



SUSTAINABLE BUILDING PRACTICES

DECARBONIZE AND SAVE

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Working together to work wonders.

INTRODUCTION

University of Texas Medical Branch at Galveston

Academic, Research, and Healthcare

Over 10 M square feet

Own and operate multiple central
utility plants

- Chilled Water, Heating Hot Water, Steam

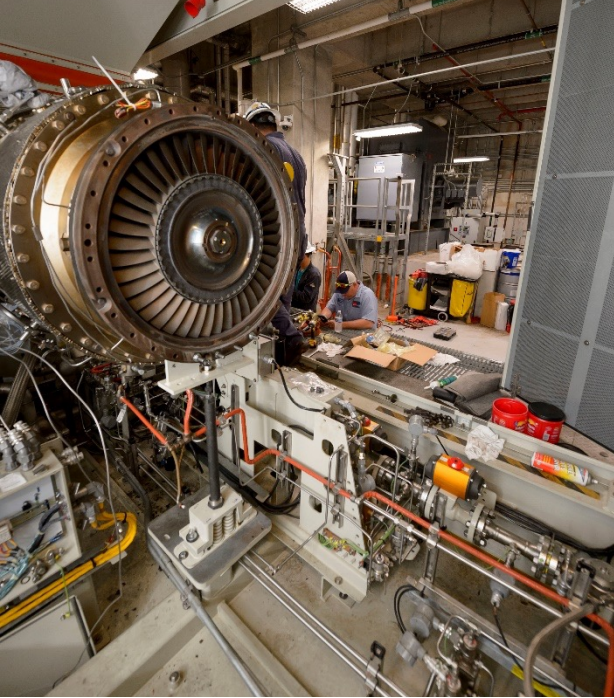
- On-site power generation and export to
ERCOT

- Thermal Energy Storage

4 Campuses, over 35 locations

Over 350 purchased utility meters
and over 100 submeters (and
growing!)





OVERVIEW

UTMB's Vision

Why we use EnergyCAP

How we use EnergyCAP

Sustainability

Energy Savings





UTMB'S ENERGY VISION

Mission

- Provide reliable utilities to support our healthcare, research and academic partners on campus

Vision

- Become an industry leader in energy management through the implementation of data analytics while improving our sustainability.



WHY WE USE ENERGYCAP

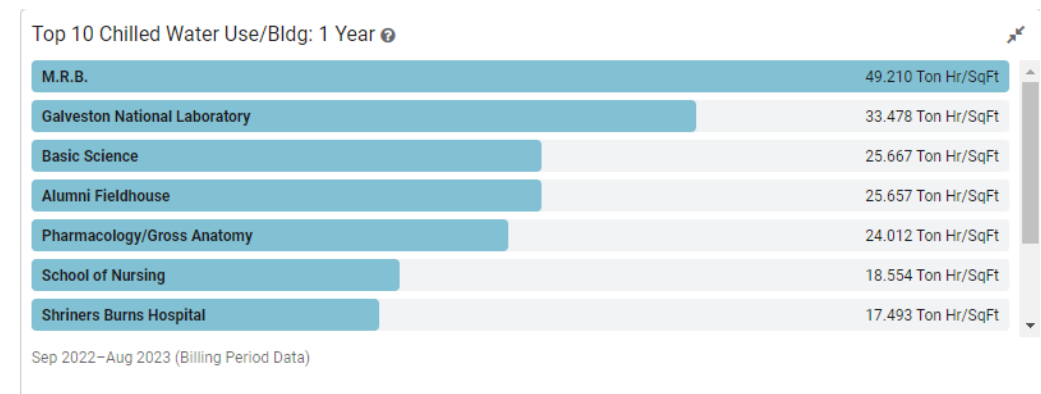
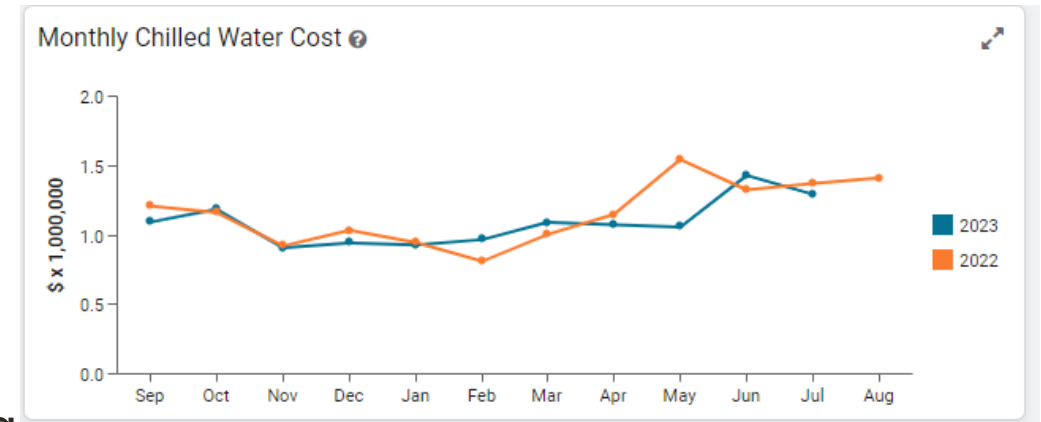
Everyone wants data!

