



AGENDA - Amended

GREEN PRACTICES COMMISSION MEETING

Thursday June 11, 2020 5:30 – 7:00 p.m.
VIA VIDEOCONFERENCE

Observe and/or Listen to the Meeting (your options to join the meeting are below):

Please click the link below to join the webinar:

<https://us02web.zoom.us/j/88656143839?pwd=ZWFyaHltdCsxelVGQVhEVDBmTnZaQT09>

Password: 903919

Or iPhone one-tap :

US: +19292056099,,88656143839#,,1#,903919# or +13017158592,,88656143839#,,1#,903919#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 929 205 6099 or +1 301 715 8592 or +1 312 626 6799 or +1 669 900 6833 or +1 253 215 8782
or +1 346 248 7799 or 888 788 0099 (Toll Free) or 877 853 5247 (Toll Free)

Webinar ID: 886 5614 3839

Password: 903919

International numbers available: <https://us02web.zoom.us/j/88656143839>

Citizen Participation

Those who wish to provide a comment during the “Public Comments” portion as indicated on the Parks Commission agenda: may provide written comments to the Director of Parks, Recreation and Forestry ahead of the meeting.

ALL written comments must be received **no later than 12:00 p.m. the day of the meeting.** Comments may be sent via email to: jwendt@ucitymo.org or mailed to the City Hall – 6801 Delmar Blvd. – Attention Jenny Wendt, Senior Project Manager. Such comments will be provided to the Green Practices Commission prior to the meeting. Comments will be made a part of the official record and made accessible to the public online following the meeting.

Please note, when submitting your comments, a **name and address must be provided.** Please also note if your comment is on an agenda or non-agenda item, and a name and address are not provided, the provided comment will not be recorded in the official record.

The City apologizes for any inconvenience the meeting format change may pose to individuals, but it is extremely important that extra measures be taken to protect employees, residents board/commission members and elected officials during these challenging times.



AGENDA - Amended
GREEN PRACTICES COMMISSION MEETING
Thursday June 11, 2020 5:30 – 7:00 p.m.
VIA VIDEOCONFERENCE

1. Roll Call
2. Opening Round
3. Approval of Minutes: 03/12/2020
4. Special Presentations
 - a. Public Comments (Limited to 3 minutes for individual's comments and 5 minutes for representatives of groups or organizations)
5. New Business
 - a. Jenny Wendt – new role at University City
 - b. Commercial Solar Program
 - c. Energy Management System
6. Old Business
 - a. Energy Efficiency Master Plan Consultant Selection
 - b. Anti-Litter Campaign
 - c. Oops: Feet on the Street Recycling Audit
7. Time Permitting
 - a. Biodiversity Projects
 - b. Upcoming Comprehensive Plan
 - c. Fall 2020 WUSTL Sustainability Exchange Intern Application
 - d. Sustainability Strategic Plan
8. Council Liaison Update
9. Closing Round
10. Adjournment



Green Practices Commission

6801 Delmar Boulevard, University City, Missouri 63130, Phone: (314) 862-6767, Fax: (314) 863-9146

Meeting Minutes – University City Green Practices Commission

March 12, 2020 **DRAFT**

Location: Heman Park Community Center

Attendees Present: John Solodar (Chairperson), Mary Gorman, Barbara Brain, Jonathan Stitelman, Timothy Dugan Jenny Wendt (Staff Liaison), Tim Cusick (Council Liaison)

Attendees Absent: Liz Essman, Adam Staudt

1. Meeting Called to Order, Roll Call 5:35pm
2. Opening Round

Barbara Brain would like to discuss mosquito spraying in University City. If time permits, this will be added to this agenda.
3. 11/14/2019 and 01/09/2020 meeting minutes were approved with minor corrections.
4. Special Presentations
 - a. Danielle Korman and Natalie Ryback of the Blackbird Foundation, a grant giving foundation focused on advancing social change, justice, and environmental protection, spoke to the commission about launching a pilot initiative to calculate baseline food waste in University City to determine how to reduce food waste in University City. Jenny will connect them to the OneSTL group and schedule a detailed presentation for the commission at a future meeting.
5. New Business
 - a. An application was submitted for the Fall 2020 WUSTL Sustainability Exchange Program to partner with a student or class to update the 2011 Sustainability Strategic Plan.
 - b. Sustainability Strategic Plan Update: The 2011 Sustainability Strategic Plan was revamped in 2016 but never completed. The Sustainability Exchange Program Intern will support this project.
 - c. Energy Efficiency Master Plan Consultant Selection: An RFP went out for an Energy Efficiency Master Plan. Staff is recommending selecting CTS Group for this process.
 - d. Biodiversity Projects: Barbara Brain has been working with an informal group focusing on native plantings (Nuts for Natives) and Jacob Kaiser. Barbara Brain adopted a median on Midland between Olive and Page. The group has removed euonymus and other weeds and hopes to add trees to the median. April 18th an

Arbor Day event is scheduled; Barbara and the Nuts for Natives will attend this meeting to discuss natives and hand out native trees. Jacob Kaiser also suggested that the group start honeysuckle removal along the River Des Peres and replacing this with native trees and shrubs. This would be a multiyear process. The group has looked at removing natives all along the River Des Peres.

Barbara and Jacob also discussed the raised beds adjacent to the Community Center. The group will investigate caring for these beds.

Barbara has also been talking with Great Rivers Greenway about trash removal and adding natives along trails.

- e. Green Cities Challenge: University City will again join the Green Cities Challenge, either as a participant at \$350 per year or \$600 per year at the leader level. The Commission decided to continue participating as a participant at \$350 per year.
- f. BYOBag Day: April 18th is BYOBag Day for the region. Various business districts and retailers have agreed to offer incentives to consumers who do not have their purchases bags. The Loop Business District, Pete's Market, International Market, and the Olive Supermarket have all agreed to participate.
- g. Earth Day Event: The City will have a small Earth Day event on April 22th, Bring Conservation Home, Great Rivers Greenway, the Farmer's Market, MSD Project Clear will be represented, and Fitz's will provide a keg of root beer.

6. Old Business

- a. Anti-Litter Campaign: The kickoff will begin with an anti-litter poster contest for middle and high school students. Monetary awards will be given for 1st, 2nd, and 3rd place posters. These will be posted throughout City buildings and in school. The Commission will be judging the posters at the May 18th meeting.
- b. Feet on the Street Recycling Audit: This program will start in May; one intern has been hired and a second intern will be hired at the end of March. These interns will work with Jenny and the sanitation division to audit the recycling carts. If the carts are contaminated, they will not be collected until they are clean.

7. Added Agenda Item

- a. Mosquito spraying and larvicide by St. Louis County: There is concern that the spraying/fogging for mosquitos also kills other insects. Barbara attended a biodiversity workshop which discussed the decline of insects and birds due to planting of non-natives and pesticides. Brentwood has discontinued mosquito fogging and has decided to use the money for spend It was recommended to investigate how Brentwood handles mosquito control.

