STEERING COMMITTEE ON STATE SUSTAINABILITY

MARCH 6, 2020

GINA MCCARTHY AUDITORIUM

greenergovCT

A Lead by Example Initiative

AGENDA

greenergovCT

A Lead by Example Initiative

EnergyCAP Reports (15 mins)

Accounting and Reporting Guidelines (5 mins)

Update on Building Audits (10 mins)

Project Team Report-Outs (25 mins)

Fix a Leak Week/SPP Survey (5 mins)

Next Steps Before April (5 mins)

HELPFUL
ENERGYCAP REPORTS

RUNNING REPORTS

LOG INTO ENERGYCAP

using your login credentials provided by your EnergyCAP liaison.

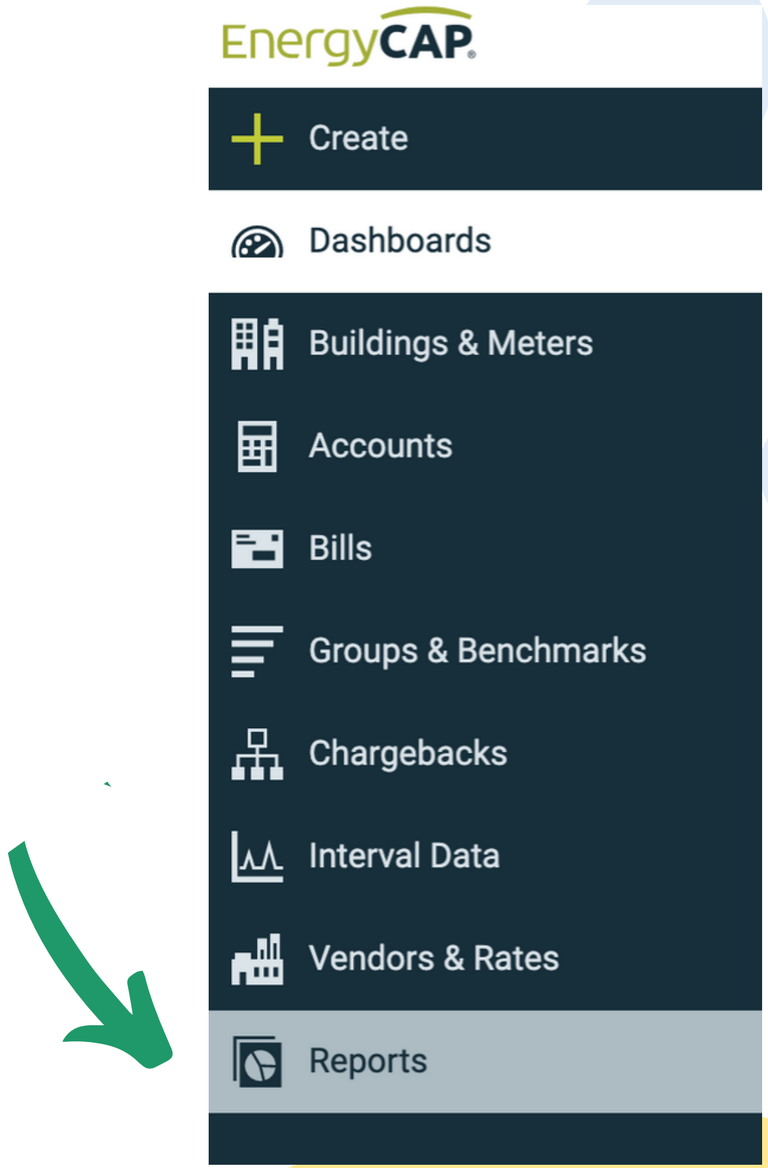
Don't have credentials? Just ask!

CLICK THE REPORTS ICON

located at the bottom of the menu.

FIND THE REPORT YOU WANT

There many options but we have recommendations to get started with.