Analytics are driving all decisions from fantasy football to energy savings

EnergyCAP allows us to track bills and interval data on the same site

Real time monitoring helps determine when something has gone wrong

Dashboards help direct our attention to where we are above our anticipated usage



HOW DO WE USE ENERGYCAP

Bill CAPture

Chargebacks

Dashboards

Wattics

CarbonHub

BILL CAPTURE AND OTHER DATA

- Upload all external vendor invoices using Bill CAPture
- Use an FTP site to get submetered data into EnergyCAP
 - Hourly and 15 min interval data for chilled water, heating hot water, steam and electricity

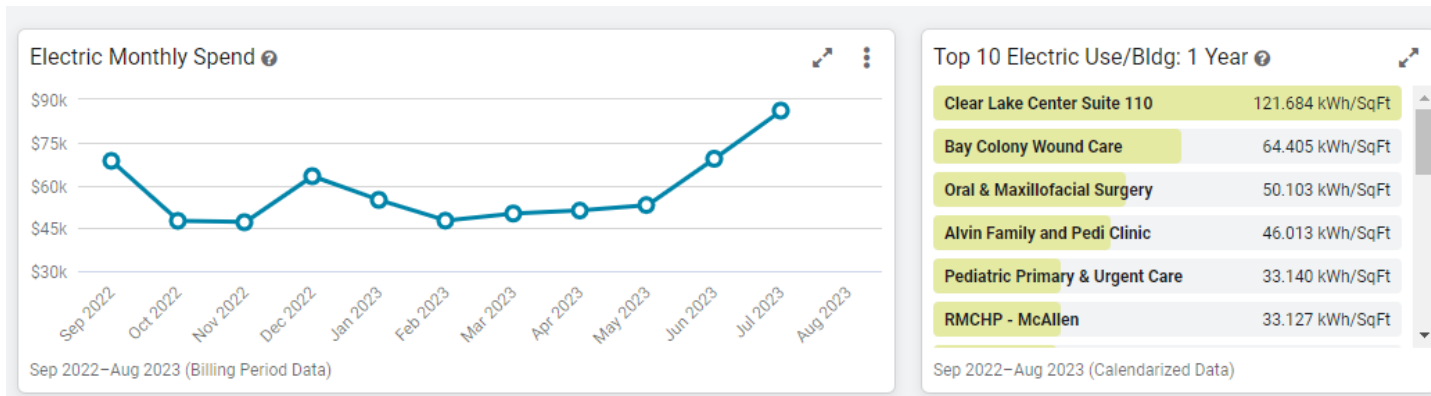
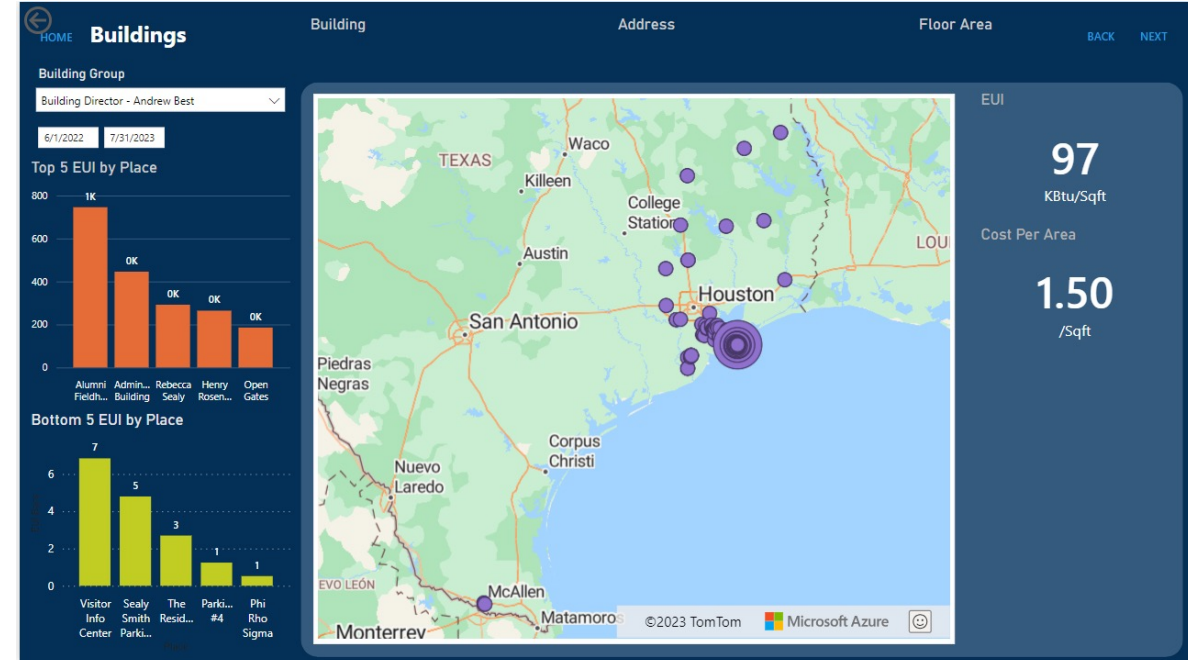