8. Council Liaison Update:

- a. Farmer's Market opens officially April 18th. Starting on April 23rd, there will be Thursday markets throughout the Summer.
- b. U City will be hiring its own executive director for the LSBD.
- c. Hotel Feasibility Study indicated there are 4 areas that can support hotels: 170 and

Olive, 170 and Delmar, Forest Park Parkway and Forsyth, and the west end of the Loop. There is a project to put in a hotel on Kingsland north of Delmar, and another project to put in a hotel at Delmar and 170.

- d. Land acquisition process for Olive/170 is underway.
- e. Washington University will be continuing school remotely for the remainder of the school year due to COVID risks.
- f. The library will be discontinuing events but will still be open due to COVID.

9. Closing Round

- a. John Solodar and Tim Cusick discussed tax abatement for the developments at Delmar and 170.
- b. John Solodar mentioned that we would probably lose the council liaison (Tim Cusick) after the elections as council members typically rotate commissions every 2 years.

10. Adjournment at 6:58pm.

www.ucitymo.org



Public Works Department

6801 Delmar Boulevard, 3rd Floor, University City, Missouri 63130, Phone: (314) 505-8560, Fax: (314) 862-0694

STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Renew St. Louis Solar – Commercial Solar Program

Renew St. Louis Solar is an innovative new program design is the first of its kind in the Midwest. Like the GROW Solar STL program for residential customers, Renew STL Solar is a "group buy" program, meaning that installation prices improve when customers can pool their projects with other similarly-situated organizations. In addition, through our Customer Volume Discount, we are offering greater financial benefits as more customers participate. Essentially, this program will allow businesses to install solar on their operational buildings and begin saving money immediately, potentially with no upfront cost.

The Commission will discuss if this program is a good fit for University City businesses. If so, the City would promote this program to businesses to encourage renewable energy in our commercial sector.



A solar "group-buy" program for St. Louis building owners

Renew STL Solar can offer a lower install price by pooling customers' projects together and purchasing equipment in bulk. The more customers participate, the more they save!

Take advantage of *no money down and interest only payments for the first year!*

Lets us help you invest in your properties and create revenue for your business. Your participation helps support the growth of the solar industry in the St. Louis Region, and can help your business achieve its sustainability goals!

To receive a FREE solar estimate and building evaluation contact Andrew Linhares

andrew@renewmo.org

www.renewstlsolar.org



Agenda Item 5c - Energy Management System



Public Works Department

6801 Delmar Boulevard, 3rd Floor, University City, Missouri 63130, Phone: (314) 505-8560, Fax: (314) 862-0694

STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Energy Management Software

Dude Solutions has a software program, the Smart Energy Management System. This is cloud based software that automatically enters our utility bills into the program. It can graph usage, make reports, notify staff of abnormal usage, automatically enter billing information (currently that is done manually by finance), dump the data into Energy Star Portfolio Manager, etc. This software is through the same platform we will be using for our permitting software.

Previously I've had interns manually enter data into Energy Star Portfolio Manager. This is after finance has already manually entered the billing data into an excel spreadsheet. This is a duplication of effort, plus data entry that is completed by finance (time consuming). In addition, it is unknown when staff will be available to track data in Energy Star Portfolio Manager since it requires considerable time for manual data entry.

The Commission will discuss the usefulness of the software and the costs associated with different options of its use.

Agenda Item 5c - Energy Management System

Energy Management System Summary Notes

- Up to 20 facilities – top 20 meters (any 20 meters, electric is probably the most logical):

\$2,724.23 annually (this is for 2 months free, after the first year this would increase to ~ \$3,200)

\$840 set up cost

\$3,564.23 up-front cost for 1 year

- All electric and gas (gas meters included in this cost for 1 year only) No water meters:

\$4,556.88 annually (this is for 2 months free, after the first year, this would increase to ~\$5,556.88)

\$1,596.00 set-up cost

\$6,152.68 total up-front cost for 1 year

All electric meters with streetlights lumped into one account

All gas meters too for the first year

And 2 free months

- ALL METERS:

Up to 31 facilities – all utility meters (127 meters)

\$10,701.60 per year (this is for 2 months free, after the first year this would increase to ~ (\$12,800)

\$6,300 set-up cost

\$17,001.60 up-front cost for 1 year

Factors:

Finance spends 1 -2 days per month manually entering data

Automation prevents data entry errors

Also, data will automatically get entered so if a bill is missing or lost, we will know.

Also notify us when there is abnormal usage

Bill validation

Central location for bills

Reporting mechanism to show reports to different departments usage

Makes budgeting easier – can determine how much to charge each department and if improvements

Can format the data to be entered into different financial software

DASHBOARD

Energy Manager™ by Dude Solutions

Energy Manager - DSI Demo Dashboard

Logout My Account Session

Organization Setup
Facility Details
Utility Accounts
Billing Data
ENERGY STAR
Interval Data
Savings Actions
Resources
Reports & Charts
System Admin
Help & Contact Info

General Stats Bill Stats Announcements

General Stats

# Facilities:	156
# Vendors:	6
# Accounts:	283
# Meters:	797

System Activity

# Users:	18
# User Types:	4
# Logins - Month:	7
# Logins - YTD:	203

ENERGY STAR

Avg. score:	32
Lowest score:	0
Highest score:	98
# Qualified(75%):	1

Resources

# Documents:	27
# Links:	6
# News sources:	26
# Blog articles:	0

Quick Links User Logins Social Media

Quick Links

- [Historical Average vs. Current](#)
- [Fire Department Chargebacks](#)
- [Facility EUI Ranking Chart](#)
- [Treemap Facility Ranking](#)
- [Year-Over-Year Comparison](#)
- [Side-by-Side Service Graphs](#)
- [Historical Data by Service](#)
- [Historical Comparison Chart](#)
- [Facility EUI Ranking Chart](#)
- [Facility Energy Use Ranking](#)

Energy Water All Utilities Interval Data ENERGY STAR

Monthly Energy Use

Monthly Total Energy Usage

All Facilities -- Apr 2015 - Mar 2016

Month	Last Year (MBtu)	This Year (MBtu)
Apr	6.1	5.8
May	5.4	5.2
Jun	4.9	5.1
Jul	5.1	5.5
Aug	5.0	5.0
Sep	4.7	4.6
Oct	5.5	5.4
Nov	7.2	7.0
Dec	8.5	8.8
Jan	8.5	8.7
Feb	6.7	7.1
Mar	6.8	6.8

Energy Usage (MBtu)

