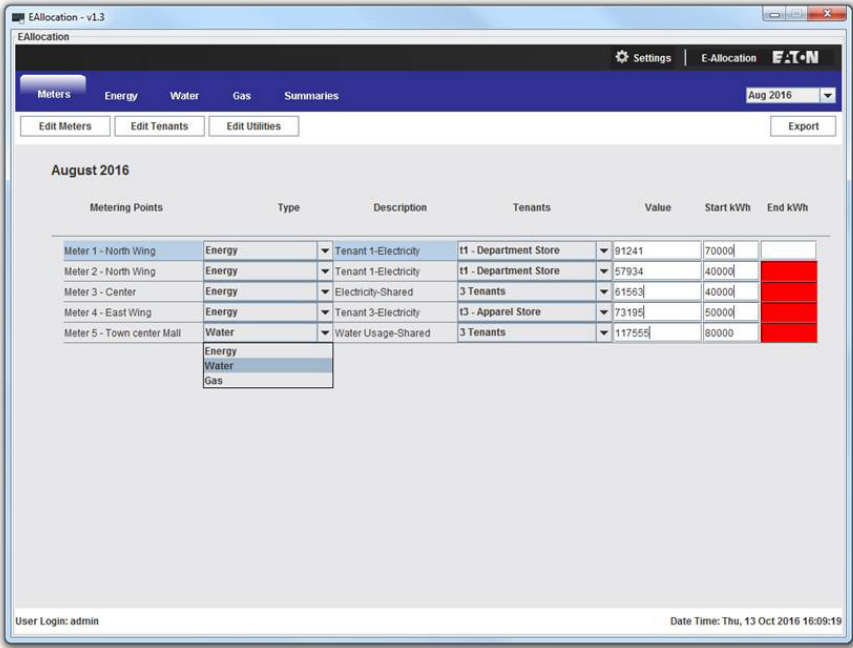
**Figure 20.  Modifying the Meter Type.**

To determine the exact split of metered utilities and associated costs, the User must specify the tenants' proportions for each meter.  In the example in **Figure 21**, meter 6 measures the natural gas consumption at the Town Center
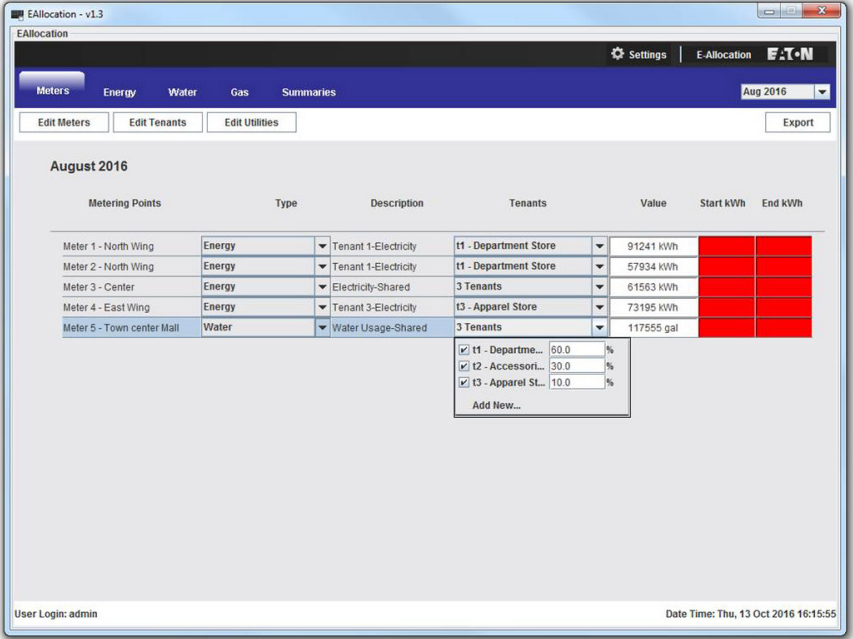


**Figure 21. Entering Utility Usage Information.**

# 3. Running the E-Allocation Software

Mall. The total gas consumption in the month of March 2013 is split among three tenants. Tenant 1 consumes 60% of the total natural gas, tenant 2 consumes 30%, and tenant 3 consumes the remaining 10%.