CHARGEBACKS

- Use chargebacks to invoice our external customers
 - Shriners Burn Hospital, Galveston National Lab
- We also use it to charge back our internal customers
 - Although no money exchanges hands here, it helps us understand how much each building is costing us to keep online

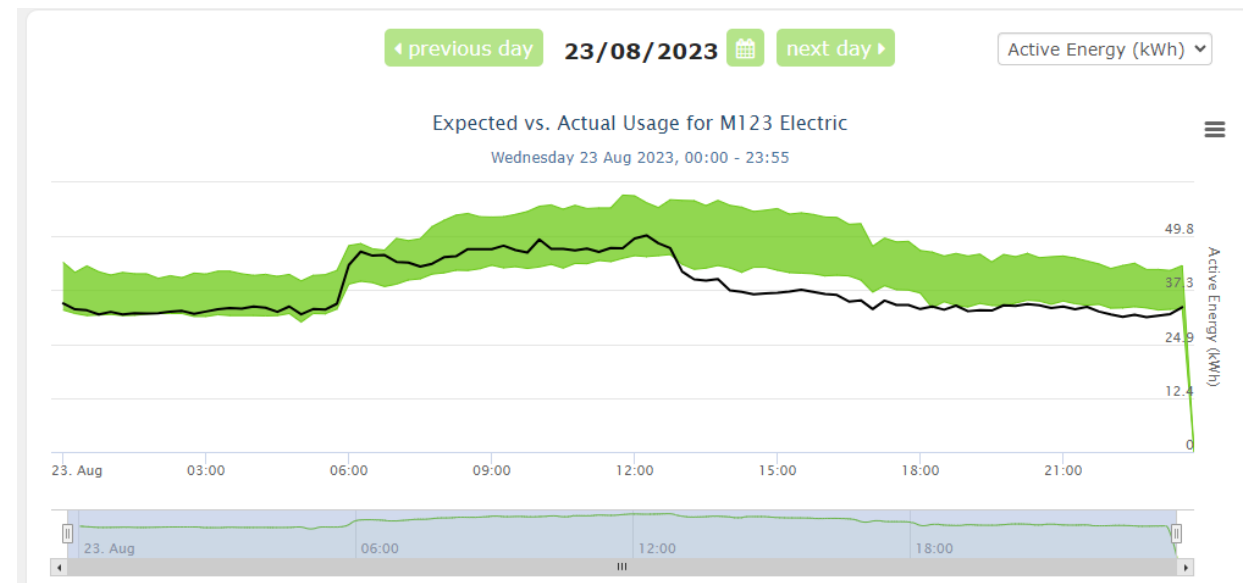
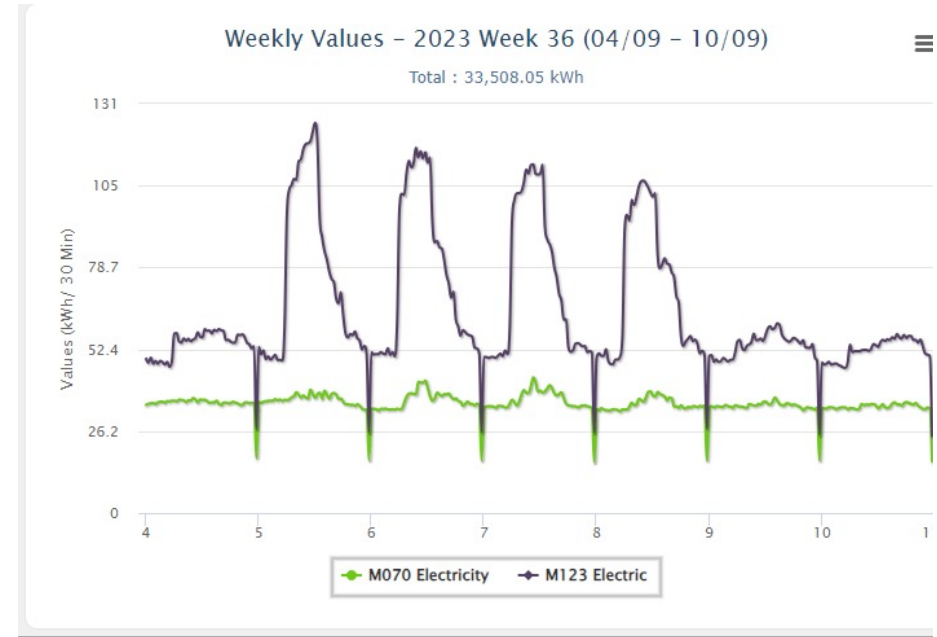
DASHBOARDS AND REPORT DESIGNER

- Help us identify our largest consumers
- To track EUI across similar building types (academic, hospital, research, etc)



WATTICS

- Interval Data
- Calculate Savings
- Ring our bell on a building level when systems are not operating efficiently