DATABASE/INVENTORY MANAGEMENT

Helpful Reports

BL-08A

Visual Missing Bills Report

Visual Missing Bills Report BL - 08A

Billing Periods w/out a Bill Record	201301	201302	201303	201304	201305	201306	201307	201308	201309	201310	201311	201312	201401	201402
0	2	2	2	2	2	2	2	2	2	2	2	1	1	1
11	0	0	0	0	0	0	0	0	0	0	0	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
13	0	0	0	0	0	0	0	0	0	0	1	0	0	0
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	2	1	1	1	1
0	1	1	1	1	1	1	1	1	1	2	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	3	3	3	3	3	3	3	3	3	3	3	2	1	1
11	0	0	0	0	0	0	0	0	0	0	0	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1
0	1	1	1	1	1	1	1	1	1	1	1	1	1	1

REPORT-03

Setup Report: Accounts, Vendors, Meters, Buildings, etc.

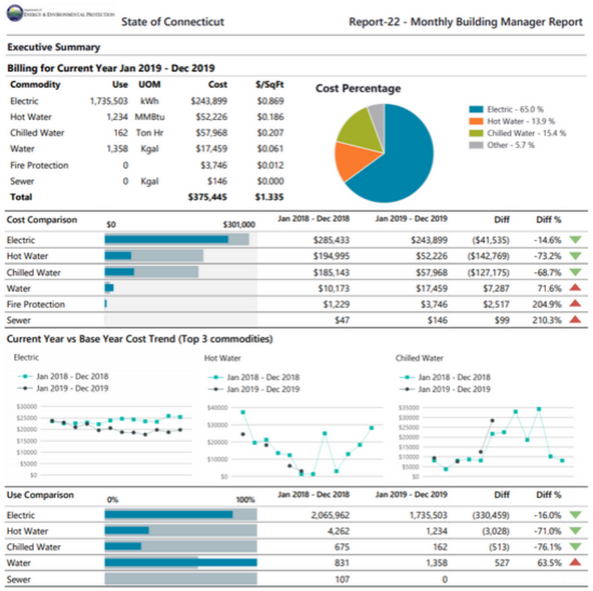
	A	I	K	O	Z	AA
1	Account Name	Cost Center Name	Vendor Name	Meter Name	Commodity	Building Name
2	10 FRANKLIN SQ - SWR_WTR	DAS Purchased Utilities	New Britain Water	10 FRANKLIN SQ - SWR	Sewer	10 Franklin Sq
3	10 FRANKLIN SQ - SWR_WTR	DAS Purchased Utilities	New Britain Water	10 FRANKLIN SQ - WTR	Water	10 Franklin Sq
4	0 RUSSELL RD - ELE	DAS Purchased Utilities	Eversource (CL&P)	0 RUSSELL RD - ELE	Electric	Maintain Boiler Building
5	525 RUSSELL RD - ELE	DAS Purchased Utilities	Eversource (CL&P)	525 RUSSELL RD - ELE	Electric	Main Building (Hosp 1)
6	300 RUSSELL RD COT 17 - ELE	DAS Purchased Utilities	Eversource (CL&P)	300 RUSSELL RD COT 17 - ELE	Electric	Cottage #17
7	302 RUSSELL RD COT 16 - ELE	DAS Purchased Utilities	Eversource (CL&P)	302 RUSSELL RD COT 16 - ELE	Electric	Cottage #16
8	240 ORAL SCHOOL RD - WTR	DAS Purchased Utilities	Aquarion Water	240 ORAL SCHOOL RD - WTR	Water	Mystic Education Center
9	10 FRANKLIN SQ - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	10 FRANKLIN SQ - NG	Natural Gas	10 Franklin Sq
10	110 BARTHOLOMEW AVE - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	110 BARTHOLOMEW AVE - NG	Natural Gas	110 Bartholomew Ave
11	505 HUDSON ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	505 HUDSON ST - NG	Natural Gas	505 Hudson St
12	286 SHELDON ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	286 SHELDON ST - NG	Natural Gas	286 Sheldon St
13	250 RUSSELL RD - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	250 RUSSELL RD - NG	Natural Gas	Maintain Boiler Building
14	309 BUCKINGHAM ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	309 BUCKINGHAM ST - NG	Natural Gas	Grounds Division
15	165 CAPITOL AVE - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	165 CAPITOL AVE - NG	Natural Gas	State Office Building
16	60 STATE ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	60 STATE ST - NG	Natural Gas	State Surplus Car Pool
17	165 CAPITOL AVE - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	165 CAPITOL AVE - NG	Natural Gas	State Office Building
18	61 WOODLAND ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	61 WOODLAND ST - NG	Natural Gas	61 Woodland Street
19	60 WESTON ST - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	60 WESTON ST - NG	Natural Gas	Office of the Public Advocate
20	990 PROSPECT AVE - NG	DAS Purchased Utilities	Connecticut Natural Gas Corporation (CNG)	990 PROSPECT AVE - NG	Natural Gas	Governor's Residence

