



State of Tennessee Utility Data Management (UDM)

Facility Management Refresher
Training
January 27, 2021



Revenue growth divisions.

- TYU division
- FRT division

Projected sales of main products in 2013

Share of market activity

Passive market share

	TYU division		FRT division			
GHT	254	550	254	274	154	415
RDW	650	320	754	273	825	154
TRG	241	450	144	364	954	174
RTG	254	650	874	657	125	274
WEF	784	145	124	752	741	759
HRT	453	784	954	241	741	345

About SFUM

The State Facility Utility Management (SFUM) section is part of the Office of Energy Programs (OEP) within TN Department of Environment and Conservation (TDEC).

SFUM was formed January 1, 2017 in response to Executive Order 63 transferring to TDEC the building management statutory responsibilities for State-owned and managed properties (Tenn. Code Ann. §§ 4-3-1012 and 4-3-1017-1019) previously held by the Department of General Services.

SFUM is responsible for several utility savings and building energy management initiatives, including the following:

- Development and maintenance of an online Utility Data Management (UDM) platform for State-owned and managed facilities.
- Oversight of energy efficiency projects under the EmPower TN initiative, designed to reduce energy consumption and utility costs for participating State facilities through the implementation of energy efficient technologies and/or energy management systems.
- Provision of no-cost technical assistance to State agencies and public higher education facilities to promote the implementation of energy management, energy efficiency, and/or renewable energy projects that meet the needs, budgets, and priorities of participating entities.

Meet the SFUM team

- Jeremy McBride, Senior Data Analyst & Energy Consultant, Jeremy.McBride@tn.gov
- Natalie Dallriva, Energy Analyst, Natalie.Dallriva@tn.gov
- Greg Jones, Data Entry & Platform Maintenance Specialist, Greg.S.Jones@tn.gov
- Ryan Stanton, Sr. Consultant for Strategic Energy Initiatives, Ryan.K.Stanton@tn.gov
- Rick Kumar-Rathor, Energy Consultant, Rick.Kumar-Rathor@tn.gov
- Russell Tedrow, Grants Analyst 2, Russell.V.Tedrow@tn.gov



UDM Platform Overview

The UDM platform data is captured and stored by the State's third-party vendor EnergyCAP, Inc. The platform stores data for utility costs and usage for approximately 8,000 State-owned and managed facilities (approximately 105 million square feet). UDM is predominantly used for utility tracking, reporting, benchmarking, and bill payment integration for General Government agencies. UDM also stores historical data and provides ongoing data feeds for all known and active State utility accounts.



**77 Agencies &
Higher Education
Organizations**



**8,000+ State-
owned & managed
Facilities**



**10,600+ Utility Meters
8,800+ Accounts**

EnergyCAP

INTRODUCTION



John Pierce

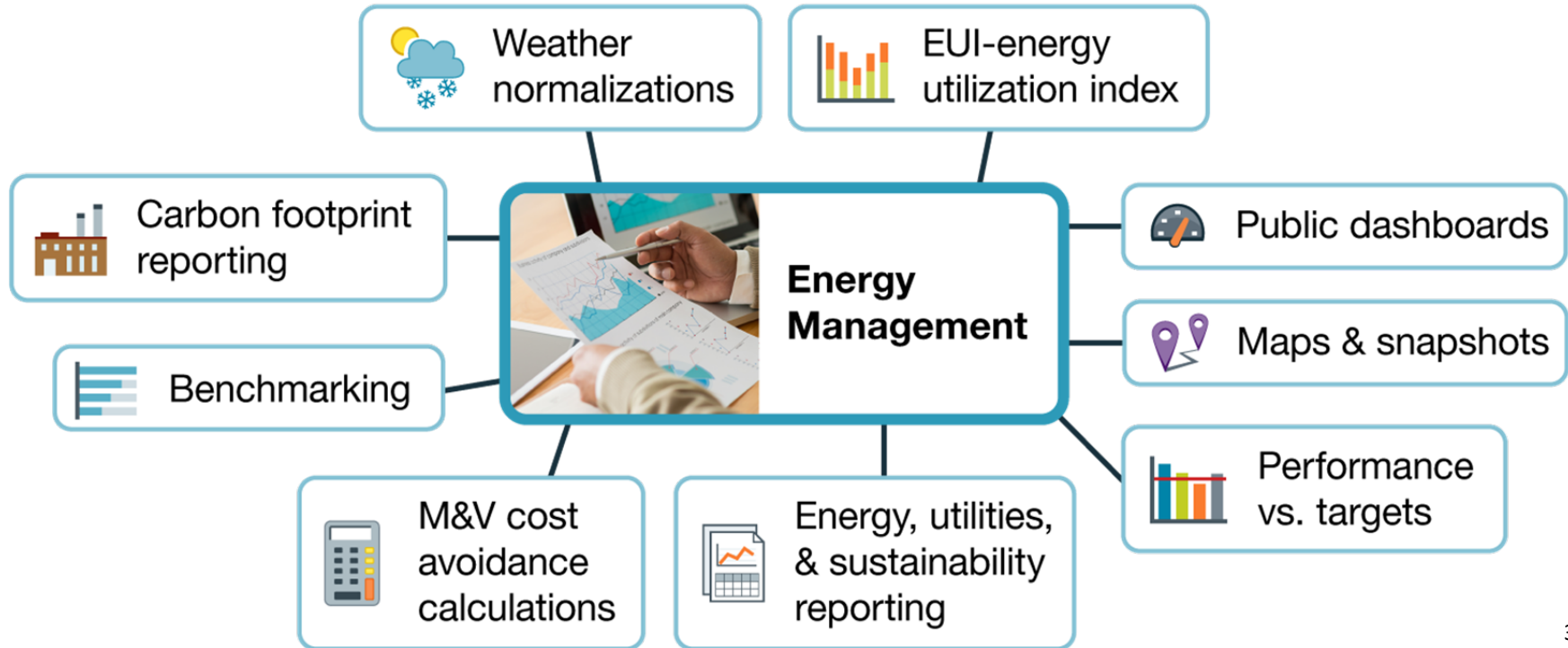
Assistant VP, Project Management Office

ENERGYCAP®

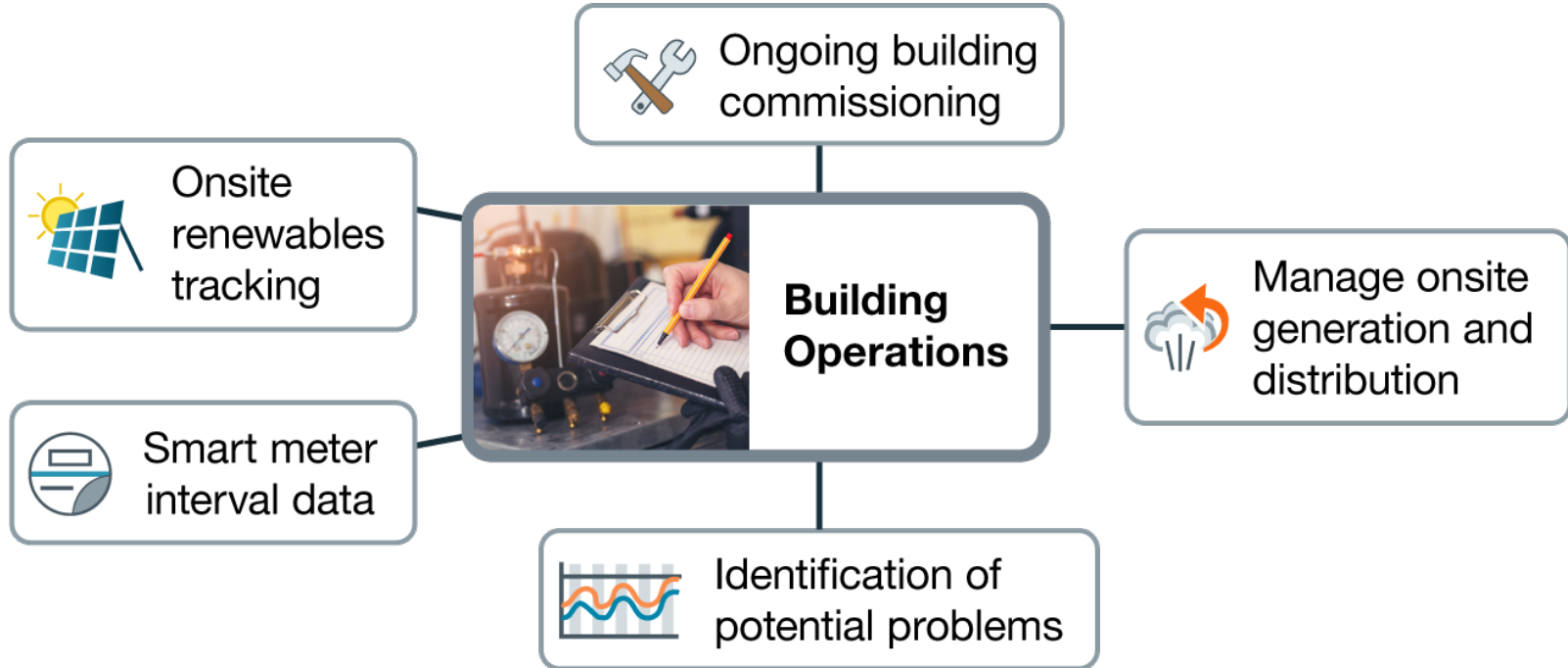
EnergyCAP

VALUE

Value



Value



EnergyCAP

LOGIN

Login

EnergyCAP Login

my.energycap.com/app/login

Enterprise

Username

Username

Password

*

Datasource

tennessee

Remember Me

Log In

Single Sign On | Support

Supported Internet Browsers:



Chrome



Firefox



Edge

Navigate to: <https://my.energycap.com>

Enter Username (TN email address)

Enter Password

Enter Datasource of tennessee

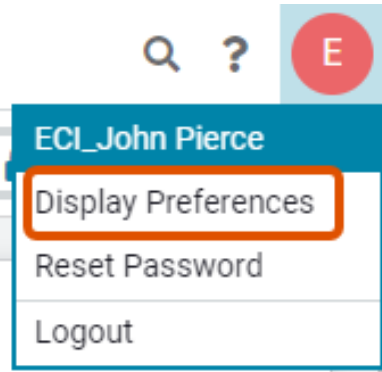
Check “Remember Me”

Log In

Display Preferences

1. Click the User Icon (top right corner)

Select “Display Preferences”



2. Update your display preferences

3. Click Save

Display Preferences Cancel Save

Primary Display		Language	English
Buildings and Organizations	<input type="text" value="name"/> <input type="text" value="code"/>	Date Format	MM/DD/YYYY
Meters	<input type="text" value="name"/> <input type="text" value="code"/>	Time zone	(UTC) Coordinated Universal Time
Accounts	<input type="text" value="name"/> <input type="text" value="number"/>	Time Format	24 Hour (13:00)
Other Data Types	<input type="text" value="name"/> <input type="text" value="code"/>		
Bill List Page Length	<input type="text" value="100 bills/page"/>		
Trend Charts			
Display	<input type="text" value="5 years"/>	of Data	

EnergyCAP

NAVIGATION

Navigating EnergyCAP

Search & Hyperlinks

Navigation Overview

Module Overview

EnergyCAP Object Properties



Search & Hyperlinks

1. Click the Search Icon (top right corner)








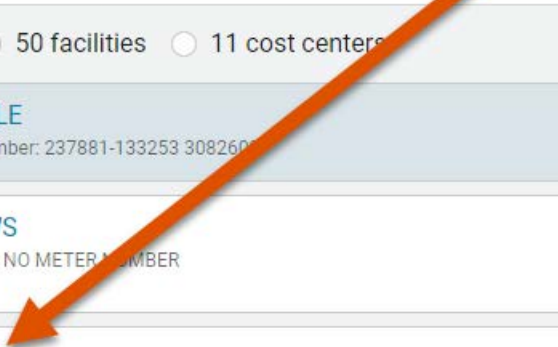
2. Enter the search value.