Apr May Jun Jul Aug Sep Oct Nov Dec Jan Feb Mar

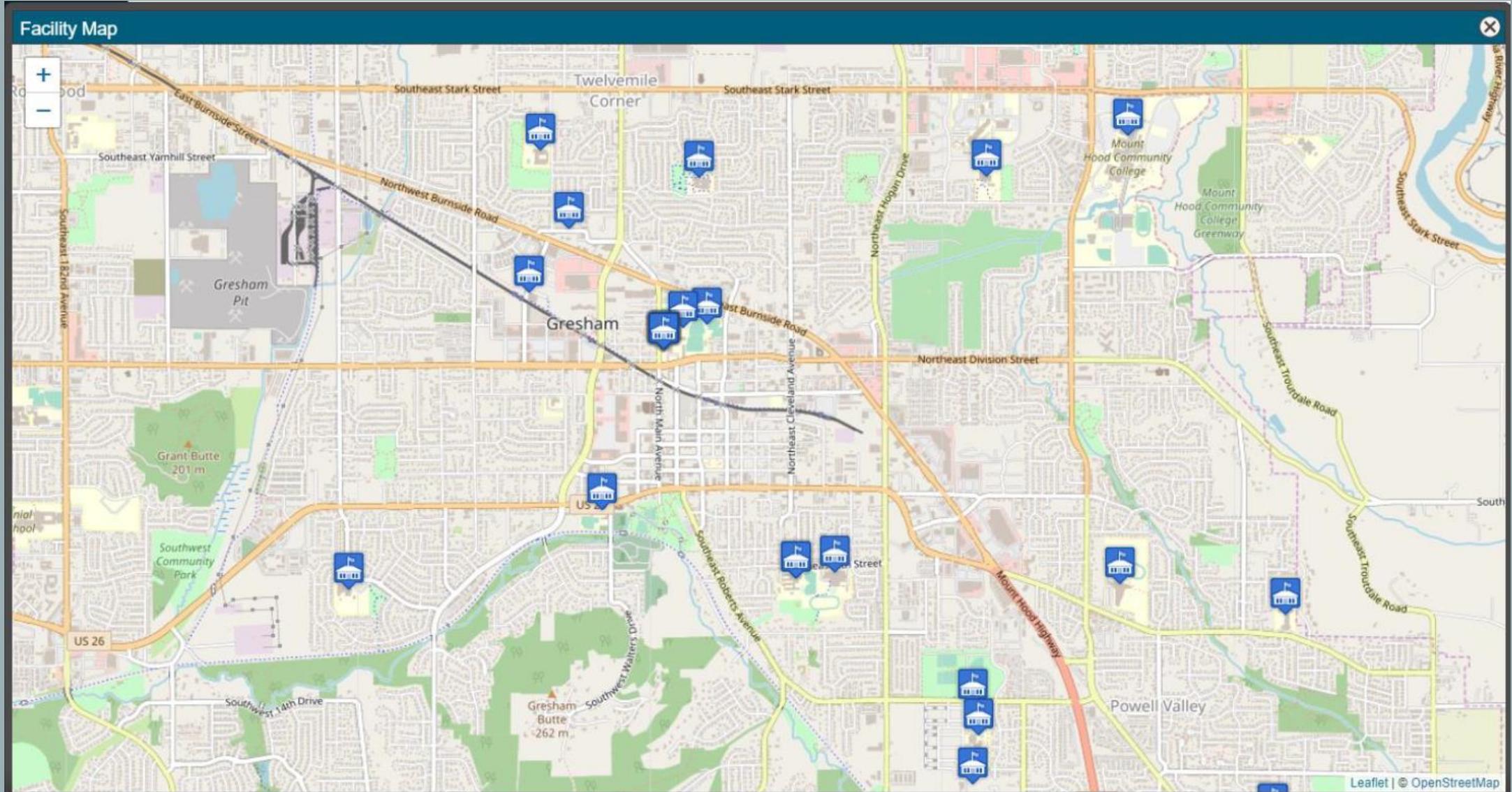
◆ Last Year ◆ This Year

Facilities: All Apr 2015 to Mar 2016 Total Electricity Demand Natural Gas Cost

DSI Demo

FACILITY > ACCOUNT > METER MAP

Agenda Item 5a - Energy Management System



TRACK MULTIPLE SERVICES

Level: **** All Facilities ****

Per facility: (generate a separate report for each facility matching the criteria)

Services:

- Electricity
- Natural Gas
- Chilled Water
- Water
- Irrigation

Hide graphs for services with no data in selected time period

Time period: **1 year**

Start date: **May 2016**

End date: **April 2017**

Proration by: **Line Item Dates**

Chart colors: **Customize colors**

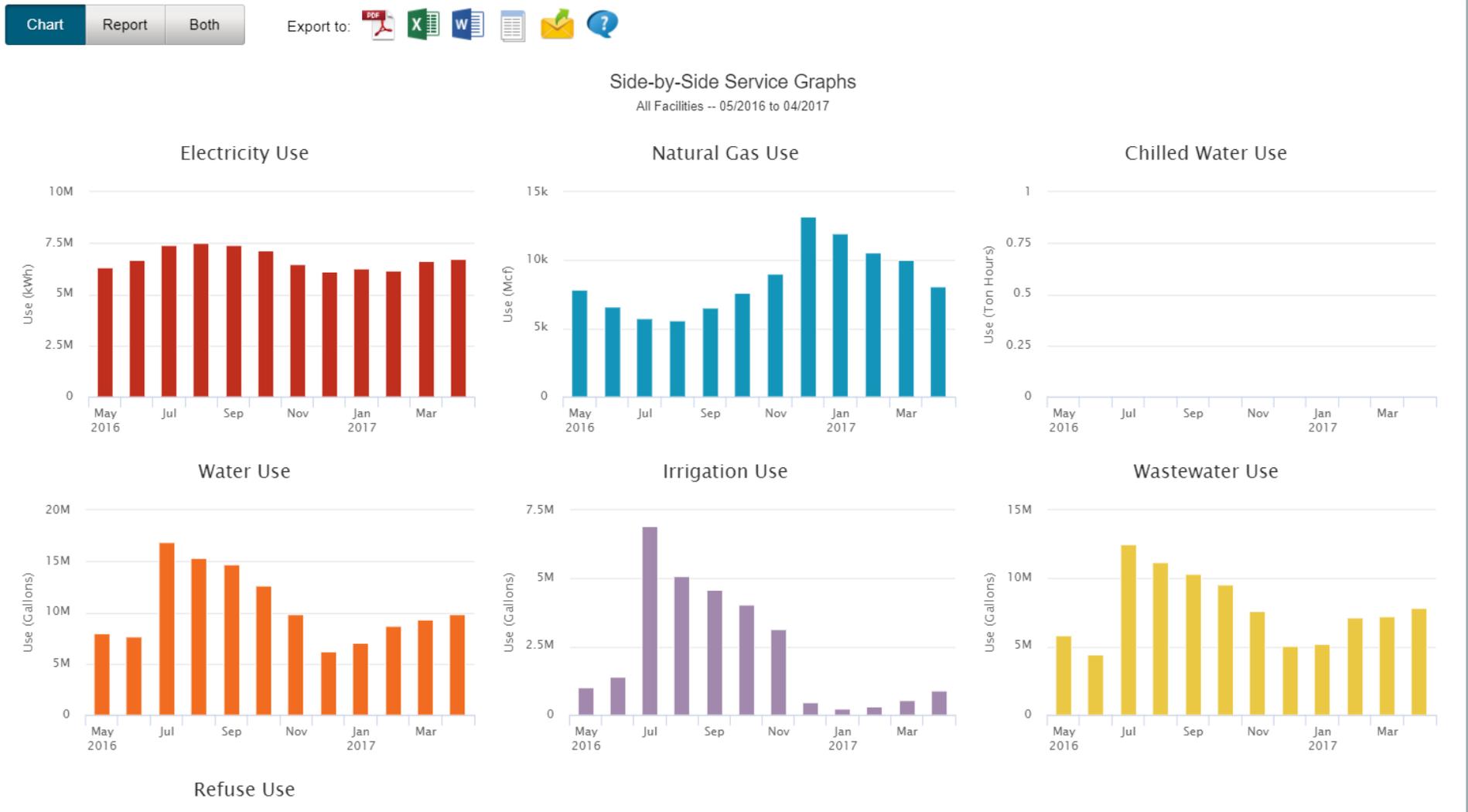
3D display:

Chart type:

Data type: Energy Use Energy Cost

Facility spec: **None specified**

[Refresh Report](#)



TRACK SUB-METERS AGAINST MASTER

Agenda Item 5c - Energy Management System

Energy Manager – Sam Houston State University
Accounts & Meters

Menu

+ Add Account

Facility: **** ALL Facilities ****

Vendor: **** ALL Vendors ****

141046342 Count: (446)

- Energy 141046342 Electricity
- Energy 141046342-0197-S Electricity
- Energy 141046342-02&03 Electricity
- Energy 141046342-0278-1 Electricity
- Energy 141046342-0282-1 Electricity
- Energy 141046342-0283-1 Electricity
- Energy 141046342-10 Electricity
- Energy 141046342-102 Electricity
- Energy 141046342-102wcp Electricity
- Energy 141046342-103-1 Electricity
- Energy 141046342-103-2 Electricity
- Energy 141046342-103wcp Electricity
- Energy 141046342-104 Electricity

Energy Manager – Sam Houston State University
141046342

Expand

Logout My Account

General Address Memos Meters **Allocations** Funding Sources

Allocation type(s): *Master Account*

Subsidiary Accounts

+ Add Subsidiary

Search:

Facility	Subsidiary Account	Service	Allocation
ACADEMIC BLDG III	141046342-8	Electricity	Meter Readings
ACADEMIC BLDG IV	141046342-10	Electricity	Meter Readings
ACADEMIC BUILDING I	141046342-39	Electricity	Meter Readings
ART COMPLEX (NEW)	141046342-380	Electricity	Meter Readings
AUSTIN & PEABODY	141046342-02&03	Electricity	Meter Readings
BALDWIN-CREAGER HOUSE	141046342-130_131	Electricity	Meter Readings
BASEBALL SOFTBALL PRACTICE FACILITY	141046342-289	Electricity	Meter Readings
BEARKAT VILLAGE A APTS A101-A306	141046342-273	Electricity	Meter Readings
BEARKAT VILLAGE C APTS C101-C306	141046342-275	Electricity	Meter Readings
BEARKAT VILLAGE D APTS D101-D312	141046342-276	Electricity	Meter Readings
BEARKAT VILLAGE F APTS F101-F312	141046342-278	Electricity	Meter Readings
BEARKAT VILLAGE I APTS I101-I306	141046342-281	Electricity	Meter Readings
BEARKAT VILLAGE J APTS J101-J306	141046342-282	Electricity	Meter Readings
BEARKAT VILLAGE K APTS K101-K308	141046342-283	Electricity	Meter Readings
BELVIN HALL	141046342-103-1	Electricity	Meter Readings
BERNARD G JOHNSON COLISEUM	141046342-48	Electricity	Meter Readings
BOBBY K. MARKS ADMINISTRATION BUILD	141046342-5	Electricity	Meter Readings
BUCHANAN HALL	141046342-103-2	Electricity	Meter Readings
CHEMISTRY AND FORENSIC SCIENCE	141046342-300	Electricity	Meter Readings
CJC COMPLEX	141046342-46	Electricity	Meter Readings
COLLEGE OF HUMANITIES & SOCIAL SCIE	141046342-314	Electricity	Meter Readings
COLLEGE OF HUMANITIES & SOCIAL SCIE FOOD POD	141046342-314-1	Electricity	Meter Readings
DAN RATHER COMMUNICATIONS BUILDING	141046342-51	Electricity	Meter Readings

**** Required field**

VALIDATE UTILITY BILLS

Energy Manager
Menu **Bill Validation**

Level: **** All Facilities ****

Vendor: **** All Vendors ****

Service: **** All Services ****

Account: **** All Accounts ****

Batch ID: **** None ****

Time period: **1 year**

Start date: **February** **2019**

End date: **January** **2020**

Date type: **Bill Date**

Method: **Historical Average**

Demand: (show variances for Billed and Actual demand)

Errors only:

Flag errors: **25** % below expected
25 % above expected

How are errors identified?

[Refresh Report](#)

Energy Manager **Bill Validation** Expand

Logout My Account Session

Export to:

Saved Report: **** New Report **** [Add](#) [?](#)

Bill Validation
All Facilities -- 02/2019 to 01/2020 -- Method: Historical Average

Display **15** rows Search:

h	Bill Date	Esti- mated?	Over- lap?	Bill Days	Average Bill Days	% Variance	Usage	Average Usage	Units	% Variance	Cost	Average Cost	% Variance
	08/18/2019			28	28		4	0	Therms	+2300%	\$19	\$11	+69.9%
	05/16/2019			31	29		837	46	kWh	+1729.5%	\$113	\$22	+412%
	08/18/2019			29	29		31	4	Therms	+780%	\$45	\$15	+196.7%
	07/08/2019			28	29		69	8	ccf	+762.5%	\$625	\$91	+590.6%
	07/20/2019			30	29		39	5	Therms	+646.9%	\$53	\$17	+220.1%
	10/19/2019			62	57		8	1	ccf	+481.8%	\$42	\$22	+86.5%
	08/04/2019			56	59		96	17	Gallons	+479.3%	\$686	\$447	+53.5%
	08/04/2019			56	59		96	17	ccf	+479.3%	\$3,639	\$3,388	
	07/21/2019			30	30		23	5	Therms	+385.5%	\$38	\$17	+125%
	10/18/2019			29	28		1,581	335	kWh	+372.1%	\$77	\$48	+60%
	11/16/2019			31	28		438	96	kWh	+356.3%	\$34	\$23	+44.3%
	08/21/2019			63	59		48	11	Gallons	+354.1%	\$287	\$130	+121.3%
	09/17/2019			30	30		4,602	1,047	kWh	+339.5%	\$190	\$123	+53.9%
	09/17/2019			30	29		2,025	463	kWh	+337.5%	\$93	\$62	+51.2%
	04/15/2019			29	28		21	5	kWh	+330.8%	\$25	\$18	+40.3%

Showing 1 to 15 of 1,332 entries
[First](#) [Previous](#) [1](#) [2](#) [3](#) [4](#) [5](#) [Next](#) [Last](#)

MEASURE PROJECT SAVINGS

Energy Manager -- DSI Demo
Capital Projects

Menu

+ Add Project

Facility: **** All facilities ****

Search text. Count: (8)

- BSC Weatherization
- City Hall Heat Recovery Chiller
- City Hall Waterside Economizer
- Crossroads Solar Array
- Fire Station HVAC Rooftop Unit Replacements
- LED Lighting upgrade**
- Pneumatic Upgrade to DDC
- Window Replacement Test

Energy Manager -- DSI Demo
LED Lighting upgrade

Expand

Logout My Account Session

Project Description Measures Docs & Photos

** Project name: LED Lighting upgrade

** Description: Installation of (86) 270 Watt modules – 23.62 kW, (3) Itek Theia 4400 inverters and (3) Itek Theia 2900 inverters.