USE/COST ANALYSIS

Reports

REPORT-22

Building Manager Report



State of Connecticut — Report-22 - Monthly Building Manager Report

Executive Summary

Billing for Current Year Jan 2019 - Dec 2019

Commodity	Use	UOM	Cost	$/SqFt
Electric	1,735,503	kWh	$243,899	$0.869
Hot Water	1,234	MMBtu	$52,226	$0.186
Chilled Water	162	Ton Hr	$57,968	$0.207
Water	1,358	Kgal	$17,459	$0.061
Fire Protection	0		$3,746	$0.012
Sewer	0	Kgal	$146	$0.000
Total			**$375,445**	**$1.335**

Cost Percentage

Cost Comparison $0 $301,000	Jan 2018 - Dec 2018	Jan 2019 - Dec 2019	Diff	Diff %
Electric	$285,433	$243,899	($41,535)	-14.6%
Hot Water	$194,995	$52,226	($142,769)	-73.2%
Chilled Water	$185,143	$57,968	($127,175)	-68.7%
Water	$10,173	$17,459	$7,287	71.6%
Fire Protection	$1,229	$3,746	$2,517	204.9%
Sewer	$47	$146	$99	210.3%

Current Year vs Base Year Cost Trend (Top 3 commodities)

Use Comparison 0% 100%	Jan 2018 - Dec 2018	Jan 2019 - Dec 2019	Diff	Diff %
Electric	2,065,962	1,735,503	(330,459)	-16.0%
Hot Water	4,262	1,234	(3,028)	-71.0%
Chilled Water	675	162	(513)	-76.1%
Water	831	1,358	527	63.5%
Sewer	107	0		

REPORT-06

Year-over-Year Comparison

		Cost, Jan - Dec				
Reporting Node Name	Reporting Node Code	Jan 2017 - Dec 2017	Jan 2018 - Dec 2018	Jan 2019 - Dec 2019	Change over 2018	
ADS_Reporting	ADS_REPORTINGNODE	$52,124	$65,687	$66,673	$986	1.5 %
AES_Reporting	AES_REPORTINGNODE	$138,155	$32,345	$578,139	$545,794	1,687.4 %
CAA_Reporting	CAA_REPORTINGNODE	$1,882	$5,044	$6,397	$1,353	26.8 %
CHFA_Reporting	CHFA_REPORTINGNODE	$129,111	$176,342	$190,511	$14,169	8.0 %
CLC_Reporting	CLC_REPORTINGNODE	$172,339	$197,112	$199,965	$2,854	1.4 %
CRDA_Reporting	CRDA_REPORTINGNODE	$733,598	$1,104,916	$1,066,611	-$38,305	-3.5 %
CSCU_Reporting	CSCU_REPORTINGNODE	$8,600,290	$8,984,411	$12,675,395	$3,690,984	41.1 %
CSL_Reporting	CSL_REPORTINGNODE	$39,562	$52,987	$66,152	$13,166	24.8 %
DAS_Reporting	DAS_REPORTINGNODE	$8,354,332	$9,169,651	$7,471,324	-$1,698,327	-18.5 %
DCF_Reporting	DCF_REPORTINGNODE	$1,286,784	$2,790,888	$2,627,141	-$163,747	-5.9 %
DCJ_Reporting	DCJ_REPORTINGNODE	$145,306	$206,130	$191,151	-$14,979	-7.3 %
DCP_Reporting	DCP_REPORTINGNODE	$258	$163	$0	-$163	-100.0 %
DDS_Reporting	DDS_REPORTINGNODE	$677,180	$852,432	$1,517,594	$665,163	78.0 %
DEEP_Reporting	DEEP_REPORTINGNODE	$4,128,741	$3,827,791	$2,100,804	-$1,726,988	-45.1 %
DMV_Reporting	DMV_REPORTINGNODE	$642,844	$731,435	$691,601	-$39,834	-5.4 %
DOA_Reporting	DOA_REPORTINGNODE	$43,201	$88,930	$144,228	$55,298	62.2 %
DOB_Reporting	DOB_REPORTINGNODE	$241	$78	$0	-$78	-100.0 %
DOC_Reporting	DOC_REPORTINGNODE	$13,339,342	$20,354,987	$20,318,714	-$36,274	-0.2 %
DOH_Reporting	DOH_REPORTINGNODE	$0	$0	$0	$0	
DOI_Reporting	DOI_REPORTINGNODE	$65,760	$551,752	$17,452	-$534,299	-96.8 %
DOL_Reporting	DOL_REPORTINGNODE	$526,276	$577,238	$588,579	$11,341	2.0 %
DOT_Reporting	DOT_REPORTINGNODE	$7,350,963	$9,040,626	$8,967,585	-$73,041	-0.8 %
DPH_Reporting	DPH_REPORTINGNODE	$669,569	$1,034,197	$1,093,653	$59,456	5.7 %
DRS_Reporting	DRS_REPORTINGNODE	$6,766	$11,164	$5,151	-$6,014	-53.9 %
DSS_Reporting	DSS_REPORTINGNODE	$234,903	$364,611	$439,951	$75,340	20.7 %
DVA_Reporting	DVA_REPORTINGNODE	$879,828	$792,027	$1,013,990	$221,963	28.0 %
ECD_Reporting	ECD_REPORTINGNODE	$14,808	$17,665	$27,209	$9,544	54.0 %
ESPP_Reporting	ESPP_REPORTINGNODE	$1,825,078	$5,407,478	$4,955,726	-$451,752	-8.4 %