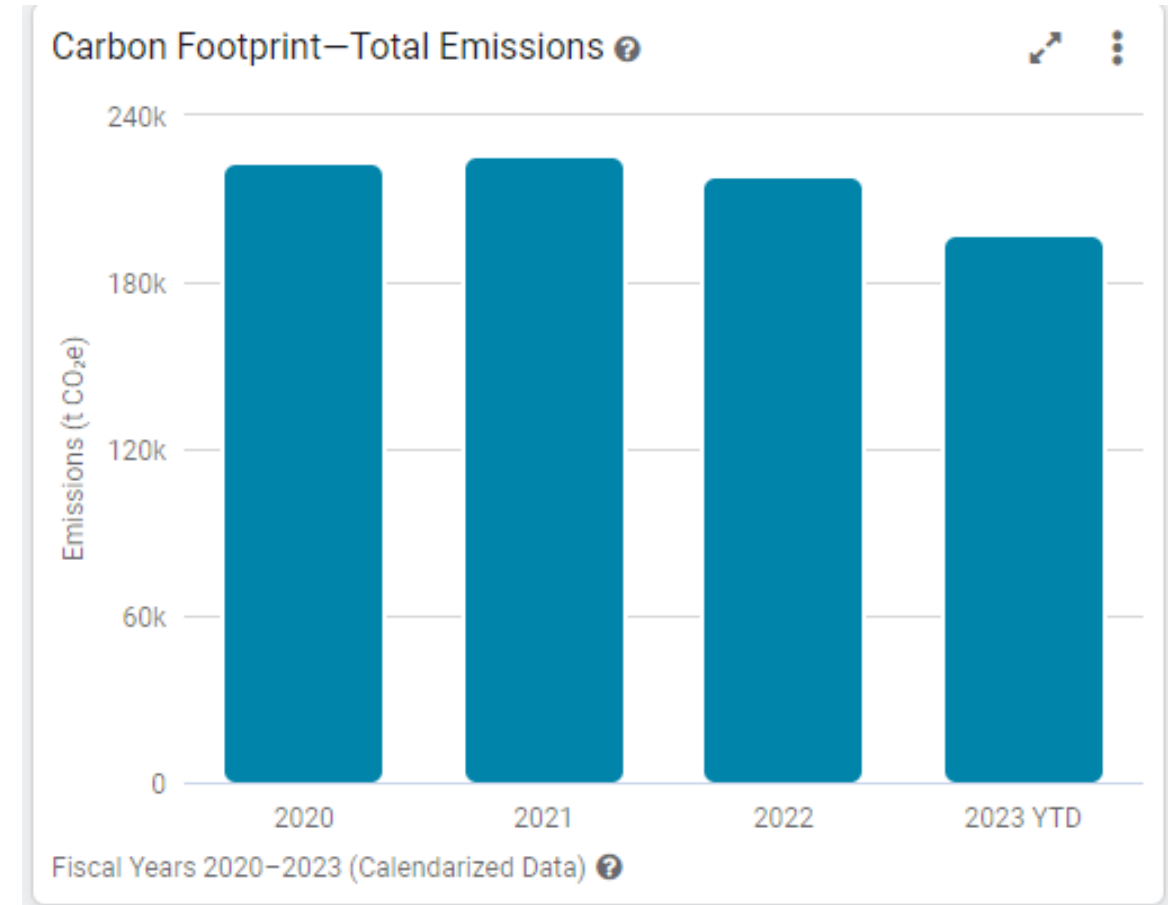


CARBONHUB

Current trends in the industry are pushing for carbon neutral solutions. We want to be prepared for the future. Start collecting the data now.

Our leadership responds to dollar savings. The goal is to reduce energy consumption and improve efficiency in order to save money, which will also reduce our carbon footprint.

Response to legislative requests

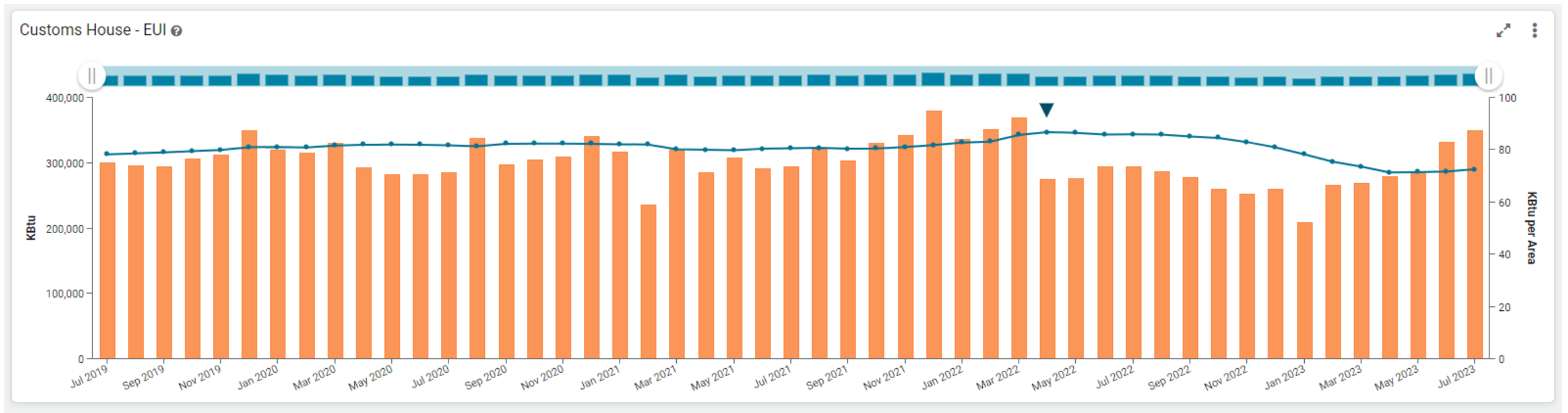


SUSTAINABILITY

- We use EnergyCAP to drive sustainable practices in new construction, capital renewal and reduction projects.
- Water Reduction efforts through local partnerships for wastewater for process water.
 - Conceptual Design phase for the Galveston Campus
 - 250,000 kgal/year of process water (\$2.6m/year)
 - Potentially expand this to our mainland properties
 - League City and Angleton
- Benchmarks – would love to be able to opt in via EnergyCAP to compare our buildings EUI with that of other, similar buildings at other locations