Project mgr: Emma Johnson

Master project: ESCo contract with DES

Facilities: Belle Service Center

Project start: 06/14/2014

Substantial Completion: 08/06/2014

Project end: 08/08/2014

Project status: **Completed**

Project cost: \$151,920

Grants & rebates: \$113,982

Net cost: \$37,938

Annual utility savings: \$2,070

Annual maintenance savings: \$0

Annual other savings: \$1,941

Total annual savings: \$4,011

Payback - Utility savings: 18 yrs 3 mths

Payback - Total savings: 9 yrs 5 mths

ANNUAL PROJECT UTILITY SAVINGS

Service	Use Savings	Units	Cost Savings
Electricity	23,000	kWh	\$2,070
All Services			\$2,070

TOTAL PROJECT UTILITY SAVINGS (17 YEARS 1 MONTH)

Service	Use Savings	Units	Cost Savings
Electricity	393,070	kWh	\$46,896
All Services			\$46,896

** Required field

Save Cancel Delete

Export to: PDF XLS W

SET BENCHMARKING TARGETS

Energy Manager – Dude Campus
 Facility EUI Ranking Chart

Menu

Level: **** All Facilities ****

End date: April 2015

Max count: 20 No max

Proration by: Line Item Dates

Targets: 1. 40 (kBtu/SqFt/Yr)
 2. 80 (kBtu/SqFt/Yr)
 3. 160 (kBtu/SqFt/Yr)

Chart colors: **Customize colors**

3D display:

Bar colors: Use first series color only
 Alternate bar colors

Rank: Top Bottom

Flag missing data (exclude facilities with missing data)

Facility spec: **None specified**

[Refresh Report](#)



CALCULATE AVOIDED COSTS

Energy Manager
Cumulative Avoided Use & Cost Graph

Menu

Level: Single Facility

Facility: Sam Dude Residence ...

Per facility: (generate a separate report for each facility matching the criteria)

Service: Electricity

Time period: 1 year

Start date: February 2019

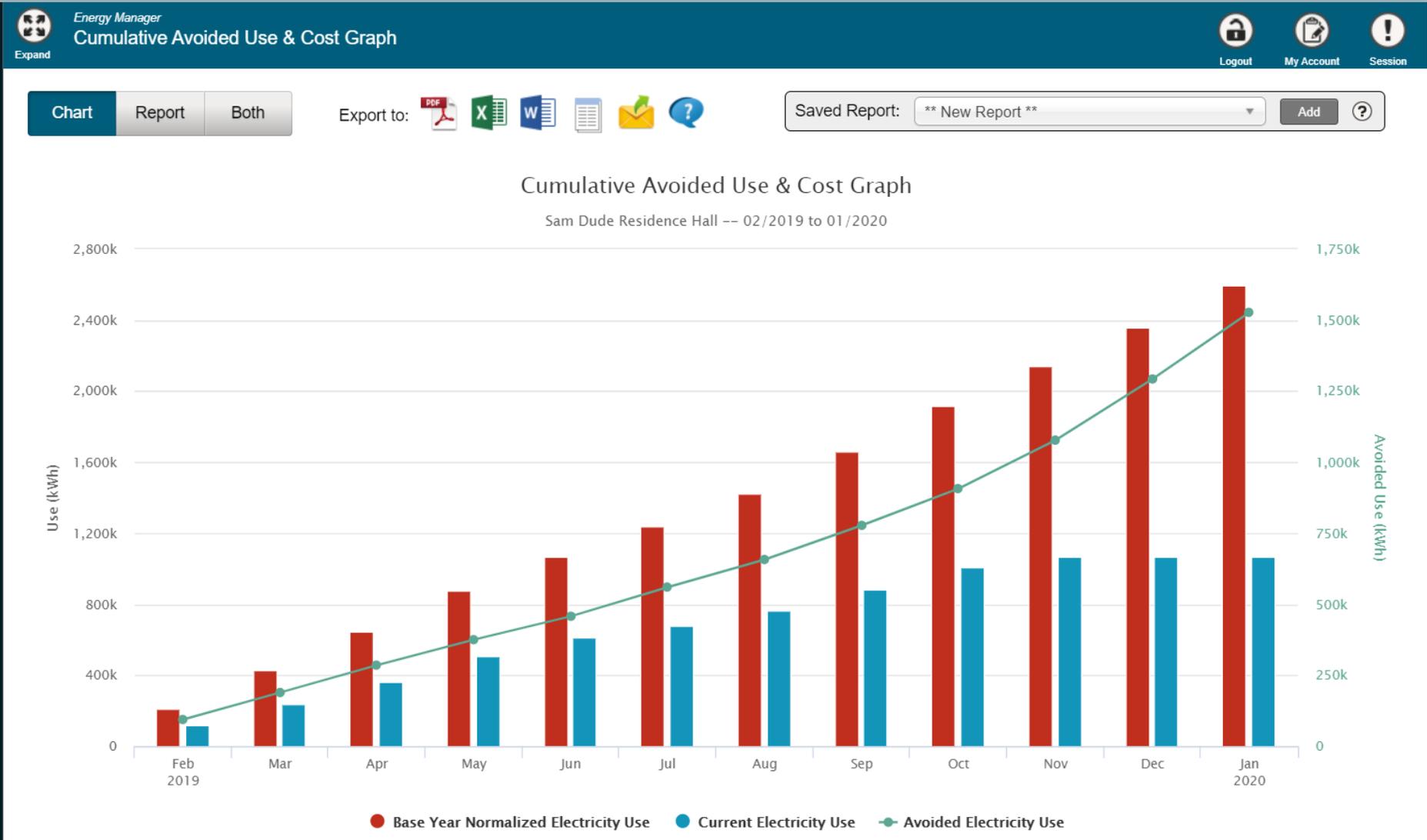
End date: January 2020

Chart colors: [Customize colors](#)

3D display:

Data type: Avoided use Avoided cost

[Refresh Report](#)



TRACK CARBON EMISSIONS

Agenda Item 5c - Energy Management System

Energy Manager -- Local Government
CO2 Avoided Emissions Ranking

Menu

Level: All facilities

Service: Electricity

Time period: 1 year

Start date: February 2015

End date: January 2016

[Refresh Report](#)

Energy Manager -- Local Government
CO2 Avoided Emissions Ranking

Expand

Logout My Account Sessk

Export to: PDF XLS WPS Print Email Help

Saved Report: ** New Report ** Add ?