REPORT-19

Monthly Utility Use and Cost Spreadsheet

	Electric				Natural Gas		
	Use kWh	Demand kW	Cost	AUC	Use THERM	Cost	AUC
01-2018	48,235.9	158	$6,707	$0.139	8,726.0	$5,292	$0.606
02-2018	47,014.8	158	$6,561	$0.140	7,007.0	$3,995	$0.570
03-2018	49,457.1	158	$6,725	$0.136			
04-2018	47,625.4	158	$6,892	$0.145	5,319.4	$3,645	$0.685
05-2018	57,394.7	158	$8,100	$0.141	3,333.2	$3,115	$0.935
06-2018	83,039.1	168	$10,866	$0.131	2,887.7	$2,948	$1.021
07-2018	82,428.5	169	$11,475	$0.139	3,307.0	$3,227	$0.976
08-2018	79,375.6	169	$11,135	$0.140	3,207.4	$2,994	$0.933
09-2018	58,005.3	169	$8,571	$0.148	3,406.5	$2,878	$0.845
10-2018	50,678.3	169	$7,657	$0.151	4,533.3	$3,378	$0.745
11-2018	48,846.5	169	$7,298	$0.149	6,105.6	$4,188	$0.686
12-2018	53,120.6	169	$7,764	$0.146	7,337.2	$4,903	$0.668
Total	**705,221.7**	**1,973**	**$99,751**	**$0.141**	**55,170.2**	**$40,562**	**$0.735**
01-2019	51,288.9	169	$7,531	$0.147	9,061.4	$6,065	$0.669
02-2019	47,625.4	169	$7,135	$0.150	7,803.6	$5,538	$0.710
03-2019	44,572.5	169	$6,738	$0.151	7,300.5	$5,977	$0.819
04-2019	50,678.3	169	$7,544	$0.149	4,795.4	$4,457	$0.929
05-2019	54,952.3	169	$8,261	$0.150	4,156.0	$4,190	$1.008
06-2019	72,659.2	169	$10,213	$0.141	3,207.4	$3,517	$1.097
07-2019	78,154.4	168	$10,317	$0.132	2,793.4	$3,078	$1.102
08-2019	72,659.2	162	$9,653	$0.133	3,086.8	$3,205	$1.038
09-2019	51,899.4	162	$7,506	$0.145	3,563.8	$3,003	$0.843
10-2019	40,909.0	162	$6,161	$0.151	2,342.6	$2,456	$1.048
11-2019	47,625.4	162	$6,763	$0.142	0.0	$1,201	$0.000
12-2019	50,678.3	162	$7,128	$0.141	0.0	$1,201	$0.000
Total	**663,702.2**	**1,995**	**$94,949**	**$0.143**	**48,110.8**	**$43,888**	**$0.912**