 Close

3. Click hyperlink

50 meters 50 accounts 50 facilities 11 cost centers

-  [1020 Jackson Hill Road - ELE](#)
237881-133253 3082602 / Serial number: 237881-133253 3082602
-  [1020 Jackson Hill Road - WS](#)
0076-09008-001-WS / Serial number: NO METER NUMBER
United States
-  [1050 Jackson Hill Rd - ELE](#)
237895-133263-3082612 / Serial number: 237895-133263-3082612
-  [115 E Jackson Blvd # 4 - ELE](#)
248962001-ELE / Serial number: 302492
-  [115 E Jackson Blvd # 6 - ELE](#)
248962002-ELE / Serial number: 302236



Navigation Overview

The screenshot displays the 'State of Tennessee - General Government' energy management system. The interface includes a left-hand navigation bar, a top search bar, and a main content area with various data visualizations. Red callout boxes highlight key navigation features:

- Create:** A red callout box points to the '+' icon in the left navigation bar.
- Settings and View Options:** A red callout box points to the gear icon in the left navigation bar.
- Hierarchy Structure:** A red callout box points to the tree view of organizational units in the left navigation bar.
- Module Navigation:** A red callout box points to the 'Buildings & Meters' header in the left navigation bar.
- Search:** A red callout box points to the search icon in the top right corner.
- Primary Navigation Bar:** A red callout box points to the top navigation tabs: 'Actual Data', 'Calendarized Data', 'Normalized Data', 'Savings', 'Energy Projects', 'Properties', and 'Flags'.
- Secondary Navigation:** A red callout box points to the sub-navigation tabs: 'Summary', 'Commodity', 'Monthly', and 'Greenhouse Gas'.

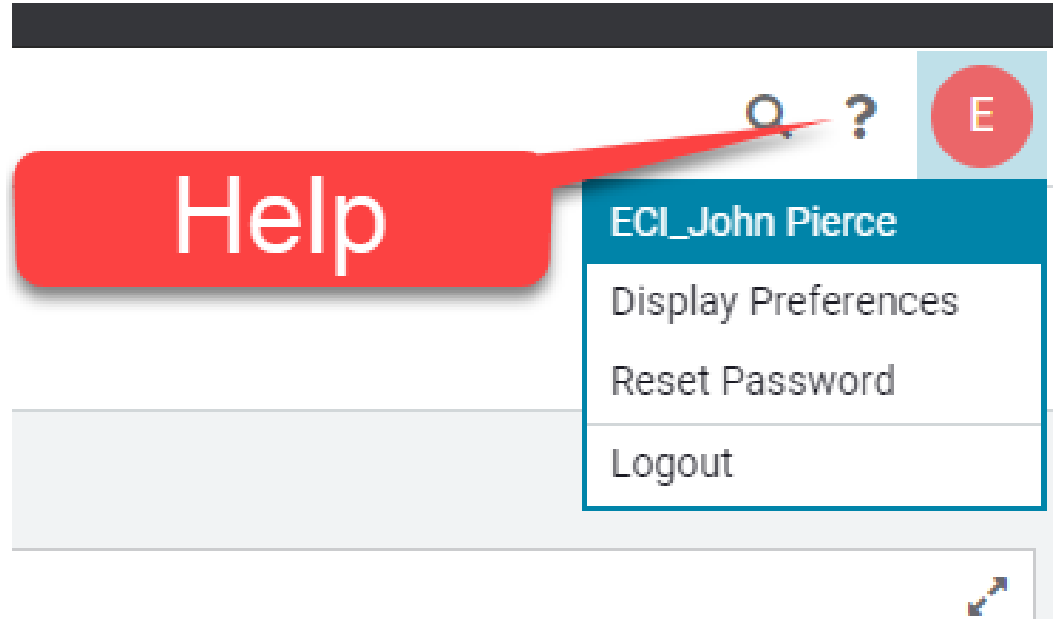
The main content area shows a 'Total Cost Summary' bar chart with data for 2018, 2019, 2020, and 2021YTD. Below it is a 'Daily Cost' section with a table:

Category	Value	Period
Previous Year	\$ 3,482	Dec 2018 - Nov 2019
Current Year	\$ 3,230	Dec 2019 - Nov 2020

A '12-Month Commodity' pie chart is also visible, showing the following breakdown:

Commodity	Percentage
Electric	34.5%
Chilled Water	33.2%
Steam	24.6%
Water & Sewer	7.7%

Navigation Overview



Dashboard

Customizable overview of EnergyCAP data



TN State of Tennessee - General Government

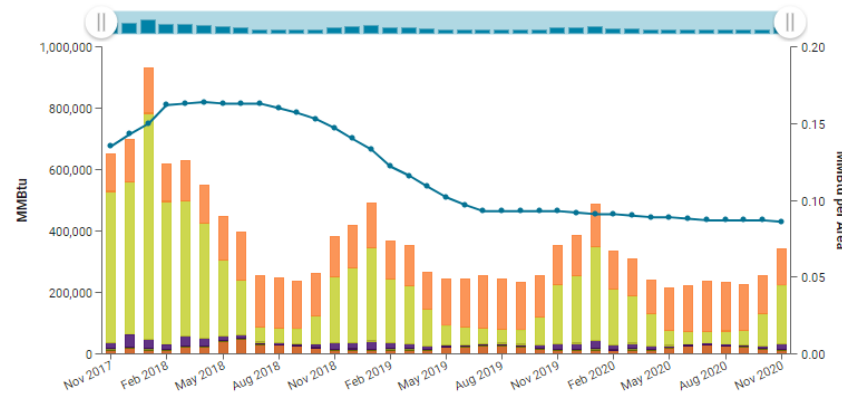


- Dashboards**
 - My Dashboards
 - My Building Operations
 - Sample Dashboard
 - SAMPLE: Building Energy Sum...
 - SAMPLE: Building Operations**
 - SAMPLE: Energy Management
 - SAMPLE: Utility Bill Accounting
 - My Maps
 - SAMPLE: All Buildings Map
 - Dashboards Shared with Me
 - DEMO: Building Operations
 - General Utility Bill Accounting
 - JRP Building Operations
 - Leased Properties
 - Public General Services
 - State of TN Dashboard - copy
 - Maps Shared with Me
 - Knoxville Complex
 - TN Tower

SAMPLE: Building Operations

Filter by building or building group

System-Wide Energy Use Intensity



Top 20 Use/Area: 1 Year

Sewage Plant	4.414 MMBtu/SqFt
Oneida Weather Station	3.820 MMBtu/SqFt
BE Maint Shop/CE (320)	3.223 MMBtu/SqFt
47C0500005 Lewisburg Flam Mat Storage(50...	2.263 MMBtu/SqFt
855 East Poplar	2.078 MMBtu/SqFt
Savannah Firetower	1.838 MMBtu/SqFt
113 Factory Street	1.538 MMBtu/SqFt
4926 Main St	1.495 MMBtu/SqFt
Sewage Treatment Bldg And Plant	1.370 MMBtu/SqFt
Jasper Attorneys General	1.184 MMBtu/SqFt
Altamont Fire Tower	1.182 MMBtu/SqFt
47D2500001 Selmer Armory (50/50)	1.062 MMBtu/SqFt
Dining Hall-Kitchen-Boiler & CH RM & CT (Bld...	0.985 MMBtu/SqFt

Most Expensive Meters

Meter	Commodity	Place	Total Cost
500 Flat Fork Rd - ELE	Electric	#MFM_MCCX	\$ 1,741,383

Top 20 Electric Use/Bldg: 1 Year

Sewage Plant	1,293.707 kWh/SqFt
BE Maint Shop/CE (320)	784.307 kWh/SqFt

Buildings & Meters

Facility Data

Data Organized by
Organization/Building

Meters Attached to Building or
Organization

The screenshot shows a sidebar menu on the left with icons for home, buildings, calendar, mail, list, hierarchy, line graph, bar chart, and a gear. The main content area is titled 'Buildings & Meters' and displays a tree view for 'Tennessee General Government'. The tree is expanded to show 'Education' and its sub-items.

- Buildings & Meters
 - Tennessee General Government
 - General Government
 - #TBD_General Government
 - Agriculture
 - Children's Services
 - Commerce & Insurance
 - Correction
 - Court System
 - Dist Attorney Gen Conf
 - Econ & Community Dev
 - Education
 - 207 North Boone St Ste 100, 300
 - Achievement Schools
 - Alvin C York Institute
 - #MFM_Alvin C York Institute
 - #TBD_Alvin C York Institute
 - ACYI CTE Building
 - 701 N Main St - NG
 - 701 N Main St - PRO
 - 701 N Main St - WS
 - North York Highway - WS
 - Voc Center 21/250 LT - ELE
 - Vocational Center
 - Arvi nwr

Buildings & Meters - Building Properties

Includes:

Build Date

Floor Area

Primary Use

ENERGY STAR
Rating

Custom Fields

Place Group
Assignments

Park Office
50050017
1400 West Gaines, Lawrenceburg, TN 38464, United States

Link to Google Maps

Primary Use: Office
Constructed: Not Configured
Floor Area: 900 ft²

Place Type: Building
Latitude, Longitude: 35.242818, -87.354306
Weather Station: TN31

Link to Weather Data Depot

Meters - 3

- SPLT-LAWRENCEBURG-PARK OFFICE-ELE [SPLT-LAWREN...]
- SPLT-LAWRENCEBURG-PARK OFFICE-WS [SPLT-LAWREN...]
- SPLT-LAWRENCEBURG-PARK OFFICE-WS [SPLT-LAWREN...]