ENERGY SAVINGS

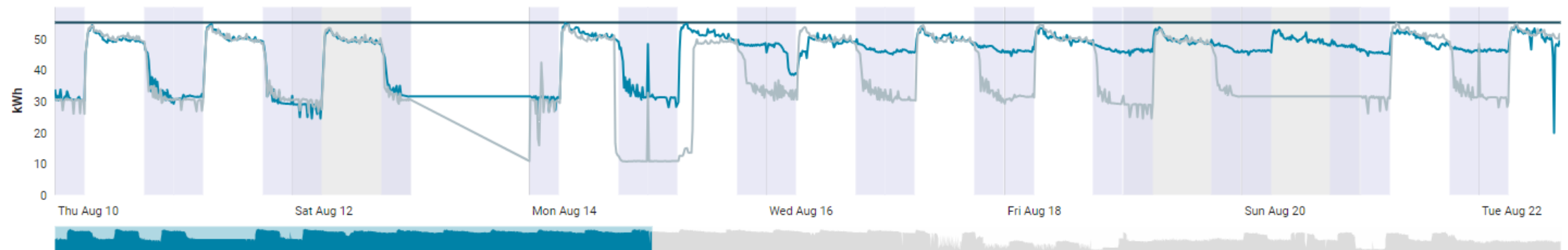
- Customs House
 - Implemented Energy Savings Project in April, 2022
 - Can see significant reduction in EUI