DASHBOARDS

SEE LIVE DATA

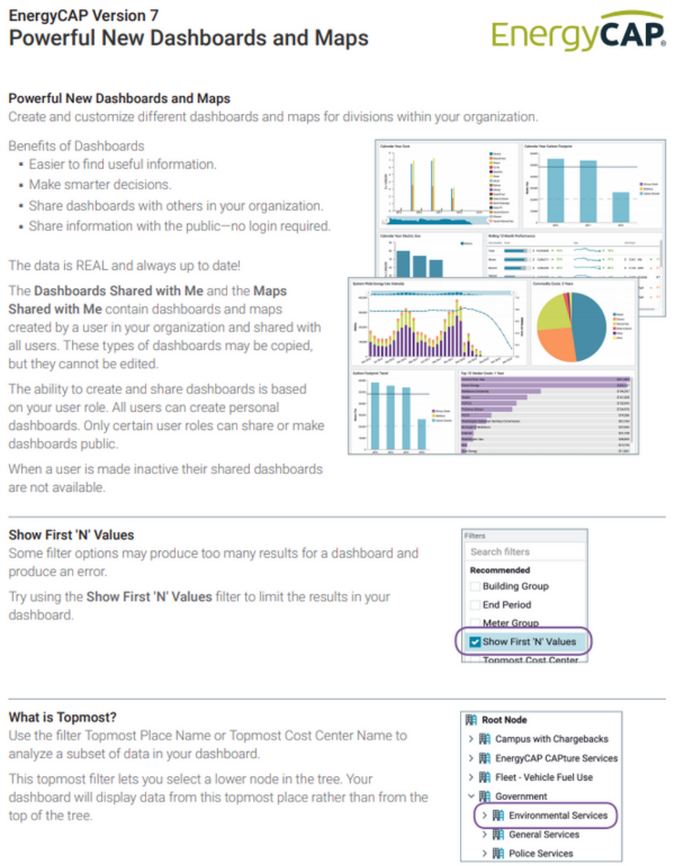
The data is always up to date with what is in our system.

QUICKLY VIEW PERFORMANCE STATISTICS

It's the simplest way to quickly view utility information.

SHARE WITH THE PUBLIC

Dashboards can be made private for internal uses or shared publicly to make information available to stakeholders.



EnergyCAP Version 7
Powerful New Dashboards and Maps

EnergyCAP

Powerful New Dashboards and Maps
Create and customize different dashboards and maps for divisions within your organization.

Benefits of Dashboards
- Easier to find useful information.
- Make smarter decisions.
- Share dashboards with others in your organization.
- Share information with the public—no login required.

The data is REAL and always up to date!

The **Dashboards Shared with Me** and the **Maps Shared with Me** contain dashboards and maps created by a user in your organization and shared with all users. These types of dashboards may be copied, but they cannot be edited.

The ability to create and share dashboards is based on your user role. All users can create personal dashboards. Only certain user roles can share or make dashboards public.

When a user is made inactive their shared dashboards are not available.

Show First 'N' Values
Some filter options may produce too many results for a dashboard and produce an error.

Try using the **Show First 'N' Values** filter to limit the results in your dashboard.

Filters
Search filters
Recommended
Building Group
End Period
Meter Group
Show First 'N' Values
Topmost Cost Center

What is Topmost?
Use the filter Topmost Place Name or Topmost Cost Center Name to analyze a subset of data in your dashboard.

This topmost filter lets you select a lower node in the tree. Your dashboard will display data from this topmost place rather than from the top of the tree.