Custom Fields - 6 of 22

Name	Value
Type	Owned
Building Status	Active
County	Lawrence
Speed Chart	EN00000177
Program Code	912010
JLL Managed Facility	No

Groups - 4

Building Group	Category	Membership
Agency Managed	Facility Management	Automatic with Custom Filters

Buildings & Meters - Meter Properties

Includes:

Linked Account(s)

Linked Vendor

Units of Measure

GL Subcode Values

Custom Fields

Meter Group
Assignments

*** > Andrew Jackson Complex > Citizens Plaza Building > ⚡ Citizens Plaza Building (4Th Ave N) - ELE04 [0112959-0443404-ELE01]

Actions ▾

- Edit Meter Setup
- Edit Meter
- Change Serial Number

Meter Chargebacks

⚡ Citizens Plaza Building (4Th Ave N) - ELE04
0112959-0443404-ELE01

Commodity Electric	Use unit kWh	Demand unit kW	Primary Use Unknown
Serial Number 302223	Buildings weather station TN7011	Time zone (UTC+00:00) Dublin, Edinburgh, Lisbon, London	

▼ Linked Accounts - 1

Account	Vendor	Rate Schedule	Effective	
Distribution and Supply				
> 0112959-0443404	NES-Nashville Electric Service	GENERAL POWER	01/01/1980-	✎

▼ Custom Fields - 1 of 3

Name	Value	
BL34C Report Group	No	⌵

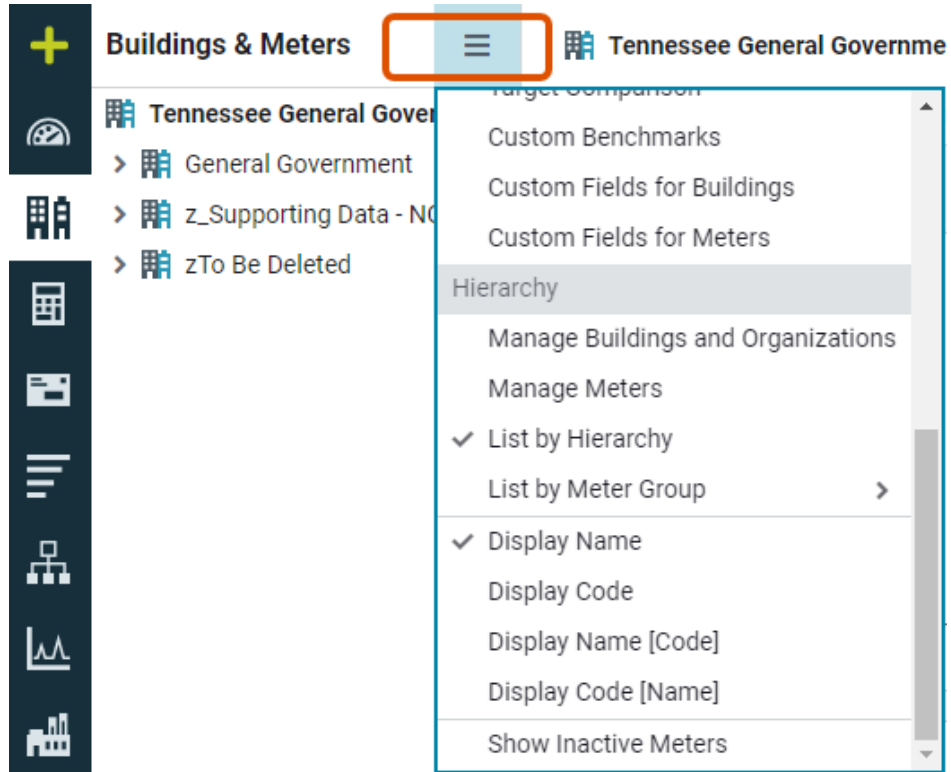
▼ Groups - 6

Meter Group	Category	Membership	
DGS-ACH	ACH	Automatic with Custom Filters	⌵
Electric	Commodity Group	Automatic with Custom Filters	

Buildings & Meters - Module Menu

Includes:

- Cost Avoidance
- Services and Tools
- ENERGY STAR
- Settings
- Hierarchy
- Manage Options
- View Options
- List Options



The screenshot shows the 'Buildings & Meters' module menu for 'Tennessee General Government'. The menu is open, displaying a list of options. The 'Hierarchy' section is highlighted, and the 'List by Hierarchy' option is selected. The 'Display Name' option is also selected. The 'Show Inactive Meters' option is visible at the bottom of the menu.

- Target Comparison
- Custom Benchmarks
- Custom Fields for Buildings
- Custom Fields for Meters
- Hierarchy
 - Manage Buildings and Organizations
 - Manage Meters
 - List by Hierarchy
 - List by Meter Group >
- Display Name
 - Display Code
 - Display Name [Code]
 - Display Code [Name]
- Show Inactive Meters

Buildings & Meters - Module Menu

Manage Buildings and Organizations

Edit, move, or delete buildings and Organizations

Contact SFUM to suggest changes!

The screenshot shows the 'Buildings & Meters' module menu. The menu is titled 'Buildings & Meters' and is located under the 'Tennessee General Government' user profile. The menu items are:

- Tennessee General Government
- General Government
 - #TBD_General Government
 - Agriculture
 - Children's Services
 - Commerce & Insurance
 - Correction
 - Court System
 - Dist Attorney Gen Conf
 - Econ & Community Dev
 - Education
 - Environment and Conservation
 - Finance & Admin
 - General Services

The 'Settings' section of the menu is expanded, showing the following options:

- Normalization
- Target Comparison
- Custom Benchmarks
- Custom Fields for Buildings
- Custom Fields for Meters
- Hierarchy
 - Manage Buildings and Organizations
 - Manage Meters
 - List by Hierarchy
 - List by Meter Group
- Display Name
 - Display Code
 - Display Name [Code]

The 'Manage Buildings and Organizations' option is highlighted with an orange border.

Accounts

Accounting Data

Data Organized by Cost Center

Accounts Attached to Cost Centers

Accounts

- Tennessee General Government
 - General Government
 - #TBD_General Government
 - Agriculture
 - Children's Services
 - Commerce & Insurance
 - TFACA
 - 3350700001
 - 3350700003**
 - 13153 US HWY 41 - PROP
 - Unionville Deason Rd - ELE
 - Unionville Deason Rd 2161 BB - ELE
 - 3350700004
 - 3350700005
 - 3350700007
 - 3350700008

Accounts – Account Properties

Includes:

Vendor Information

Linked Meter(s)

Assigned Rates

Custom Fields

... > DHS_REPORTING > 63000006 > 1575 Corporate Parkway Blvd - ELE [4431764001]

Actions

- Edit Account Setup
- Edit Account
- Change Account Number

Bills Actual Data Properties Flags

Account Chargebacks

1575 Corporate Parkway Blvd - ELE
4431764001
1575 Corporate Parkway Blvd, Clarksville, TN 37040, United States

Vendor: CEMC- Cumberland Service effective: -

> ACCOUNT MEMO

▼ Linked Meters - 1

Meter	Serial number	Parent location	Rate schedule	Effective	
Distribution and Supply					
> ⚡ 4431764001-ELE	H109252-50	Clarksville TRC & VR Office & TSW	GENERAL POWER 51-1000KW	01/01/1980-	+

> Custom Fields - 0 of 7

> Account Alerts - 0

Accounts – Module Menu

Includes:

Settings

Hierarchy

Manage Options

View Options

List Options

The screenshot shows the 'Accounts' module menu. On the left is a vertical sidebar with icons for adding, viewing, and managing data. The main area displays a tree view of accounts under 'Tennessee General Government', with 'General Government' expanded to show sub-categories like '#TBD_General Government', 'Agriculture', 'Children's Services', 'Commerce & Insurance', 'Correction', 'Court System', 'Dist Attorney Gen Conf', 'Econ & Community Dev', 'Education', 'Environment and Conservation', and 'Finance & Admin'. On the right, a dropdown menu is open, showing options for 'Settings' (Accounting, General Ledger Subcodes, Custom Fields for Accounts), 'Hierarchy' (Manage Cost Centers, Manage Accounts), and 'Display Name' (checked, Display Number, Display Name [Number], Display Number [Name]). A 'Show Inactive Accounts' option is also visible at the bottom of the dropdown.

Bills/Bill Processing

- ✓ Enter/Import Bills
- ✓ Create Bill Lists
- ✓ Share Bill Lists
- ✓ Manage Batches

My Bill Lists
Default Bill List
Shared Bill Lists
Batches
Bill Import

Bill Lists

1 - 32 of 32

\$ 243,799.78 Total Cost of 32 Bills

	Account Code - 2	Billing Period - 1	Bill Begin Date	Bill End Date	Total Cost	Bill Entry Date
<input type="checkbox"/>	498567-1574	Jul 2018	07/01/2018	08/01/2018	\$ 136,236.79	02/03/2019
<input type="checkbox"/>	498567-3481	Jul 2018	07/01/2018	08/01/2018	\$ 34.85	02/03/2019
<input type="checkbox"/>	65409234-23	Jul 2018	07/01/2018	08/01/2018	\$ 2,172.07	02/03/2019
<input type="checkbox"/>	MID-4181871	Jul 2018	06/06/2018	08/31/2018	\$ 2,172.07	12/09/2018
<input type="checkbox"/>	MID-4496923	Jul 2018	06/23/2018	07/25/2018	\$ 968.90	12/09/2018
<input type="checkbox"/>	MID-55013068519	Jul 2018	06/21/2018	07/21/2018	\$ 3,503.38	12/09/2018
<input type="checkbox"/>	MID-55020012849	Jul 2018	06/29/2018	07/29/2018	\$ 418.73	12/09/2018
<input type="checkbox"/>	NE-0001	Jul 2018	07/01/2018	08/01/2018	\$ 8,360.69	12/21/2018
<input type="checkbox"/>	NE-05-2315-2	Jul 2018	07/01/2018	08/01/2018	\$ 49,258.14	03/01/2019
<input type="checkbox"/>	NE-123223804	Jul 2018	06/30/2018	07/31/2018	\$ 0.00	12/09/2018

Groups & Benchmarks

Compare similar meters and buildings with default and customized groupings.