Based on the provided inputs in the main screen under the "Meters" tab (**Figure 21**), the E-Allocation software automatically calculates the proportions that each tenant is responsible for and displays such information under corresponding tabs. For example, **Figure 22** shows under the "Energy" tab each tenant's share of the electric energy consumed in the month of March 2013.
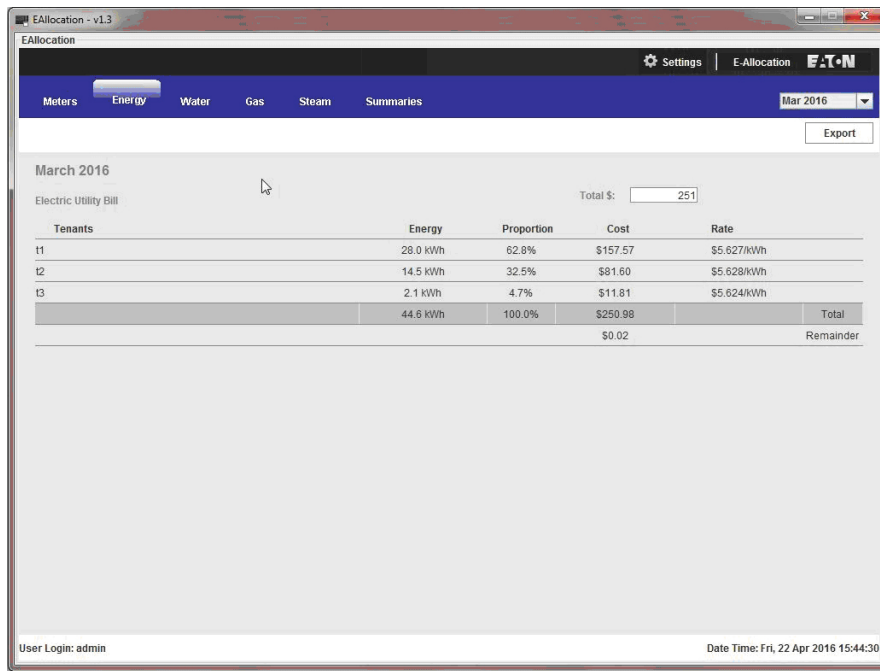


**Figure 22. Tenants' Electric Utility Allocated Proportions.**

For a particular utility bill, if the User enters the total amount allocated in the "Total $" field, the E-Allocation software will calculate the cost that each tenant incurs. In **Figure 23**, the User entered 2817.1 in the "Total $" field, and this amount is split automatically among the tenants.
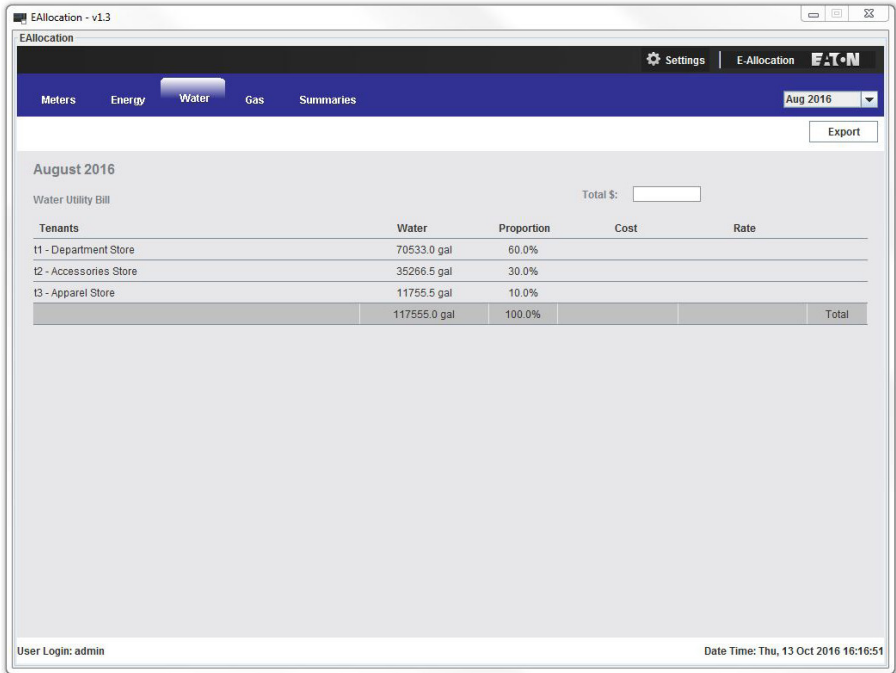
**Figure 23. Water Allocation Split Among Tenants.**