Root Node
Campus with Chargebacks
EnergyCAP CAPture Services
Fleet - Vehicle Fuel Use
Government
Environmental Services
General Services
Police Services

FREE HOW-TO GUIDE

Look for it in March's meeting recap email

ACCOUNTING AND REPORTING GUIDELINES

THE COMMENT PERIOD HAS CLOSED

on version 1 of EO 1 Accounting and Reporting Guidelines

THANK YOU FOR SUBMITTING COMMENTS AND QUESTIONS

Suggestion: Capturing large quantity of gasoline use being consumed in employee personal vehicles while on state business. [Agency] spends thousands mileage reimbursements for state business in personal vehicles.

Question 1: Is a building that [an agency] owns, but leases out to a private operator, required to be part of EO #1?

Answer 1: No, lease-outs to non-state entities are considered out of EO 1 scope.

BUILDING AUDITS

BUILDING AUDIT SELECTIONS

SELECTED BUILDINGS

Five consultants were each assigned a subset of the 35 locations

Buildings were initially selected on a square footage basis, and then refined based on criteria on the right.

CRITERIA FOR SELECTION

1. High, and likely inefficient, energy users due to outdated systems or equipment

2. No recent comprehensive energy improvements

3. Align with the state facilities plan and broader capital investment goals

35 SELECTED BUILDINGS

Vinal Regional Vocational Tech
Roselle School
Capitol Region Mental Health Center
Whiting Forensic Hospital
18-20 Trinity Street, Hartford
30 Trinity Street, Hartford
505 Hudson Street
Uncas - Campbell Building (Medical Building)
460 Capitol Avenue, Hartford
Rentschler Field Stadium
450 Capitol Avenue, Hartford
Uncas - Southeastern Mental Health Authority
CT Mental Health Center
410 Capitol Avenue, Hartford
Rowland State Government Center
300 Corporate Place, Rocky Hill
Battell Hall
Merritt Hall
DCF Building 8 East Campus
DCF Education/Recreation/Admin Facility
DESPP Laboratory
Department of Public Safety Headquarters
CT. State Police Academy - Main Bldg.
Various Cheshire Corrections Institution Facilities
Carl Robinson Education/Medical and Admin. Facilities
New Center
Garner Correctional Institution
42 Jarvis Street, Cheshire
Bridgeport Memorial Unit
Webster Building
Hartford Correctional Center
R. L. Corrigan Correctional Inst
Brooklyn 300 Bed Dorm & Support
Various Enfield Corrections Institution Facilities
Willard Correctional Institution

THESE 35 BUILDINGS REPRESENT ALMOST 5 MILLION SQ FT

AUDIT LOGISTICS

TIMELINE

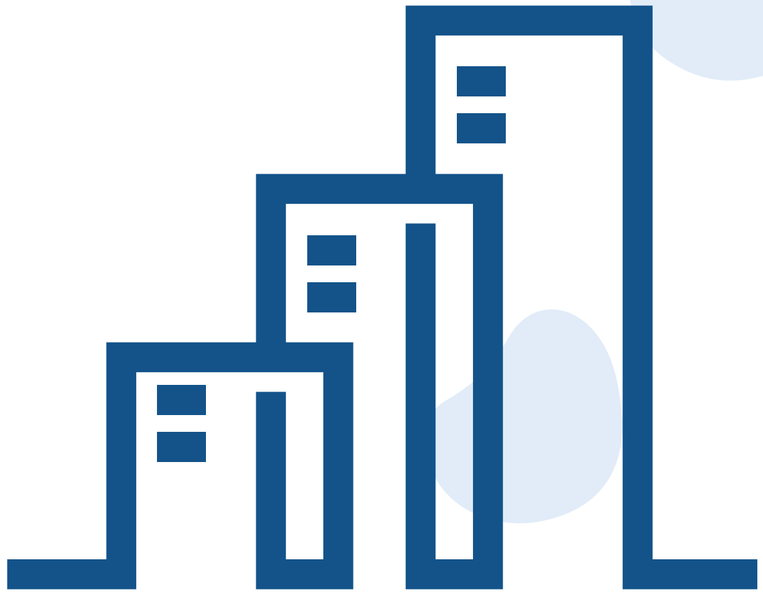
- Contractor site visits commenced on 2/24
- The bulk of the draft reports are expected early July
- Final Reports are expected end of August

ACCURATE BUILDING DATA

- Continued collaboration with DEEP for facility energy use information within EnergyCAP database

INCENTIVES AND COSTS

- Lowered audit costs from **$1.2 million** to **$625,000** through negotiation
- Partnering with Eversource and UI for significant rebates; **up to 40% of projected audit expenditures**



THE GOAL IS TO COMPLETE ALL AUDITS OVER 7-8 MONTHS.