The screenshot displays a web application interface for 'Groups & Benchmarks'. The left sidebar contains a navigation menu with icons for various categories: Building Groups, Meter Groups, and Reporting Groups. The main content area shows a hierarchical view of 'Building Groups > TN State Parks > Area 4'. Below this, there are tabs for 'Benchmarks' and 'Buildings'. The 'Buildings' tab is active, showing a list of buildings with their respective costs per square foot. The data is sorted by 'Cost' in 'High to Low' order. A callout box labeled 'Data Options' points to the sorting controls. Another callout box labeled 'View Options' points to the edit icons for each building entry. At the bottom of the interface, there are summary statistics for 'Cost/Area (\$/ft²)' and 'Total Cost'.

Last 12 Months / Electric only (Calendarized)			
Camp Wash House Number 1			\$20.91/ft²
Maintenance Building			\$12.24/ft²
5857 Champion Rd-Bldg Kitchen			\$4.89/ft²
Sewage Treatment Plant And Pump House			\$4.27/ft²
Wastewater Treatment Sand Filter Pl			\$4.19/ft²
Beach Bath House Number 3			\$3.49/ft²
Campground Restrooms Number 3			\$3.41/ft²
Campground Restrooms Number 1			\$3.41/ft²
Campground Restrooms Number 2			\$3.41/ft²
Marina Service Bldg			\$3.24/ft²
Maintenance Building			\$3.15/ft²
Rangers Dwelling			\$3.15/ft²
Caretaker Cabin			\$3.00/ft²
Handicap Restroom			\$2.64/ft²

Cost/Area (\$/ft²)			Total Cost		
Low	Median	High	Low	Median	High
0.00	0.72	20.91	\$84	\$1,974	\$21,981

Vendors & Rates

Analyze spending by vendor or rate.



Vendors & Rates - Module Menu

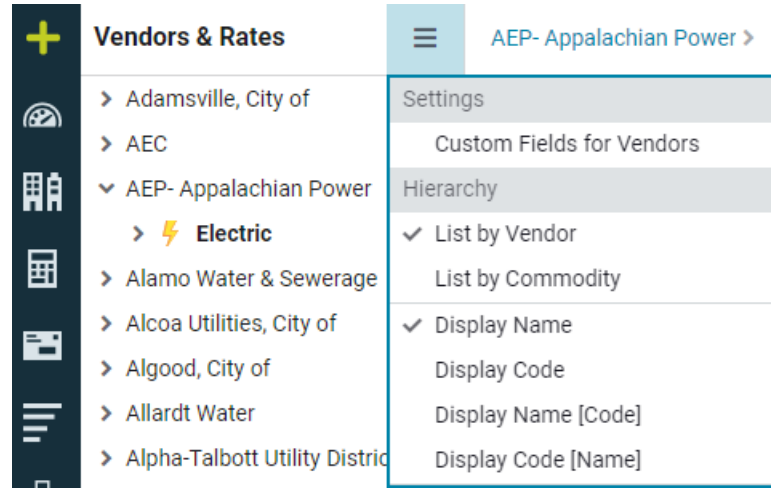
Includes:

Settings

Hierarchy

List Options

View Options



Reports

The screenshot shows the 'Reports Library' interface. On the left is a vertical navigation menu with icons for Reports, Recent Reports, Recommended Reports, My Reports, Reports Shared with Me, Reports Library, and a settings gear. The main area is titled 'Reports Library' and contains a search bar at the top with the placeholder text 'Search report name or description'. An orange callout box with the word 'Search' points to this search bar. Below the search bar is a list of reports:

- Custom BL34C for Tennessee** (CUSTOM-BL34C)
Custom BL34C for Tennessee
- Monthly Trends—Comparing Year-to-Year** (Report-01)
Tabular report, with an optional chart, to compare values across years by month. Yellow and red color coding highlight variance exceptions. Spark lines show general trend for each year. Filters can be used to group data together into single page views. If you are using this report for Cost Avoidance, remember to run Cost Avoidance -> Calculate Savings BEFORE generating your report. This report replaces: AN01, AN01PT, AN01CC, AN02, AN02CC, AN03, AN04, AN06, AN06A, AN10, AN10A, AN11A, AN25, AN25PT, AN26PT, AN26, BL01, BL02, BL03, BL04, BL13, BL14, BL25, BL26, CAP03, CAP03A, CAP04, CAP04A, CAL02, CAL03, CAL06, CAL06PT, CAL07, CAL26-D, CAL27, NORM02, NORM03, NORM09, NORM10, NORM11, YY14 and YY15 (SSRS)
- Ranking Report** (Report-02)
Compare and rank similar objects based on a common data type. Objects include accounts, buildings, commodities, cost centers, meters, place types, and vendors. Results can be sorted by rank order, name, or code. Actual, calendarized, and normalized data are available. If you are using this report for Cost Avoidance, remember to run Cost Avoidance -> Calculate Savings BEFORE generating your report. This report replaces: AN08, AN08A, AN13, AN13PT, AN14, AN14PT, AN15, AN15PT, AN16, AN17, AN17PT, AN18, AN18PT, CAL09, CAL10, CAL11 and CAL12 (SSRS)
- Setup Report: Accounts, Vendors, Cost Centers, Meters, Buildings (Excel Only)** (Report-03)
A formatted Excel file containing a list of all Accounts with their associated Vendors, Cost Centers, and Meters. Each Meter is also associated with its Building. Custom Field values for each Account, Meter, Building, and Vendor are also included in collapsible columns. Helpful for quickly downloading a comprehensive list of the most commonly used objects in the application. This replaces the following reports: BL24, SU01, SU01B, SU03A, SU03B, SU09, SU34, SU37, SU43, SU44, SU45, SU46, SU49, SU50, and SU58 (SSRS)

On the right side, there is a 'Filters' panel with the following sections:

- Object:** Building, Meter, Account, etc.
- Output File Type:** Excel, PDF, Word, etc.
- Topic:** Accounting, Facilities, etc.
- Format:** Choose format (dropdown menu)
- Other Attributes:** Actual Data, Flagged Bills, etc.
- Show Only Reports with Charts
- Reset Filters** button

EnergyCAP

REPORTS

Over 350 reports

help you analyze data from utility bills, setup information, interval data and Cost Avoidance.

Users can:

Configure and save reports

Share reports with others

- Anyone can update a shared report

- If the owner is made inactive the shared report is still available

Email a report to a user or group

How do you find a report?

REPORT FOLDERS

Recent Reports

For quick access, your most recent reports are listed in this section, most recent report shown first.


Recommended Reports

These reports are selected by your administrator and placed in this group for easy access.


Search for a Report

Search by report name, or description. Filter reports being shown by Object, Output File Type, Topic, Format, Other Attributes, or only ones with Charts.


Reports Library

 **Custom BL34C for Tennessee**
CUSTOM-BL34C

Custom BL34C for Tennessee

 **Monthly Trends—Comparing Year-to-Year**
Report-01

Tabular report, with an optional chart, to compare values across years by month. Yellow and red color coding highlight variance exceptions. Spark lines show general trend for each year. Filters can be used to group data together into single page views. If you are using this report for Cost Avoidance, remember to run Cost Avoidance -> Calculate Savings BEFORE generating your report. This report replaces: AN01, AN01PT, AN01CC, AN02, AN02CC, AN03, AN04, AN06, AN06A, AN10, AN10A, AN11A, AN25, AN25PT, AN26PT, AN26, BL01, BL02, BL03, BL04, BL13, BL14, BL25, BL26, CAP03, CAP03A, CAP04, CAP04A, CAL02, CAL03, CAL06, CAL06PT, CAL07, CAL26-D, CAL27, NORM02, NORM03, NORM09, NORM10, NORM11, YY14 and YY15 (SSRS)

 **Ranking Report**
Report-02

Compare and rank similar objects based on a common data type. Objects include accounts, buildings, commodities, cost centers, meters, place types, and vendors. Results can be sorted by rank order, name, or code. Actual, calendarized, and normalized data are available. If you are using this report for Cost Avoidance, remember to run Cost Avoidance -> Calculate Savings BEFORE generating your report. This report replaces: AN08, AN08A, AN13, AN13PT, AN14, AN14PT, AN15, AN15PT, AN16, AN17, AN17PT, AN18, AN18PT, CAL09, CAL10, CAL11 and CAL12 (SSRS)

Filters

Object

Output File Type

Topic

Format

Other Attributes

Show Only Reports with Charts

Apply Report Filters

Search filters

Recommended

- Account Period
- Billing Period
- Building Group
- Meter Group
- Topmost Cost Center Code
- Topmost Cost Center Name
- Topmost Place Code
- Topmost Place Name

Optional

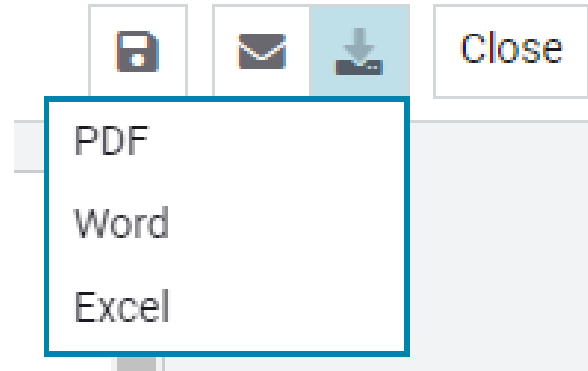
- Account is Active

Data Displayed	Operator	Value	Action
Actual	equals	Actual	▼
Include Account Charges	equals	Yes No	
Account is Active	equals	Active Inactive	×
Bill is Void	equals	Void Not Void	×
Billing Period	greater than or equal to	July 2018	×
Include Accruals	equals	Yes No	×
Topmost Place Name	equals	Memphis ANG (Air Memphis) - PYKL	▼

Remove Filter

Download Options

Excel option is useful when you want to sort and manipulate the data within the report.



Save Report

Save Report

Cancel

Save

Name

Summary by Commodity

Code

Report-04

Description

Executive summary of Commodity use and cost across the database. Can also be filtered to provide Commodity use and cost for Buildings, Cost Centers or Place Types. Includes pie charts for energy use and cost as well as tabular summaries for each Commodity. Per area calculations are available when displaying Building or Place Type summaries. Actual, Calendarized, and

My Reports

Configure and save frequently used reports:

Select the report.

Configure the filters.

Select Save

Change the name or description, this is especially helpful when sharing the report with others.

Reports Shared with Me

Reports that have been configured, saved and shared with one, or several user groups. Certain user roles have permission to share.

Filters are modifiable by the user.