CO2 Avoided Emissions Ranking

All Facilities -- 02/2015 to 01/2016 -- Service: Electricity

Display 20 rows Search:

Facility	Base Year Normalized CO2 Emissions (Tons)	Current CO2 Emissions (Tons)	Reduced CO2 Emissions (Tons)	% CO2 Emissions Reduced	# of Cars off the Road	# of Trees Planted
City Hall	890	774	117	13.1%	17	583
Downtown Park - Canal - Quailing Pond	85	49	37	42.9%	5	183
Surrey Downs	52	21	31	60.3%	4	157
Davis Slough - Bluberry Farm Bldg	21	5	16	74.5%	2	78
South Bellevue Community Center	57	43	14	24.9%	2	71
Aquatic Center Building	99	85	14	14.3%	2	70
Station 3	28	16	12	43.4%	1	60
Botanical Garden - Shorts Visitor Center	18	9	9	50.4%	1	44
Mt. Garfield Elementary School Buildings	21	13	8	39.5%	1	41
Station 1	30	25	5	16.4%	0	24
Ballet Building	5	1	4	82.5%	0	21
Old Safeway site	12	9	2	20.4%	0	11
Robinswood Park - House,Cabana,Pump	9	7	2	19.0%	0	8
Crossroads Substation OLD	2	0	2	83.2%	0	8
Belle Service Center	161	159	2	1.0%	0	8
Municipal Golf Course - Maint Shop	7	5	2	23.3%	0	7
Station 2	20	19	1	6.3%	0	6
Highland Parks & Community Center	23	21	1	5.1%	0	5
Clear Creek Park Education Barn	7	6	1	14.4%	0	4
Station 5	9	8	1	10.6%	0	4

Showing 1 to 20 of 52 entries

First Previous 1 2 3 Next Last

RECORD 15-MIN INTERVAL DATA

Agenda Item 5c - Energy Management System

Energy Manager -- Dude Campus
IDR Graphs - Single Meter

Center For Advanced Learning

Period: **Daily** Weekly Monthly

Beginning: December - 2016

Sun	Mon	Tue	Wed	Thu	Fri	Sat
27	28	29	30	1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	31
1	2	3	4	5	6	7

Graph options

Data type: Demand (kW)

Estim. data: Show

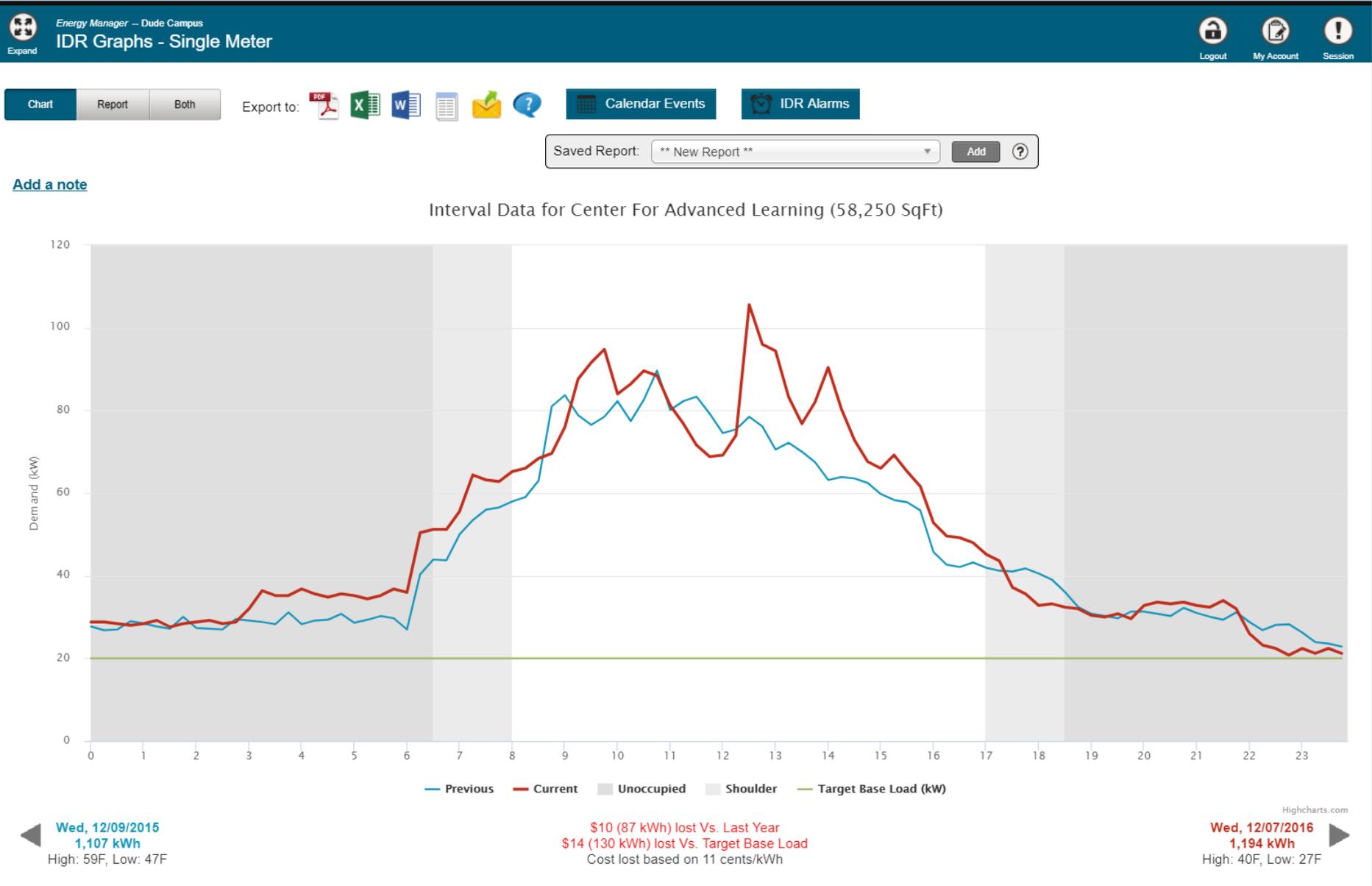
Graph type: Line

Weather data: None

Interval: 15-minute

Target base load: 20 (max kW unoccupied)

Date achieved: 10/11/2016



MANAGE UTILITY BUDGETS

Agenda Item 5c - Energy Management System

Energy Manager - DSI Demo
YTD Budget Assessment

Menu

Energy Manager - DSI Demo
YTD Budget Assessment

Expand

Logout My Account Session

Export to:

Saved Report:

YTD Budget Assessment
Aquatic Center Building

Display rows

Search:

Facility	Service	Units	Period	Budgeted Use	Actual/Projected Use	Use % Variance	Budgeted Cost	Actual/Projected Cost	Cost % Variance
Aquatic Center Building	Electricity	kWh	01/2016	55,049	66,768	21.3%	\$5,160	\$6,315	22.4%
			02/2016	49,575	52,022	4.9%	\$4,669	\$5,135	10.0%
			03/2016	51,729	50,985	-1.4%	\$4,826	\$5,093	5.5%
			04/2016	45,525	44,063	-3.2%	\$4,063	\$4,198	3.3%
			05/2016	45,572	43,619	-4.3%	\$3,956	\$4,038	2.1%
			06/2016	42,910	41,068	-4.3%	\$3,711	\$3,740	0.8%
			07/2016	44,890	43,635	-2.8%	\$3,937	\$3,933	-0.1%
			08/2016	38,368	38,368	0.0%	\$3,454	\$3,454	0.0%
			09/2016	31,798	31,798	0.0%	\$2,977	\$2,977	0.0%
			10/2016	45,511	45,511	0.0%	\$4,402	\$4,402	0.0%
			11/2016	50,284	50,284	0.0%	\$4,787	\$4,787	0.0%
			12/2016	55,315	55,315	0.0%	\$5,051	\$5,051	0.0%
	Total			556,526	563,436	1.2%	\$50,994	\$53,123	4.2%
Aquatic Center Building	Natural Gas	Therms	01/2016	5,928	4,362	-26.4%	\$4,774	\$3,026	-36.6%
			02/2016	5,416	3,803	-29.8%	\$4,533	\$2,749	-39.4%
			03/2016	5,606	3,839	-31.5%	\$4,750	\$2,819	-40.6%
			04/2016	4,815	3,116	-35.3%	\$4,151	\$2,410	-41.9%
			05/2016	4,052	2,964	-26.8%	\$3,682	\$2,437	-33.8%
			06/2016	3,302	2,769	-16.5%	\$3,072	\$2,217	-27.8%
			07/2016	2,620	2,453	-6.3%	\$2,604	\$1,830	-29.7%
				Total			35,239	25,706	-26.8%

Showing 1 to 20 of 39 entries

Level:

Facility:

Per facility: (generate a separate report for each facility matching the criteria)

Services: Electricity Natural Gas Water Irrigation Wastewater

Budget year:

Include missing:

YTD:

Proration by:

Aggregate data:

INTUITIVE REPORTING

- ▶ Billing Data
- ▶ ENERGY STAR
- ▼ Interval Data
 - IDR Meters
 - IDR Alarms
 - IDR Graphs - Single Meter
 - IDR Graphs - Meter Aggregation
 - IDR Graphs - Meter Comparison
 - Import Data
 - IDR Data Review
- ▶ Savings Actions
- ▶ Resources
- ▼ Reports & Charts
 - ▶ Use and Cost
 - ▶ ENERGY STAR
 - ▶ Carbon Emissions
 - ▶ Bill Review
 - ▶ Budget Data
 - ▶ Savings Actions
 - ▶ Avoided Cost
 - ▶ Weather Data
 - ▶ Miscellaneous
 - ▶ Custom Reports
 - ▶ Saved Reports

DSI Demo

General Stats | Bill Stats | Announcements

General Stats	System Activity
# Facilities: 156	# Users: 18
# Vendors: 6	# User Types: 4
# Accounts: 283	# Logins - Month: 7
# Meters: 797	# Logins - YTD: 203

ENERGY STAR	Resources
Avg. score: 32	# Documents: 27
Lowest score: 0	# Links: 6
Highest score: 98	# News sources: 26
# Qualified(75%): 1	# Blog articles: 0

Quick Links | User Logins | Social Media

Quick Links Edit List

- [Historical Average vs. Current](#)
- [Fire Department Chargebacks](#)
- [Facility EUI Ranking Chart](#)
- [Treemap Facility Ranking](#)
- [Year-Over-Year Comparison](#)
- [Side-by-Side Service Graphs](#)
- [Historical Data by Service](#)
- [Historical Comparison Chart](#)
- [Facility EUI Ranking Chart](#)
- [Facility Energy Use Ranking](#)

Energy | Water

Monthly Energy Use

Month	Blue Line (MBtu)	Red Line (MBtu)
Apr	6.1k	5.8k
Ma	5.5k	5.4k

Facilities: [All](#) | Apr:



Department of Public Works

6801 Delmar Boulevard, University City, Missouri 63130, Phone: (314) 505-8560, Fax: (314) 862-0694

STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Energy Efficiency Master Plan

Background:

Proposals were requested to create an Energy Efficiency Master Plan based primarily on the following scope of work:

- Align long-term energy planning with other long-term University City plans and agreements, including the OneSTL Sustainability Plan.
- Optimize the City's energy consumption via energy efficiency, energy conservation, and demand management.
- Identify the resources necessary to optimize the ongoing operation and maintenance of the City's energy system, including the proposed Continuous Commissioning (CCx) program, to ensure efficiency gains are sustained.
- Identify the best energy source, or combination of sources, to meet the City's needs and energy efficiency goals, as well as a cost-benefit analysis.
- Coordinate with City Facilities Management staff for project initiation, project clarification, discussion of issues, discussion of document contents, and responses to comments.
- Prepare and provide draft and final Plan outlines, up to three (3) drafts of the Plan, a final Master Plan document, and a final financial model, submitted electronically.
- Prepare for and attend one (1) Project Kick-Off Meeting to introduce the Consultant team to the City's Project Team staff, to establish communication protocols, to confirm the scope of work, and to fully discuss the project.
- Prepare for and give a presentation on the Master Plan to the University City Council.

The Request for Proposals was directly provided to eight different consulting firms known to provide this service and was posted on the City's website on January 27, 2020. Proposals were due February 14, 2020.

Two companies replied with proposals, CTS Group and Energy Resources Group. Staff is reviewing the proposals to advise the City Manager on a recommended selection.

The Green Practices Commission will discuss if the City will and how to move forward with this project.



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STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Anti-Litter Campaign

The topic of litter has been discussed in Green Practices Commission meetings; a commissioner drew up a draft plan of action. A follow-up meeting was held at City Hall. Participants of this meeting included a green practices commissioner: Liz Essman, Public Works staff: Jenny Wendt, Dennis Lockett, Code Enforcement: Tim Scott, Rachel White, Allison Bamberger, and several concerned citizens: Joel Minor, Naomi Silver, Beth Metzler, Emma Scharff, Sharon Logan (Lions Against Litter).

Three action areas were identified: actions by the City, actions by citizens, and actions by private businesses. Actions to be discussed with private businesses will be coordinated with the Director of Economic Development.

Proposed City actions are as follows:

- Additional trash containers on Olive and crossroads of busy intersections, including North and South, Hanley, and Midland. The Sanitation Superintendent will determine the cost for new containers and if they can be budgeted.
- Municipal code property maintenance requirements will be reviewed to determine what businesses must do to keep property clean, as well as what can be encouraged. Multiple sections of code refer to litter, <https://www.ecode360.com/28290233>, <https://www.ecode360.com/28291137>, <https://www.ecode360.com/28291136>. Planning will investigate further.
- Create or reuse successful antilitter PR for roadway signs, signs for private business, and for schools. Public Works will work with Communications Director on this task and bring proposed signage back for approval consideration.
- Install anti-litter signs on Midland, Hanley, and North and South near Olive where litter tends to accumulate. Public Works/Streets will install these signs.
- Promote Adopt-a-Stop (bus stops), Adopt-a-Highway (MoDOT/Olive Blvd.), Adopt-a-Roadside (County roads). This can be promoted by Public Works and Communications.
- Invite Washington University to support this campaign. Public Works will initiate this conversation with JoAnna Schooler.

Agenda Item 6b - Anti-Litter Campaign

- Inquire about community service needs with U City courts and County courts to determine if there are people available for litter removal and what logistics are involved. Public Works will initiate this conversation.
- Promote the importance of property maintenance to businesses, including encouraging businesses to post signs on private property about litter. Economic Development will reach out to businesses about this.