AUDIT REPORTS

GOAL OF REPORTS

The main purpose of the energy audits is to **identify no-cost/low-cost, and high-impact energy savings opportunities,** providing recommendations in line with the State's efficiency goals.

Results will be provided in standardized, comparable reports for each facility.

Audit reports will be used as a basis for planning energy cost reduction projects.

REPORT CONTENTS

- condition of energy equipment
- In-depth analysis of energy/water cost trends and usage patterns
- *Energy Use Intensity* (EUI*) benchmarking
- determination of potential for energy and water savings
- feasibility of renewable energy systems on the audited property, as applicable

*EUI can be defined as the measurement of a building's annual energy consumption relative to its square footage.

PROJECT TEAM REPORT-OUTS

PUBLIC ENGAGEMENT REPORT-OUT

Goal of Award Ceremony

To recognize and identify champions of sustainability, highlight contributions, and encourage a culture of recognition and longevity.

Timeline

- March 20: release nominations form
- Early May: Award Ceremony

Nominations Form

- **Agency Changemaker** - nominated by each SSO to a sustainability champion at their agency
- **High-Impact Project** - goes to agencies or institutions in the GHG, Water, and Waste categories
- **Governor's Recognition Award** - 2-3 groups or individuals to recognize in their work in the GreenerGov sphere

Details

- Press Release in late April with Awards Ceremony Announcement
- Potential of a low/zero waste event?
- Booths to showcase CT resources

SUSTAINABLE WATER USE STRATEGIES

DIFFICULTY

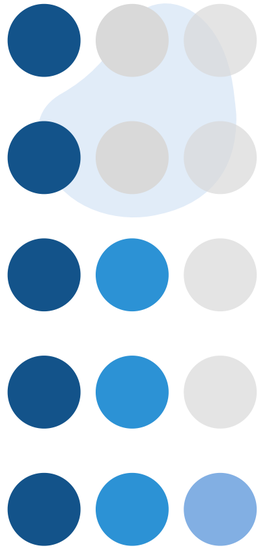
Strategy 1: Water Conservation and Reduction Sign Campaign

Strategy 2: WaterSense Standards

Strategy 3: Water Management Planning Strategy

Strategy 4: Landscaping and Green Infrastructure

Strategy 5: Water Conservation and How to do it by Mechanical Means



ENERGY EFFICIENCY STRATEGIES

DIFFICULTY

Strategy 1: Complete an energy efficiency project through the SBEA program or another option offered through the utilities, using developed SOP

Strategy 2: Complete a Bond Funded energy efficiency Project using developed SOP

Strategy 3: Use EnergyCAP to run reports to identify buildings that are inefficiently using energy and good candidates for efficiency measures

CLEAN AND EFFICIENT TRANSPORTATION STRATEGIES

DIFFICULTY

Strategy 1: Identify Internal and External Funding Streams For EV Infrastructure.

Strategy 2: Analyze All Aspects Of Agency Vehicle Needs For Efficiencies And Opportunities To Reduce Overall Vehicle Counts.

Strategy 3: Agencies Should Prioritize Purchase Of The Most Fuel-Efficient Vehicles That Meet Program Needs.