The screenshot displays a web interface for managing reports. On the left is a navigation menu with the following items: 'Reports', 'Recent Reports', 'Recommended Reports', 'My Reports', 'Reports Shared with Me', and 'Reports Library'. The main content area is titled 'Reports Shared with Me' and features a search bar labeled 'Search report name or description'. Below the search bar, two reports are listed:

- Setup Report: Accounts, Vendors, Cost Centers, Meters, Buildings (Excel Only)**
Report-03-bypark [Report-03] Shared
An Excel file, allowing you to download a comprehensive list of common objects, including all accounts with their associated vendors, cost centers, and meters. Each meter is associated with its building. Custom field values for each account, meter, building, and vendor are also included in collapsible columns. This report replaces: BL24, SU01, SU01B, SU03A, SU03B, SU43, SU44, SU45, SU46, SU49, SU50, and SU58 (SSRS)
- Bill Line Item Report - Observation Type by JM**
Report-18-Observ [Report-18] Shared
Provides bill line items grouped by Bill Line Item Name. Also sortable by account code and meter code. Cost values include account and meter charges. To avoid lines with zero charge, set the Bill Line Value filter to NOT EQUALS 0 (zero). This report replaces: BL16. (SSRS)

On the right side of the interface is a 'Filters' sidebar with the following sections:

- Object:** Building, Meter, Account, etc.
- Output File Type:** Excel, PDF, Word, etc.
- Topic:** Accounting, Facilities, etc.
- Format:** Choose format (dropdown menu)

Email options

Email Report

Cancel

Send

Report

Summary by Commodity - Report-04

Recipients

john.pierce@energycap.com × jeremy.mcbride@tn.gov ×

Emails will be sent from EnergyCAP Reports (no-reply@energycap.com)

Subject

REPORT: Summary by Commodity - Report-04

Message

Please see the attached report.

Attachment file type

PDF

Only send report if data is available

Helpful reports

Executive Summary Reports

Search for "executive", or Filter Format to "Executive Summary", to see a list of one page summary reports.

These reports often have a graph at the top with supporting details below.

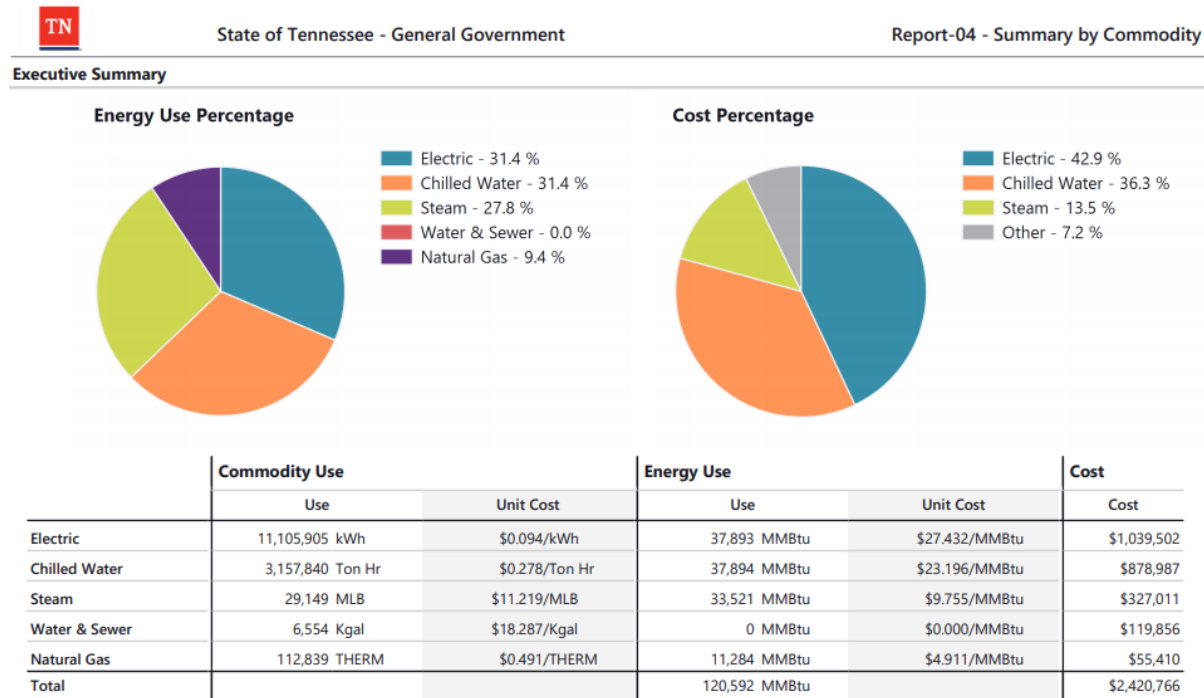
Reports Library

The screenshot displays the Reports Library interface. At the top left, a search bar contains the text "executive". Below the search bar, two report cards are visible. The first report is titled "Summary by Commodity" (Report-04) and includes a description: "Executive summary of Commodity use and cost across the database. Can also be filtered to provide Commodity use and cost for Buildings, Cost Centers or Place Types. Includes pie charts for energy use and cost as well as tabular summaries for each Commodity. Per area calculations are available when displaying Building or Place Type summaries. Actual, Calendarized, and Normalized data are all available via filter options. This replaces the following reports: AN04A, AN07, BL10, BL10A, BL12, and BL12A (SSRS)". The second report is titled "Executive Summary by Commodity" (BL12) and is marked as "Legacy". Its description reads: "One-page summary of cost, use, unit cost. Also includes energy percentage, and cost percentage for all commodities in pie chart format with an accompanying data table. Includes common use and global use units and Cost/Unit values for both. Breaks out total energy costs by commodity (electricity/gas/etc.) This report is replaced by Report-04." On the right side of the interface, there is a "Filters" panel. It contains several filter options: "Object" (Building, Meter, Account, etc.), "Output File Type" (Excel, PDF, Word, etc.), "Topic" (Accounting, Facilities, etc.), and "Format". The "Format" dropdown menu is highlighted with an orange box and currently shows "Executive Summary".

REPORT-04 – Summary by Commodity

Provides an executive summary of Commodity consumption and costs.

Displays pie charts and a table of results.



Energy Management Report Guide

14 recommended
Energy Management
reports and important
filters

TN State of Tennessee - General Government

Reports Library

Search report name or description

Custom BL34C for Tennessee
CUSTOM-BL34C
Custom BL34C for Tennessee

Monthly Trends—Comparing Year-to-Year
Report-01

Tabular report, with an optional chart, to compare values across variance exceptions. Spark lines show general trend for each year . Filters can be used to group data together into single page views. If you are using this report for Cost Avoidance, remember to run Cost Avoidance -> Calculate Savings BEFORE generating your report. This report replaces: AN01, AN01PT, AN01CC, AN02, AN02CC, AN03, AN04, AN06, AN06A, AN10, AN10A, AN11A, AN25, AN25PT, AN26PT AN26, BL01, BL02, BL03, BL04, BL13, BL14, BL25, BL26, CAP03, CAP03A, CAP04, CAP04A, CAL02, CAL03, CAL06, CAL06PT, CAL07, CAL26-D, CAL27, NORM02, NORM03, NORM09, NORM10, NORM11, YY14 and YY15 (SSRS)

SUGGESTED TOPICS

- Reports Overview
- Report Designer Overview
- Cost Avoidance Reports
- Energy Management Report Guide**
- SSRS Reports

HELP

- User Guide
- Request Feature
- Contact Support
- More Help

Energy Management Report Guide

Energy Management Report Guide Report-22 Monthly Building Manager Report

ENERGYCAP



Recommended Use

An all-inclusive and comprehensive single page monthly report for building managers, showing use, cost, and performance vs. last year (or any prior base year).

<https://helpcenter.energycap.com/assets/media/EnergyMgmtReportGuide.pdf>

Energy Management Report Guide

Report-22 – Monthly Building Manager Report

Report-10 – Two Year Comparison

Report-04 – Summary by Commodity

Report-13 – Bill Analysis

Report-19 – Monthly Utility Use and Cost Spreadsheet

Report-26 – Use and Cost Summary

Report-23 – Energy Conservation Program

Report-14 – Cost Avoidance

Report-01 – Monthly Trends Comparing Year-to-Year

Report-02 – Ranking Report (by Building Cost/Area)

Report-02 – Ranking Report (by Meter Unit Cost)

Report-21 – Monthly Comparison

Report-06 – Year-over-Year Comparison

Report-08 – Monthly Trends – One Page per Year

Report Help

EnergyCAP Help for Reports:

https://helpcenter.energycap.com/#t=Reports%2FHelpful_Reports.htm

SSRS reports

SSRS reports are faster, more flexible, and provide enhanced reporting capabilities that include hyperlinks to EnergyCAP objects.

An Energy Management [report guide](#) is also available to help you know which report best suits your needs and provides helpful tips for filter settings.

Contents

- Report-01 Monthly Trends—Comparing Year-to-Year
- Report-02 Ranking Report
- Report-03 Setup Report for Accounts, Vendors, Cost Centers, Meters, Buildings
- Report-04 Summary by Commodity
- Report-05 Budget Report
- Report-06 Year-over-Year Comparison
- Report-08 Monthly Trends
- Report-09 Bill PDF
- Report-10 Year-over-Year Data Comparison
- Report-11
- Excel Bill Transfer Format
- Report-12 Visual Bill Audit

EnergyCAP

DASHBOARDS

Dashboards

Create and customize

Can only edit content
in My Dashboards, or
My Maps

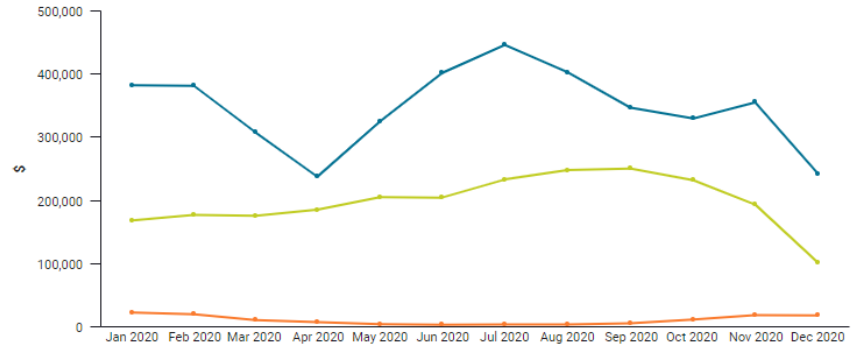
Maps plot buildings
based on Latitude and
Longitude, or the
address

+ Dashboards

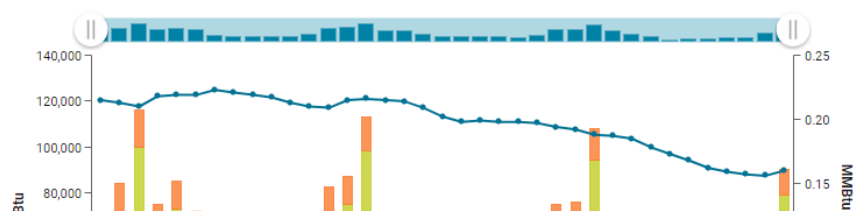
- My Dashboards
 - SAMPLE: Building Energy Summary
 - SAMPLE: Building Operations**
 - SAMPLE: Energy Management
 - SAMPLE: Utility Bill Accounting
- My Maps
 - SAMPLE: All Buildings Map
- Dashboards Shared with Me
 - DEMO: Building Operations
 - General Utility Bill Accounting
 - JRP Building Operations
 - Leased Properties
- Maps Shared with Me
 - Knoxville Complex