The "Summaries" tab provides a chart with an overall view of all the utilities and each tenant's incurred proportions. Information on costs, if available, is also listed here (see **Figure 24**).
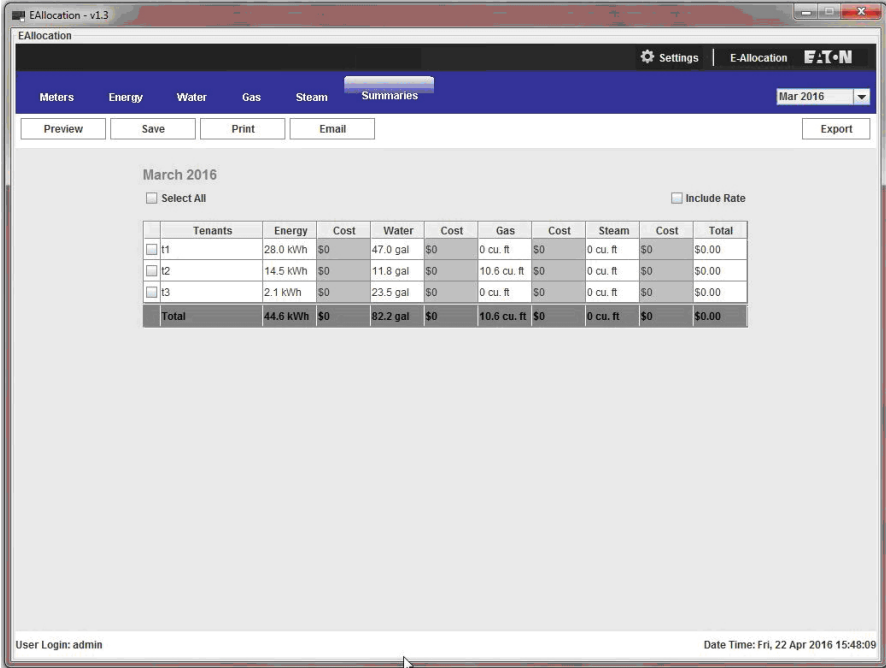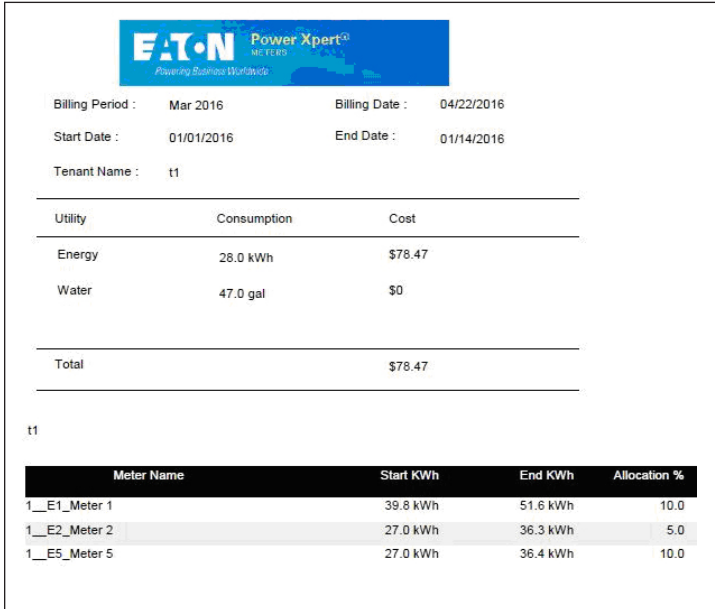


**Figure 24. The Summaries Page.**

# 3. Running the E-Allocation Software

The user may choose to preview the results by first selecting appropriate tenants in the "Summaries" tab, and then clicking the "Preview" button on the top left. The example in **Figure 25** displays a consolidated PDF with tenants' utility consumptions, costs, and start and end kWh.
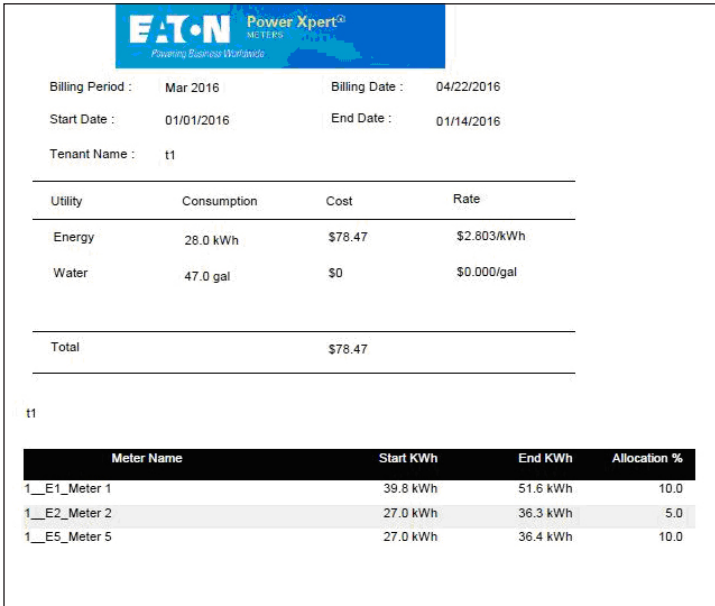