Proposed citizen actions are as follows:

- Host clean-up events (with the city's support). One event already took place on October 30th by Christ the King 6th graders, and one is tentatively scheduled for November 9th by high school students. Public Works Sanitation Division supports these events by providing tools and supplies as available.
- Promote anti-litter campaigns at schools. Emma Scharff, the president of the High School's environmental club will discuss this with staff. Beth Metzler will discuss this with Catholic School staff, and Joel Minor will discuss this with his children's schools.
- Promote to schools the various contests that are currently available through MoDOT and the Missouri Department of Conservation, the "Trash Can contest" and "No More Trash! Bash" programs <https://www.nomoretrash.org/trash-can-contest>, <https://www.nomoretrash.org/trash-bash>. Emma, Joel, Beth, and Jenny can work on this.
- Lions against Litter will continue its successful actions (March – October monthly clean-up events).
- Encourage organizations possible litter removal events.

Proposed private business actions are as follows:

- Daily/regular litter removal.
- Sign up for an "Adopt-a" program.
- Add trash receptacles around property.
- Post anti-litter signage.

All the private business actions can be encouraged by Economic Development.

Litter is an issue everywhere. It will take a multi-faceted campaign to make changes. Making small changes with the involvement from multiple groups can add up to noticeable change. All parties mentioned above are aware of this plan and have agreed with their part of the action plan.

The order of proposed actions and a kick-off date needs to be determined.



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STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Recycling Anti-Contamination Program "Feet on the Street"

Contamination is the number one cause of the increased cost of recycling. It is what caused China to discontinue accepting recyclable materials from the United States, and it is what is keeping commodity market values down. Education is always helpful, but a more robust campaign is what is needed for full effect.

The Recycling Partnership is a national nonprofit organization with many private partners. It has developed an anti-contamination program (the Oops! Program) that has proven to be successful in many cities, including Atlanta Georgia. This is a 5-step program; it starts with data gathering, creating communication materials, training staff (volunteers), deployment of program, and finally tracking, evaluating, and adjusting.

A toolkit provides step by step instructions and materials needed for the campaign. The preparation for the program takes 8 weeks, and the program itself takes another 8 weeks.

Utilizing \$45,000 in grant funds (approved by council 6/24/2019), the City will work with Republic Recycling Services to audit University City's recycling loads to determine the "top issue" contaminants. Next will begin a vigorous educational campaign about these contaminants and the "Feet on the Street" Program. This campaign will clearly indicate the tagging and rejecting protocol of the program. This audit piece of the program will consist of staff, interns, and volunteers reviewing contents of carts and tagging them with an "Oops" tag if contamination is found. The resident will be notified that they will need to remove the unacceptable material and the container will be serviced on their next recycling service day the following week.

Through the Recycling Partnership's experience, the tagging and rejection policy and has been proven to be the most effective process for long-term contamination reduction. This procedure of not returning to empty carts until the following week will no doubt result in displeased residents. However, with proper pre-education, consistent messaging and explanation for residents with questions, and strict adherence to the tag/reject/return the following week protocol, the program will run successfully as designed.

The "Feet on the Street" program is anticipated to be discussed with City Council at an upcoming Study Session. The deployment of the program is still being determined.



Public Works Department

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STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: BIODIVERSITY PROJECTS

The Green Practices Commission will review Barbara Brain's March presentation and possible biodiversity projects she has been discussing with Jacob Kaiser, City Forester.



Public Works Department

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STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEM: Comprehensive Plan Update

The Green Practices Commission will briefly discuss the upcoming Comprehensive Plan Update.

STAFF REPORT

MEETING DATE: June 11, 2020

AGENDA ITEMS: WUSTL Sustainability Exchange Program
Sustainability Strategic Plan Update

Overview:

Students majoring or minoring in Environmental Studies at Washington University receive excellent instruction and training from some of the best professors in the nation. The Environmental Studies Program is proud of its range of expertise, from environmental policy, biology, and earth science to anthropology, engineering, and green building. While the professors may be experts in the classroom, it is recognized that community organizations like ours are experts in the field. These students are also in need of a more engaged learning experiences off-campus, and the program's administration knows that often community organizations have limited resources to achieve their goals. By partnering with community organizations to facilitate internships, the hope is to meet this student demand, deepen student learning, prepare students for careers, and meaningfully support the work of community organizations, like the City of University City.

Currently University City has a WUST Sustainability Exchange student, Juliet Kamau. Juliet has been working with the City from summer 2019 – current date. Juliet's hours are based on her school schedule. Record keeping (timesheets) and compensations is done through Washington University. Juliet will be finished with her University City work in Spring 2020.

I am suggesting that University City submit a proposal for the fall 2020 Sustainability Exchange. The anticipated student would begin work in fall of 2020 and either work with the City one semester or the entire school year, depending on the student's availability and the needs of the City.

Proposals:

Proposals for fall 2020 projects are due by February 28th. The program will likely be able to accommodate 2-3 new projects. Announcements for fall projects will be made by April 1, 2020. Fall 2020 projects will begin the week of August 24th, 2020.

Project Criteria:

- **Relevance:** The project is relevant to an environmental or sustainability-related problem.
- **Partnership:** The project is mutually beneficial, and all parties have put time and effort into developing a relationship, determining needs, and defining roles.
- **Impact:** If completed successfully, the project will have a clear, tangible impact on 1) the client and 2) an environmental issue

- **Equity:** The project balances priorities across a diverse community viewing the challenges and opportunities from an objective perspective and in order to counter any disproportionate impact of environmental burdens on any particular group.
- **Interdisciplinarity:** The project is broad enough to require perspectives and skillsets from multiple disciplines. If your project is primarily focused on one type of activity (like data analysis or graphic design), we encourage you to think more broadly about the problem you're working on and how you can expand it to facilitate interdisciplinarity.
- **Student Learning:** The project facilitates student learning by clearly outlining the role students will have in the project, the deliverable expected of them, and the bigger environmental issue they address by engaging in this project.

University City Project Proposal:

University City's Green Practices Commission created a Sustainability Strategic Plan (SSP) in 2010. Some of the plan's actions have been completed, some have not, and some are obsolete. A lot has changed since 2010, and the updates need to define things like: What is sustainability as it pertains to University City? What action items are specifically needed for University City? What are the current specific, measurable, attainable, relevant, and time-based (SMART) goals for University City? Does University City need a "plan", or does it need "guidelines" that can be absorbed by other plans, policies, or procedures?

City Council consented to endorse the OneSTL Sustainability Plan (OneSTL Plan) on July 9, 2018 .

Since 2016, the Green Practices Commission (GPC) had been working on an update to the plan and the OneSTL Plan was used further to guide the GPC's work. A template was created, and categories revamped to streamline the document in line with categories from the OneSTL Sustainability Plan. The revised section titles are as follows:

- Energy
- Transit Oriented Development
- Waste/Resource Conservation
- Ecosystems/Habitat
- Waste/Stormwater
- Education/Advocacy

As the GPC continues aligning the SSP with the OneSTL Plan, a sustainability student's help would come in handy. The student could work on this task with input from staff, Green Practices Commission, research, existing plans, and community experts. The plan (or guidelines) can aid in future budget decisions, educational outreach, and other city functions for a more sustainable future.