SAMPLE: Building Operations

Commodity Spending Trend



System-Wide Energy Use Intensity



Dashboards – Copy & Edit

Copy



Change Name

Unlock



Copy Dashboard

Cancel

Save

Name

SAMPLE: Building Operations - copy

Description

Building and Meter performance metrics within your Topmos

Dashboards – Copy & Edit

Add/Move Widgets

Edit Filters



Edit System-Wide Energy Use Intensity Cancel Save

Title
Frozen Head SP Energy Use Intensity

Filters

Search filters

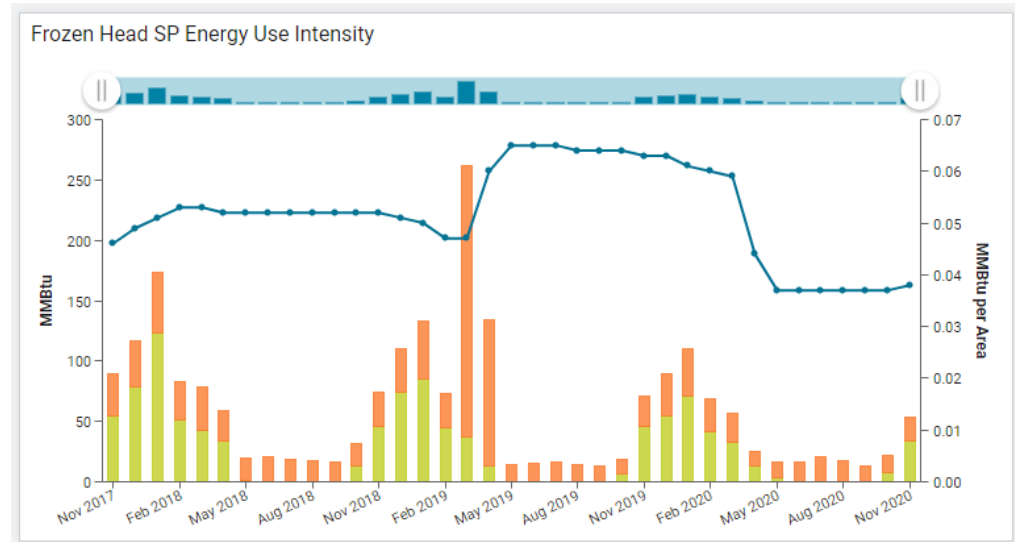
Recommended

- Building Group
- Topmost Place Code
- Topmost Place Name

Last N Years **equals**

Topmost Place Name **equals**

Content type: Energy Use Intensity



Dashboards – Lock & Use

+ Dashboards

My Dashboards

Frozen Head Building Operations

- SAMPLE: Building Energy Summary
- SAMPLE: Building Operations
- SAMPLE: Energy Management
- SAMPLE: Utility Bill Accounting

My Maps

- SAMPLE: All Buildings Map

Dashboards Shared with Me

- DEMO: Building Operations
- General Utility Bill Accounting
- JRP Building Operations
- Leased Properties

Maps Shared with Me

- Knoxville Complex

Frozen Head Building Operations

Filter by building or building group 🔒 🗑️ + 🖨️

Frozen Head SP Energy Use Intensity

Top 20 Cost/Area: 1 Year









Campground Bath House	\$3.92/SqFt
Picnic Area Restrooms	\$2.90/SqFt
Restroom Building Trailhead	\$2.89/SqFt
Rangers Residence	\$1.52/SqFt
Garage Managers Residence	\$1.48/SqFt
Gas Storage Building	\$1.16/SqFt
Manager Residence	\$0.98/SqFt
Picnic Shelter C	\$0.88/SqFt
Stage Bandstand	\$0.64/SqFt
Maintenance Building Barn	\$0.60/SqFt
Picnic Shelter 81571A	\$0.55/SqFt
Picnic Shelter B	\$0.53/SqFt
Storage Shed	\$0.46/SqFt

Dashboards – Show, Hide, and Copy

Dashboards Shared with Me

 Show All Dashboards Shared with Me

Show

Dashboard	Description	Created by	
DEMO: Building Operations	Building and Meter performance metrics within your Topmost Plac	Jeremy McBride	 
General Utility Bill Accounting	Bill Status	Ruby James	 
JRP Building Operations	Building and Meter performance metrics	Paul Rockey	 
Leased Properties	Ellington Complex Leased Properties	Dana Byrd	 
			4 results

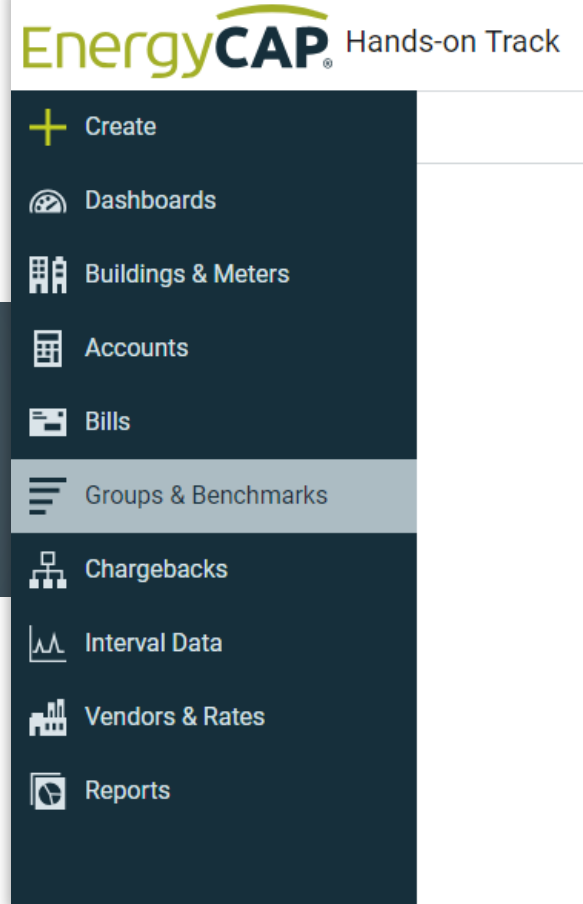
Hide

Copy

EnergyCAP

GROUPS & BENCHMARKS

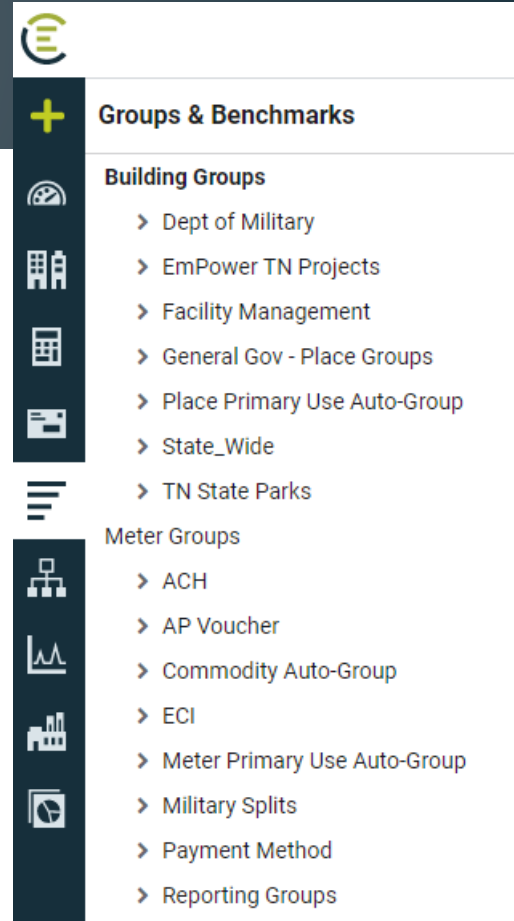
Access Groups and Benchmarks



Two Divisions of Groups

Building Groups, made up of buildings.

Meter Groups, made up of meters.



The screenshot shows a software interface with a dark sidebar on the left and a white main content area on the right. The sidebar contains a vertical list of icons: a green 'E' logo, a yellow plus sign, a sun icon, a building icon, a calendar icon, a document icon, a hamburger menu icon, a tree icon, a line graph icon, a factory icon, and a pie chart icon. The main content area has a header 'Groups & Benchmarks' and two sections: 'Building Groups' and 'Meter Groups'. Each section contains a list of items with right-pointing chevrons.

- Groups & Benchmarks**
- Building Groups**
 - > Dept of Military
 - > EmPower TN Projects
 - > Facility Management
 - > General Gov - Place Groups
 - > Place Primary Use Auto-Group
 - > State_Wide
 - > TN State Parks
- Meter Groups**
 - > ACH
 - > AP Voucher
 - > Commodity Auto-Group
 - > ECI
 - > Meter Primary Use Auto-Group
 - > Military Splits
 - > Payment Method
 - > Reporting Groups

Group Types

Manual Groups (gold) – members are added, or removed, manually.

Automatic Groups (purple) – populated and maintained automatically using a comprehensive list of available filters.

+ **Groups & Benchmarks**

Building Groups

- > Dept of Military
- ▼ EmPower TN Projects
 - EmPower Projects FY2016
- ▼ Facility Management
 - Agency Managed
 - JLL Managed
- > General Gov - Place Groups
- > Place Primary Use Auto-Group
- > State_Wide
- > TN State Parks

Meter Groups

- > ACH
- > AP Voucher
- > Commodity Auto-Group

Power of Automatic Groups

Let EnergyCAP keep your groups up-to-date.