**Figure 25. Preview Results without Rates.**



**Figure 26. Preview Results with Rates.**

**Changing E-Allocation Report Logo**

E-Allocation v1.2 includes support for customized billing firm name and logo. To access this function, select E-Allocation > Settings > Edit Logo.
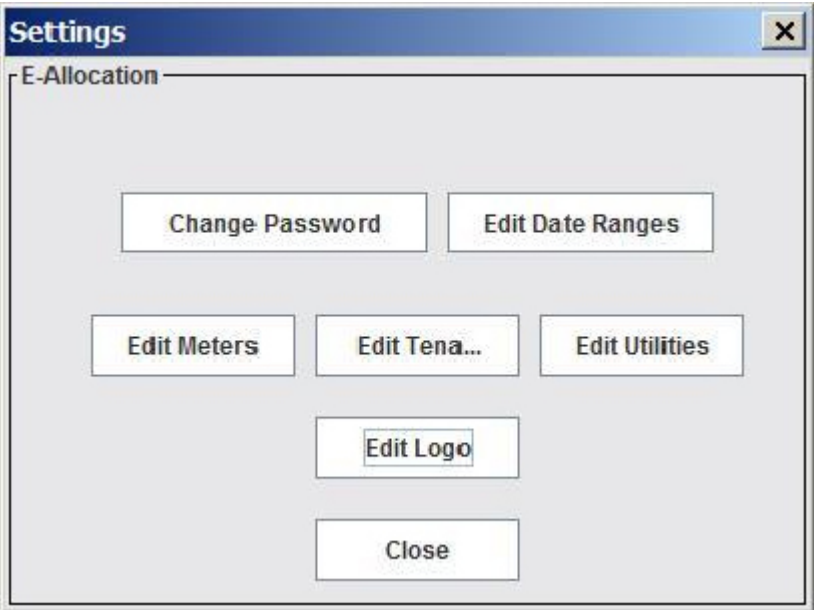


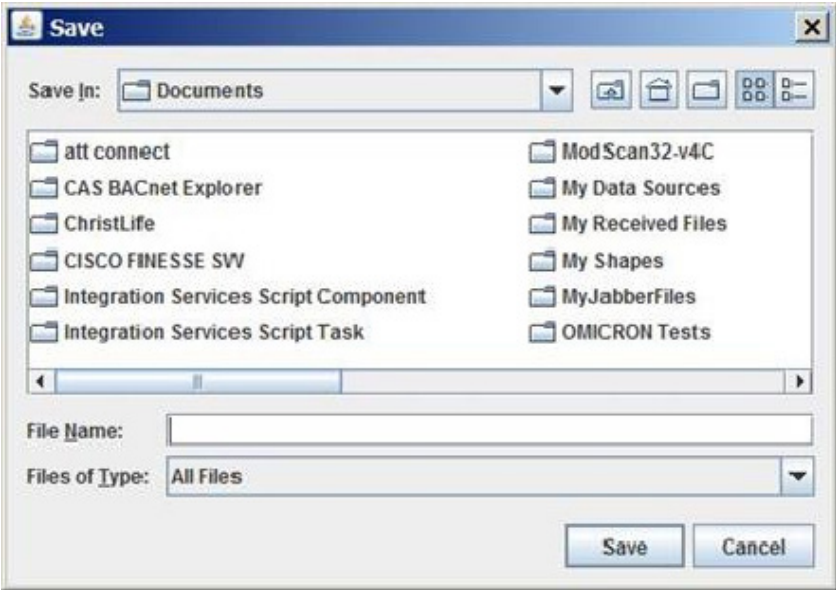**Figure 27. The Edit Logo Button on the Settings Screen.**



**Figure 28. Assigning a New File Name.**

# 3. Running the E-Allocation Software



**Figure 29. Typical Appearance of the Company Name and Logo Added to the Bill.**

**Table 1. FTP File Names Containing Energy Power.**

**PXMP-EPM v2.3.1 FTP > Energy Folder**

| |
| --- |
| Apparent_Power_LP_Q1Q4 |
| Apparent_Power_LP_Q2Q3 |
| Power_LP_FW |
| Power_LP_RW |
| Pulse_LP |
| Reactive_Power_LP_Q1 |
| Reactive_Power_LP_Q2 |
| Reactive_Power_LP_Q3 |
| Reactive_Power_LP_Q4 |