SPP
SURVEY

Upcoming Survey

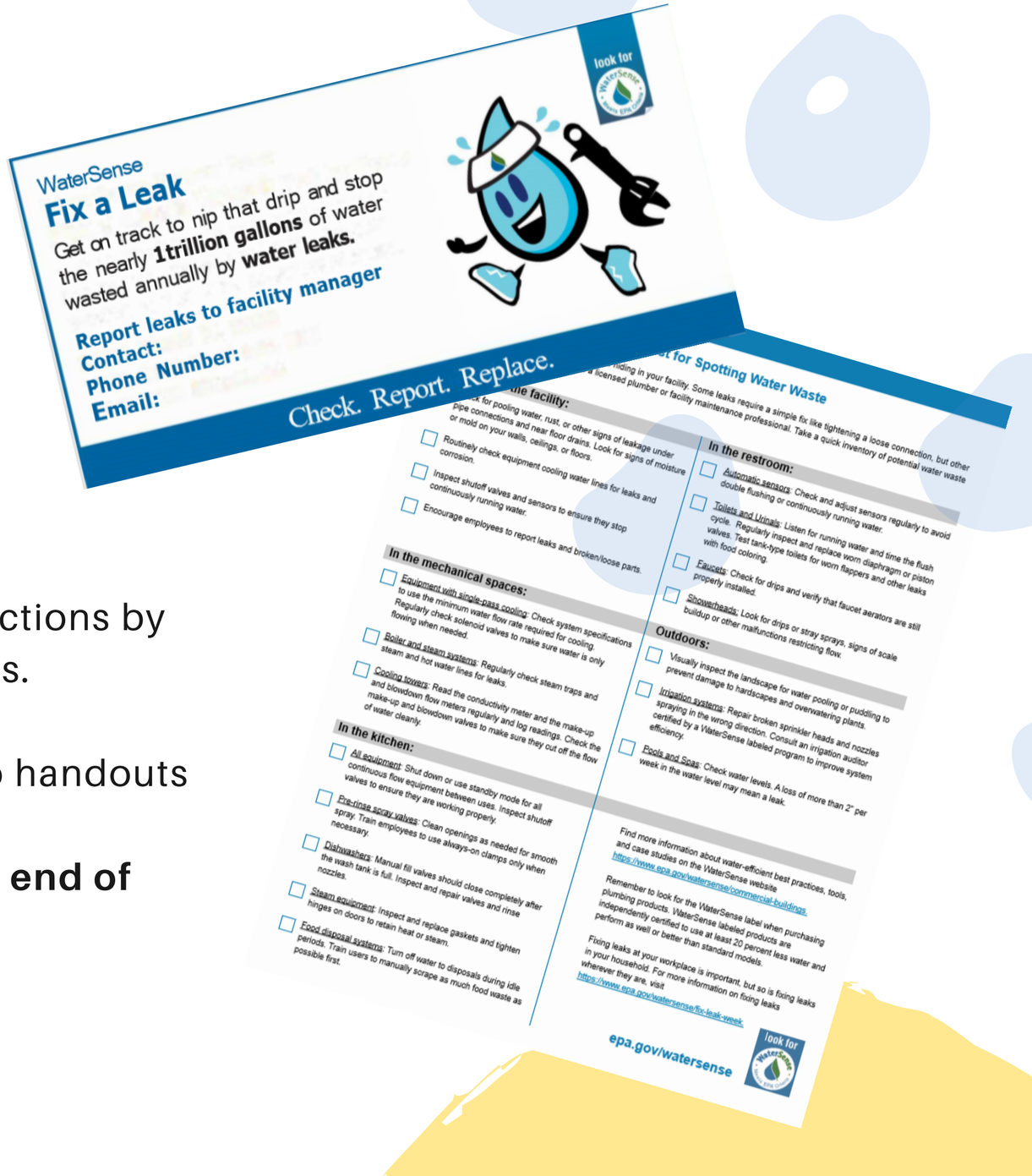
The reporting team has prepared a survey on your experience completing the Sustainability Performance Plan.

They hope to use feedback on this survey to shape future reporting.

Be on the lookout for a survey from the Reporting Team later this month.

FIX A LEAK WEEK

FIX A LEAK WEEK
3/16 - 3/22



- Run by EPA's WaterSense program

- Offers an opportunity for SSOs to jumpstart water reductions by reporting and fixing leaks at state buildings and facilities.

-We will share promotional materials and helpful how-to handouts

- Track reported and/or fixed leaks for a survey at the end of the week

NEXT STEPS

NEXT STEPS

Refine Sustainability Strategies

Project teams may be asked to edit strategies.

Level 3

Complete Level 3 by April 1, 2020

Encourage leak reporting

Fix a Leak week is 3/16 - 3/22