When combined with Custom Fields, the possibilities are endless

EXAMPLES:

GL Subcode Groupings

Construction Types

Similar Sized Buildings

Similar HVAC Equipment

Geographical Regions

Chargeback Meters

ENERGY STAR Ratings

Facility Age

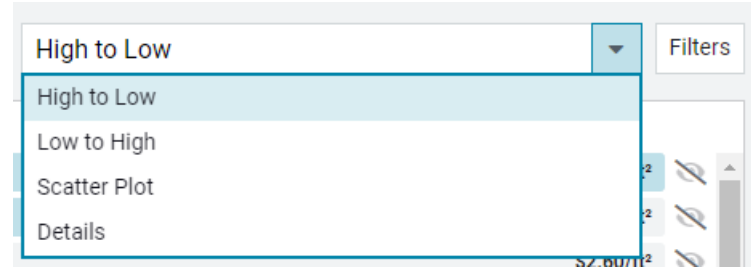
Types of Benchmark Charts

High to Low

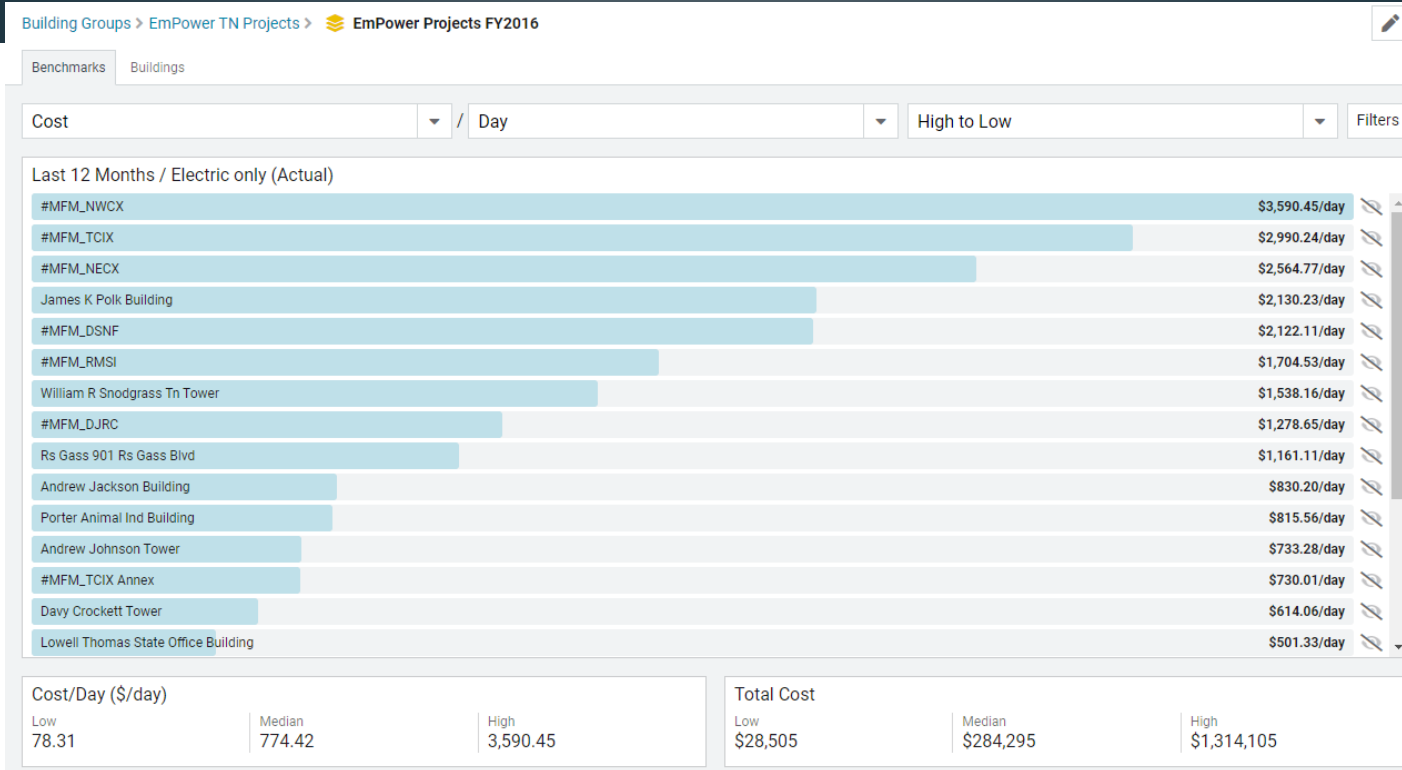
Low to High

Scatter Plot: Visually identify outliers

Details: Several columns of data for each group member, each column is sortable



Types of Benchmark Charts



The median Cost/Day is \$774.42/day.

Filters

Data Type – Actual vs Calendarized

Billing Period Range

Commodity Displayed

Show Hidden Buildings/Meters

Show Buildings/Meters with Zero Averages

Filters

Data Type
Actual

Billing Period Range
Last 12 Months

Commodity
⚡ Electric

Show Hidden Buildings

Show Buildings with Zero Averages

Close








Hide/Show

Occasionally you may want to hide a Group Member from the benchmarks and the calculations. A hidden member is not removed from the group. Its data is simply not displayed or used in calculations for the associated benchmarking charts.

1. Select the hide icon to exclude the member.
2. The benchmark calculations and median update automatically
3. To include the member again, on the Buildings, or Meters, tab, click the Show icon.

Hide/Show













Last 12 Months / Electric only (Actual)

#MFM_NWCX	\$3,590.45/day	
#MFM_TCIX	\$2,990.24/day	
#MFM_NECX	\$2,564.77/day	
James K Polk Building	\$2,130.23/day	
#MFM_DSNF	\$2,122.11/day	
#MFM_RMSI	\$1,704.53/day	
William R Snodgrass Tn Tower	\$1,538.16/day	

Hide

Building Groups > EmPower TN Projects >  EmPower Projects FY2016

Benchmarks **Buildings**

 295 Summar Ave [57000006]	 Jackson Complex [JACKSON]	
 6325 Haley Road [79000014]	 Memphis Complex [MEMPHIS]	
Hidden from benchmarks		
 #MFM_DSNF [MFM_DSNF]	 DSNF [1921]	
 Rs Gass 630 Hart Lane [19020006]	 R.S. Gass Complex [R_S_GASS]	

Show

Benchmark Views

Meter Benchmark Views

Cost/Day Rank

Cost/Unit Rank

Use/Day Rank

Place Benchmark Views

Cost/Area Rank

Use/Area Rank

Demand/Area Rank

Cost/Day Rank



Use/Day Rank

Filter for Dashboards

Dashboards

- My Dashboards
 - My Building Operations
 - Sample Dashboard
 - SAMPLE: Building Energy Summary
 - SAMPLE: Building Operations
 - SAMPLE: Energy Management**

SAMPLE: Energy Management

Filter by building or building group  

Top 20 Building Use/Area: 1 Year

Sewage Plant	4.414 MMBtu/SqFt
Oneida Weather Station	3.820 MMBtu/SqFt
BE Maint Shop/CE (320)	3.223 MMBtu/SqFt
47C0500005 Lewisburg Flam Mat Storage(...)	2.263 MMBtu/SqFt

Top 20 Bldg Cost/Area: 1 Year

Bldg Water Supply (743)	\$203.03/SqFt
Sewage Plant	\$149.85/SqFt
BE Maint Shop/CE (320)	\$97.12/SqFt
Golf Course Pump House	\$75.80/SqFt

Top 15 Vendor Costs: 1 Year

#MFM_MCCX	\$2
#MFM_BCCX	\$2
#MFM_NWCX	\$2
#MFM_NECX	\$2

Group Reports

AN13 through AN19 are reports based off the charts seen in Groups & Benchmarks

New SSRS reports are also built to use the Group filter

When running the report, be sure to use the respective Building or Meter Group name as a filter in the reports.

Report-01 - Monthly Trends - Comparing Year-to-Year

Use Avoidance % Demand Use Per Area Cost Per Day Use Cost Unit Cost

Last run 09/13/2018
version 2, updated 02/01/2018

Area, Cost Per Day, Demand, Unit Cost, Use, Use Avoidance, Use Avoidance %, Use Per Area, Use Per Day. Filters can be used to group data together into single-page views (e.g., one Building per page, one Cost Center per page, etc.). Actual, Calendarized, and Normalized data are all available via filter options. Charts can be represented by calendar year or fiscal year. (SSRS Generated Report)

Filters

Search filters

Recommended

- Account Period
- Billing Period
- Building Group
- Group Data By
- Meter Group
- Topmost Cost Center Name
- Topmost Place Name

Optional

- Account is Active
- Account Name
- Accounts in Cost Center Name:
- Bill is from External Vendor
- Bill is Void
- Commodity

Data Displayed equals Actual

First Month (1-12) equals 1

Include Account Charges equals Yes No

Include Accruals equals Yes No

Value Displayed equals Cost

Account is Active equals Active Inactive

Bill is Void equals Void Not Void

Billing Period greater than equal January 2017

Commodity one of Electric Natural Gas

Group Data By equals Meter

Meter Group equals AP Meters

Hierarchy for Quick Comparison

A little-known feature of EnergyCAP is the ability to change the view in Buildings & Meters to display meters from a specific Meter Group.

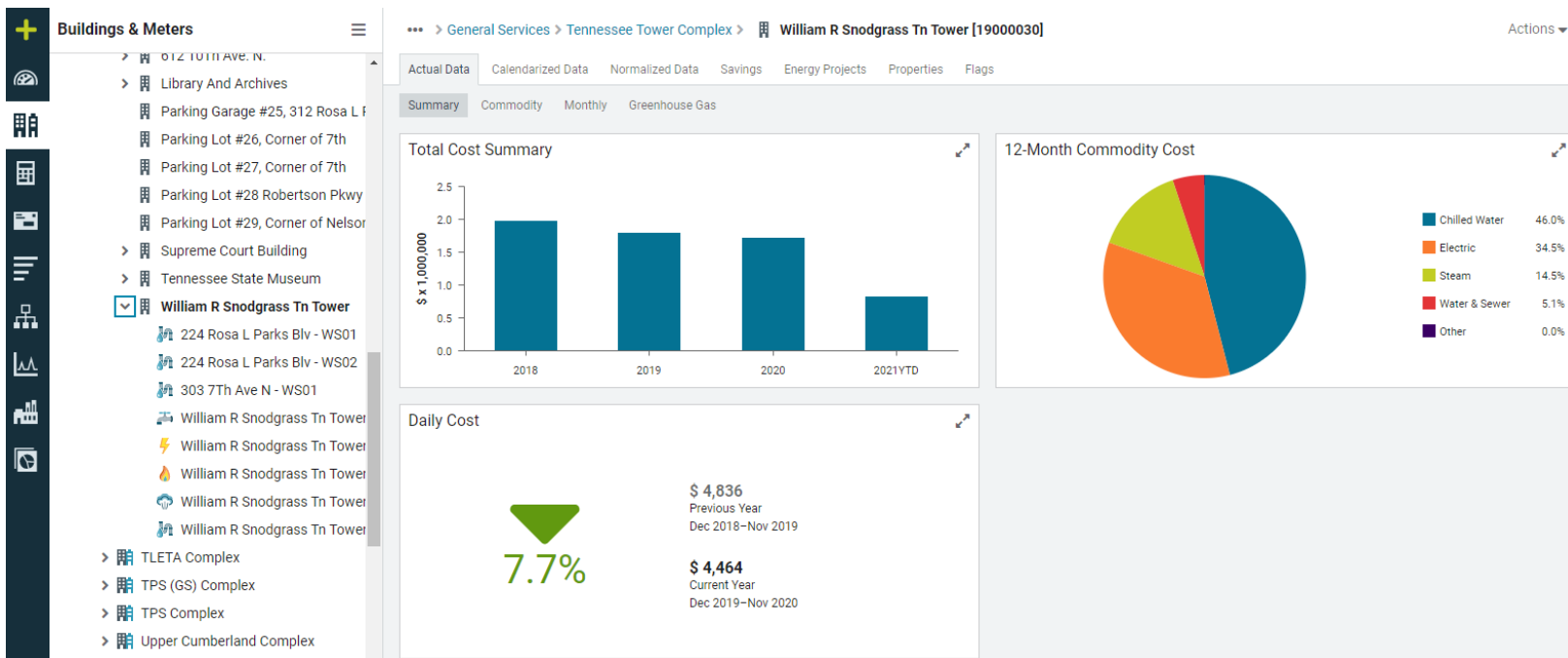
This allows you to quickly compare the same chart for multiple meters.