The "Save" button under the "Summaries" tab saves detailed utility consumptions and costs for each tenant in a folder designated by the User. The "Print" button prints the results, and the "Email" button emails information through an SMTP server to designated email address(es). In the example in **Figure 30,** the User fills in the appropriate fields in the "Email" dialog box to allow message(s) be sent to the intended recipient(s).
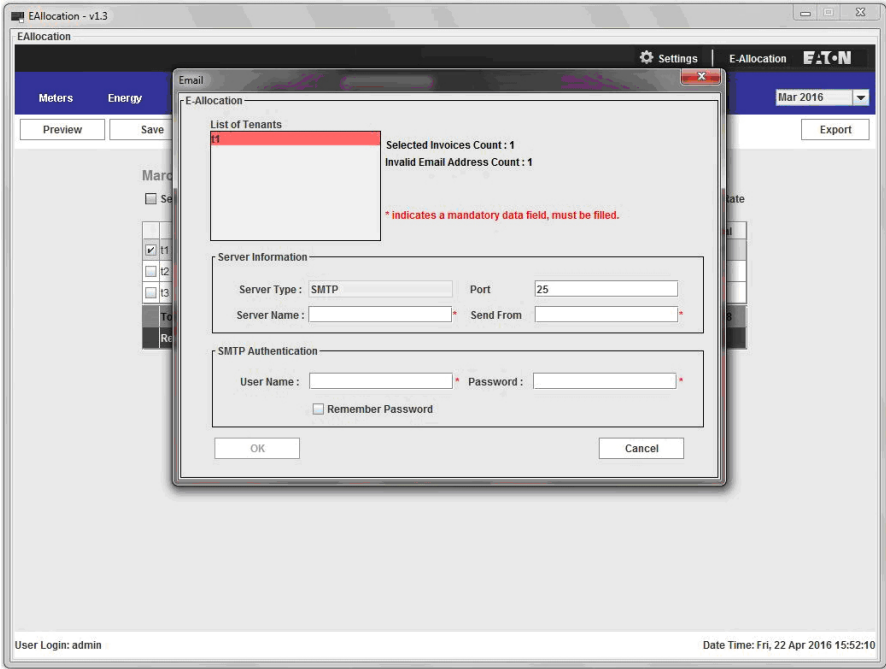
**Figure 30. Email Results Window.**

To export selected information in a comma separated value (CSV) format to a folder designated by the User, click the "Export" button on the top right. In the example in **Figure 31**, the summary information has been selected for export.
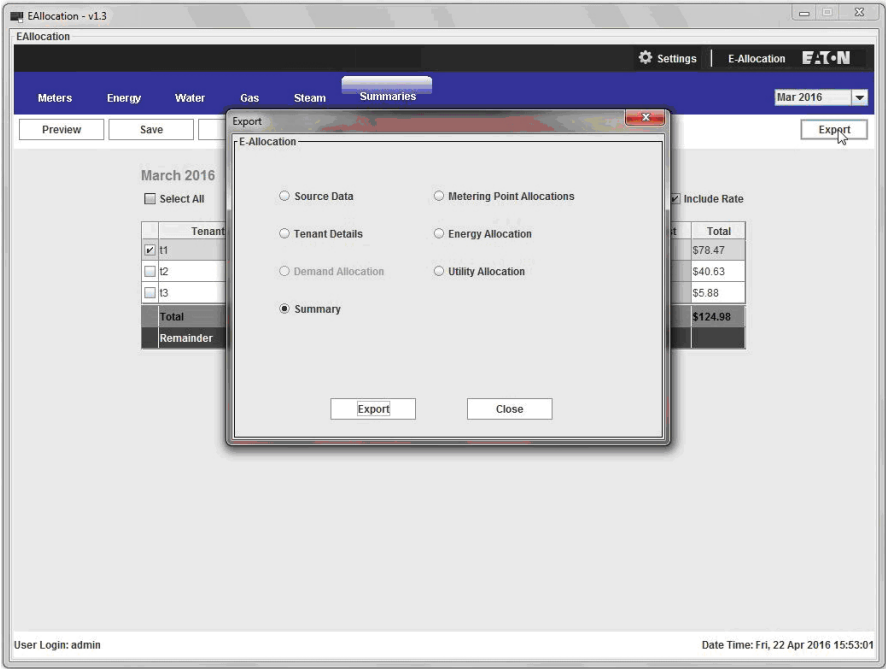


**Figure 31. Export Data Window.**

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