ENERGY SAVINGS

- Interval data
- Night and weekend setbacks

Interval Data: 08/10/2023–09/10/2023

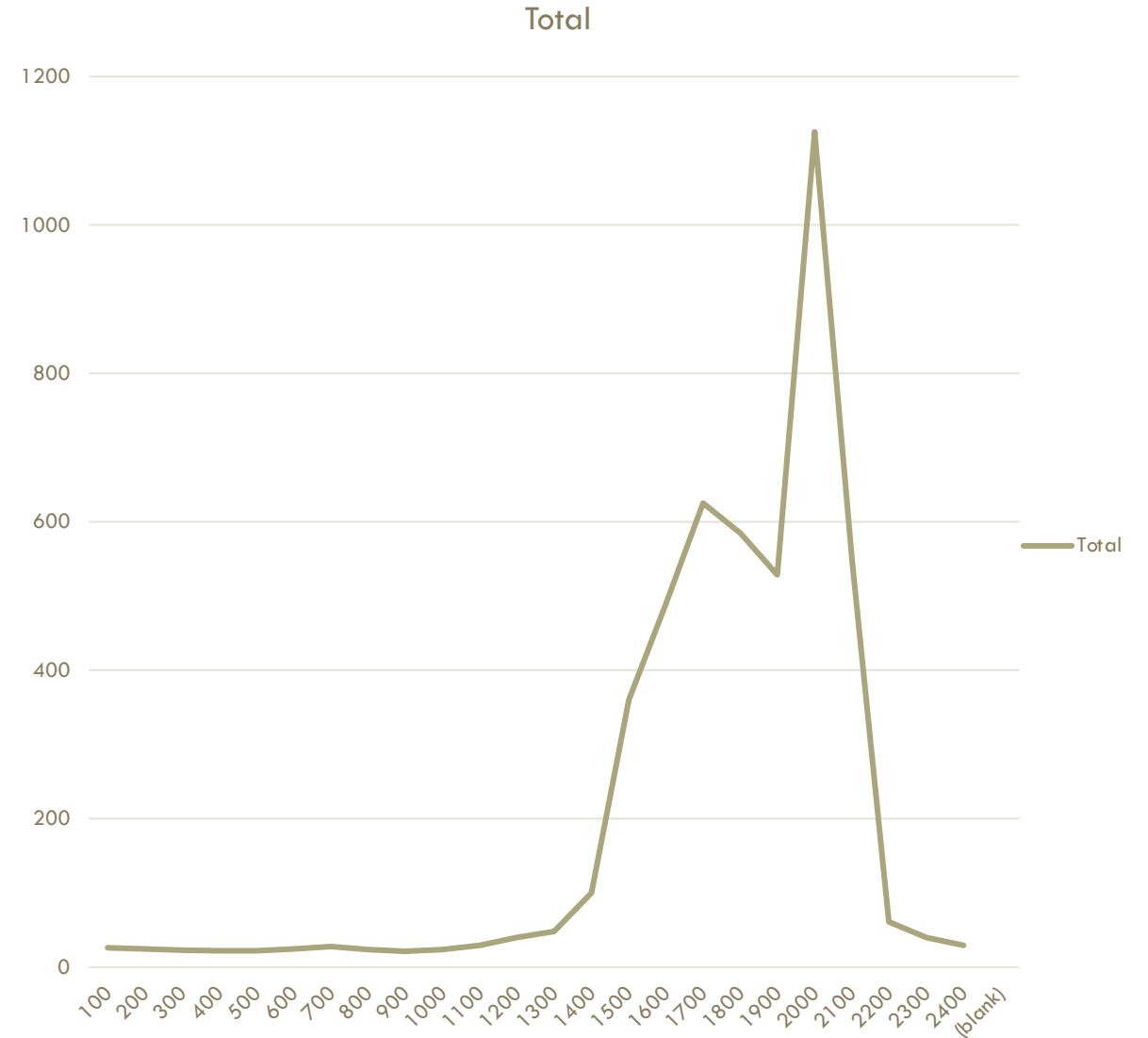


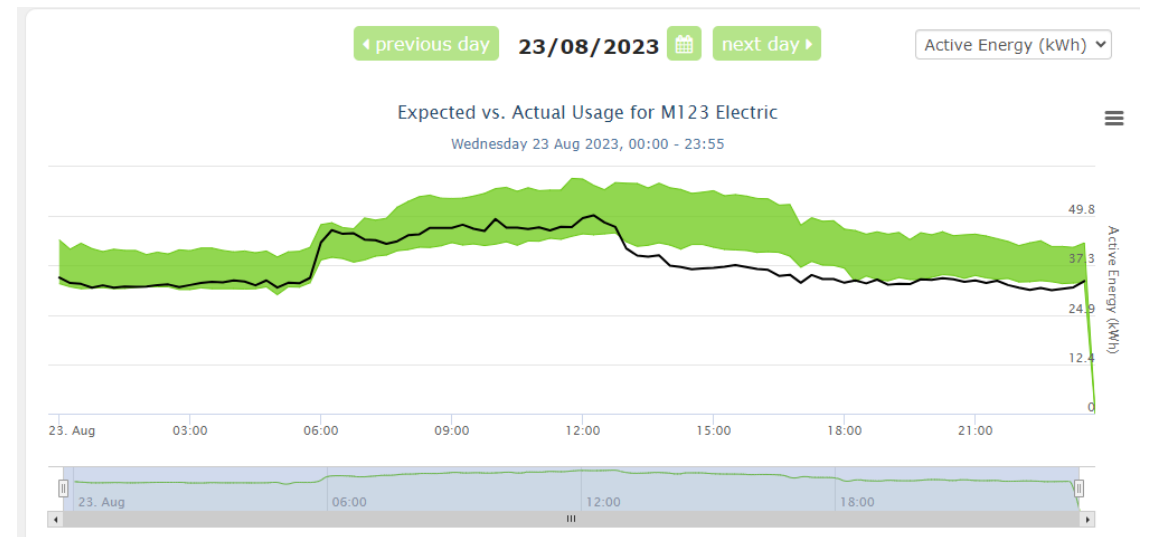
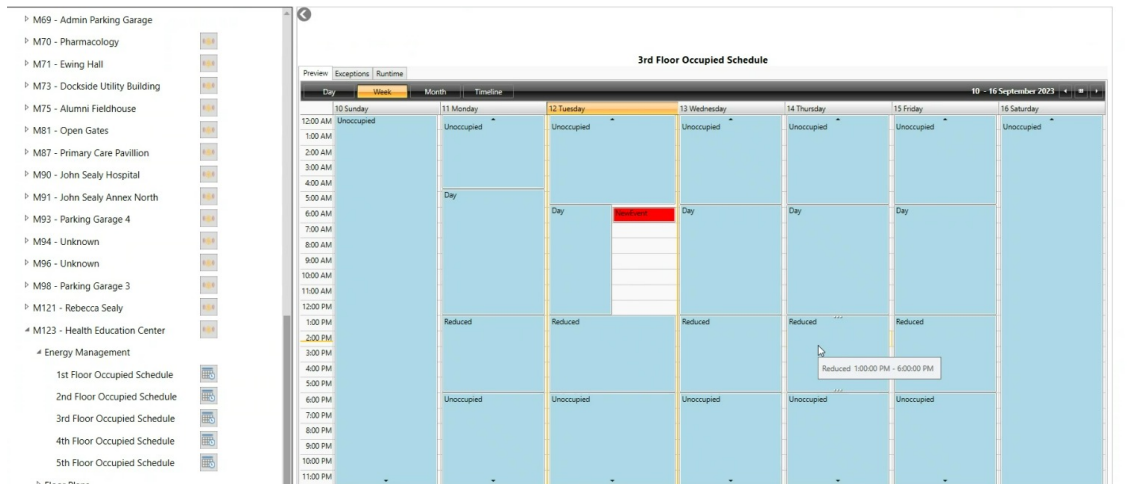
ENERGY SAVINGS