The screenshot displays the EnergyCAP interface. On the left, a vertical sidebar contains several icons: a plus sign, a meter, a building, a calculator, a document, a list, a hierarchy, a line graph, and a factory. The main content area is titled 'Buildings & Meters' and shows a tree view for 'Tennessee General Government'. The tree includes 'General Government', 'z_Supporting Data - NOT FOR REPORT', and 'zTo Be Deleted'. A dropdown menu is open for 'Tennessee General Government', listing various meter groups: 'List by Meter Group', 'AP Voucher', 'ACH', 'ECI', 'Reporting Groups', 'Payment Method', 'Commodity Auto-Group', 'Meter Primary Use Auto-Group', and 'Military Splits'. The 'ACH' option is selected with a checkmark.

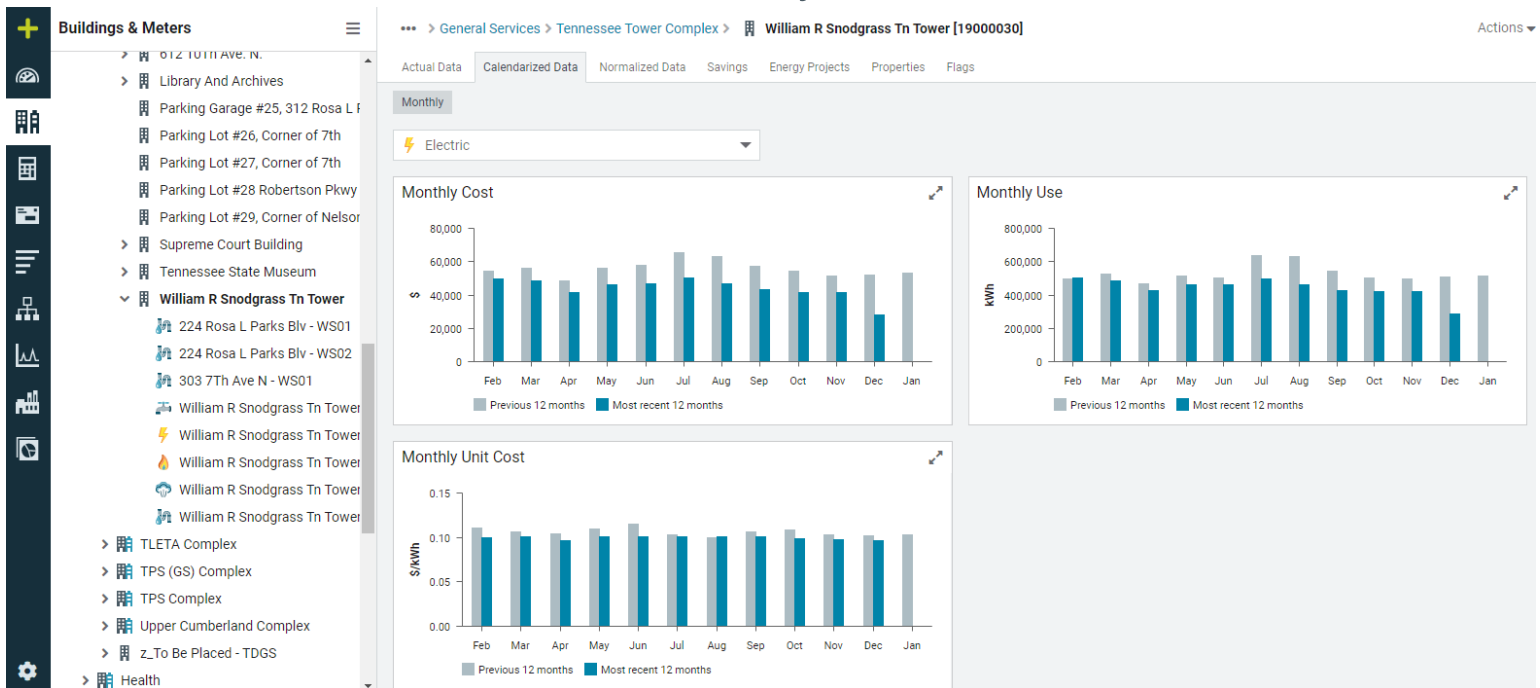
EnergyCAP

POWERSHOTS

Charts and Graphs displaying Cost and Use Data for selected Objects



Calendarized Monthly to view recent trends



EnergyCAP

ENERGY PROJECTS

Energy Projects - Overview

The screenshot shows a software interface for managing energy projects. The breadcrumb trail indicates the path: ... > 32101 > TENESSEE_TOWER > William R Snodgrass Tn Tower [19000030]. The main content area displays a table of energy projects for this building.

Project name	Start - 1	Completion - 2	Project cost	Cost savings	Energy savings	Project Type	Funding source	Project manager	Rebate	Memo
TN Tower - Densification	07/01/2013	11/22/2013	\$ 1	\$ 1		Densification			\$ 1	

Summary data of projects that impact energy use

Not intended to be comprehensive project management tool

Results in an indicator on the EUI Chart for completed projects

Information is subtotaled at the Organization Level

Energy Projects - Add

Requires a unique Name

Requires a Short name
and Type

Enter other information,
as available

Energy Projects with
Completion Dates are
indicated on the EUI Charts

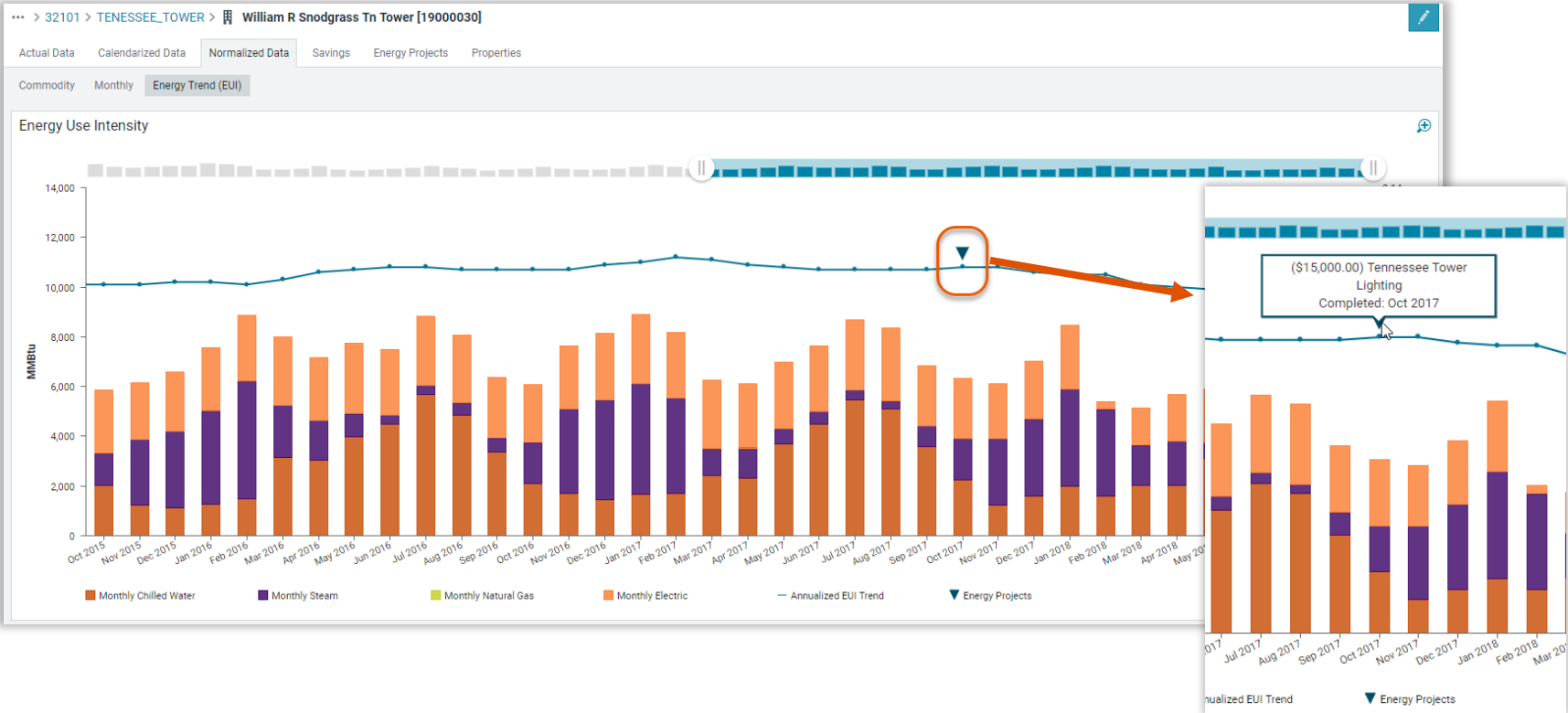
Add Energy Project

Cancel Save

... > 32101 > TENESSEE_TOWER > William R Snodgrass Tn Tower [19000030]

Name	Cost	Start
<input type="text" value="*"/>	<input type="text"/>	<input type="text" value="MM/DD/YYYY"/>
Short name (used on charts)	Rebate	Completion
<input type="text" value="*"/>	<input type="text"/>	<input type="text" value="MM/DD/YYYY"/>
Type	Cost savings	Funding source
<input type="text" value="* Choose or add"/>	<input type="text"/>	<input type="text"/>
Manager	Energy savings	Memo
<input type="text"/>	<input type="text"/> <input type="text"/>	<input type="text"/>

Energy Projects – EUI Charts



Thank you!



John Pierce

Assistant VP, Project Management Office

ENERGYCAP[®]