ERCOT Avg Price for August
led to additional setbacks

4CP

Real Time price exposure

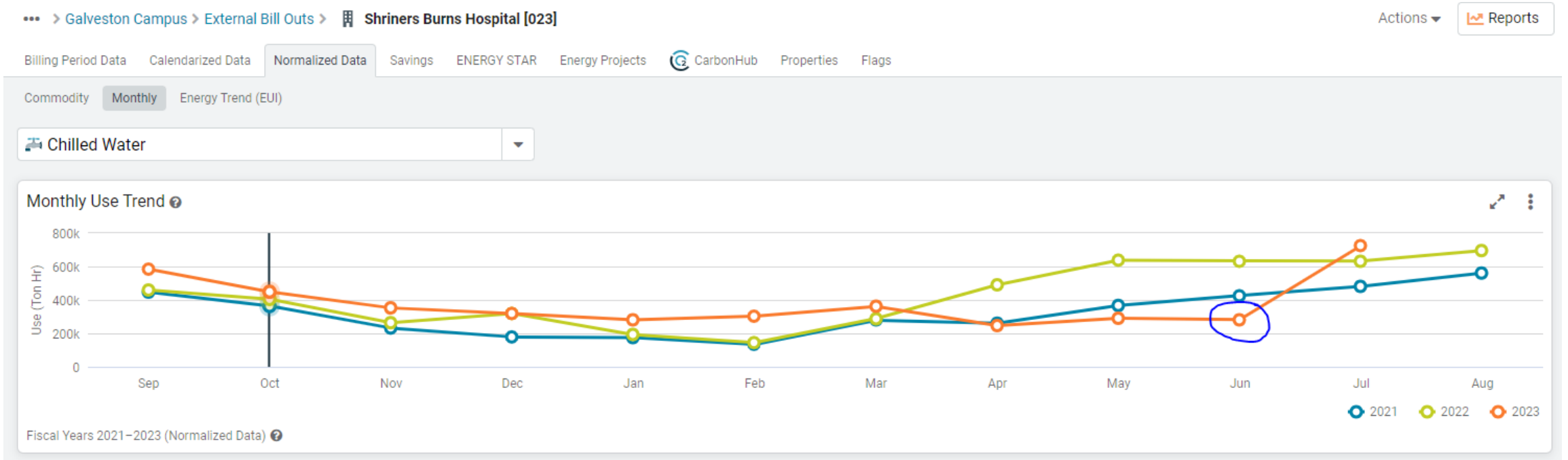




ENERGY SAVINGS

ENERGY SAVINGS

- Fault Detection and how EnergyCAP helps there
- Bad Data In = Bad Data Out (SBH meter calibration)



QUESTIONS?