

CATALYST



The Million-Dollar Mistake: How EnergyCAP Saved the Day



Carly Kupka

Energy and Utilities Analyst
University of CA San Diego

Agenda



- ✓ About Carly and UC San Diego
- ✓ Life before and after EnergyCAP
- ✓ Our current process
- ✓ Catching the error
- ✓ Working with our vendor
- ✓ More of what UC San Diego does with EnergyCAP
- ✓ Q&A

About Carly Kupka

University of Oregon, Sustainability

City of Eugene, Stormwater
Management

Utility and Energy Analyst at UC San
Diego since 2017

Hobbies:

- SUP'ing and snowboarding
- Rising Tableau enthusiast
- Cello
- Raising 2 babies



**GO
DUCKS™**

An overview of UC San Diego

Main campus spans approximately 1,200 acres of coastal woodland in La Jolla, California

761 buildings and counting on the main campus, 3 hospitals, and 30+ off-site clinics

\$80 million annual utility budget

\$147 million annual recharge operation

The university is built on the un-ceded territory of the Kumeyaay Nation



Before and After EnergyCAP

UC San Diego - Utility Management Transformation with EnergyCAP

Before EnergyCAP (Pre-2018):

- Utility data managed entirely in spreadsheets
- 1 FTE handled ~2,000 meter reads, rate assignments, and billing manually
- Separate manual process for AP utility bills
- Entire billing cycle took a full month
- Reports were delayed by nearly 2 months

After EnergyCAP Implementation (2018+):

- All vendor bills uploaded and paid through EnergyCAP
- Internal recharges fully managed within the platform
- Meter data now collected automatically via interval data feeds
- Billing cycle now takes 1 week
- Staff time repurposed from manual billing to data sharing, energy savings, and sustainability reporting
- Stakeholder reports available by the second week of the following month
- Meter reader role consolidated, freeing up an entire FTE, reducing departmental costs

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Questions so far?

The Million Dollar Mistake

UC San Diego's Monthly Billing Workflow

- ~ 1000 bills a month via EDI- paid and recharged in ECAP- AP Reformatter
- ~ 150-200 paper bills monthly- paid via check, uploaded to ECAP for recharge
- ~ 1200-1500 internal chargebacks created- GL Reformatter
- ~ Internal review relies heavily on audit flags

The screenshot displays the 'Flag Issue List' interface. On the left, a sidebar menu under 'Bills' includes options like 'My Bill Lists', 'My Flag Lists', and 'Flag Issue List', with the latter highlighted by a red circle. The main area features a header with filters for Status (Unresolved), Flag type (Choose), Flag issue (Choose), Flag assignee (Choose), and Vendor name (Choose). Below this, a table lists 744 issues across 625 bills. The table columns are: Billing Period, Flag Issue, Account Number, Vendor Name, Flag Created, Flag Issue Assignee, and Total Cost. The data shows various 'Abnormal Cost' and 'Abnormal Use' issues for March 2025, along with a 'Total Cost Mismatch' for March 2025. The bottom right corner indicates '1-250 of 744 Issues sorted by Total Cost'.

Billing Period	Flag Issue	Account Number	Vendor Name	Flag Created	Flag Issue Assignee	Total Cost
Mar 2025	Abnormal Cost	E7291	UCSD Campus	04/07/2025		\$417,992.97
Mar 2025	Abnormal Use	E7291	UCSD Campus	04/07/2025		\$417,992.97
Mar 2025	Abnormal Cost	E7286	UCSD Campus	04/07/2025		\$345,938.25
Mar 2025	Abnormal Use	E7286	UCSD Campus	04/07/2025		\$345,938.25
Mar 2025	Abnormal Use	E7283	UCSD Campus	04/07/2025		\$272,538.80
Mar 2025	Abnormal Use	E7292	UCSD Campus	04/07/2025		\$257,683.61
Mar 2025	Abnormal Cost	E7284	UCSD Campus	04/07/2025		\$148,452.53
Mar 2025	Abnormal Use	E7284	UCSD Campus	04/07/2025		\$148,452.53
Mar 2025	Abnormal Cost	E7302	UCSD Campus	04/07/2025		\$123,692.57
Mar 2025	Abnormal Use	E7302	UCSD Campus	04/07/2025		\$123,692.57
Mar 2025	Total Cost Mismatch	210001069372	SDGE	04/08/2025		\$115,978.99

UC San Diego recovered \$1M due to a misbilled leak

EnergyCAP helps track and compare virtual meter data to identify and resolve vendor billing errors.

... / SAN DIEGO PURCHASED UTILITIES / Off Campus / Non-State / HOUSING / La Jolla Del Sol

610000003072 - La Jolla Del Sol [610000003072] Actions Reports

Bills Billing Period Data Properties Flags

Void

All Bills Not filtered Filters

\$3,147,138.06 / 114 bills Columns Sort

<input type="checkbox"/> Billing Period ↓	Bill Begin Date	Bill End Date	Exported to GL On	Total Cost	Bill Use	
<input checked="" type="checkbox"/> Mar 2023	03/09/2023	04/10/2023	06/26/2023	\$23,487.54	1895 CCF	
<input checked="" type="checkbox"/> Mar 2023	02/08/2023	03/09/2023	05/31/2023	\$421,990.91	1849 CCF	
<input checked="" type="checkbox"/> Mar 2023	02/08/2023	03/03/2023	05/31/2023	\$537,530.43	80013 CCF	
<input checked="" type="checkbox"/> Feb 2023	01/11/2023	02/08/2023	03/30/2023	\$20,322.91	1598 CCF	
<input checked="" type="checkbox"/> Feb 2023	02/08/2023	03/09/2023	06/26/2023	\$23,427.29	1800 CCF	

1-114 of 114 bills sorted by Billing Period (descending)

Analyzing Unresolved Resolved Held Void Accrual

Visualizing water leak savings: water saved and financial impact

WATER RECOVERY DASHBOARD FY25

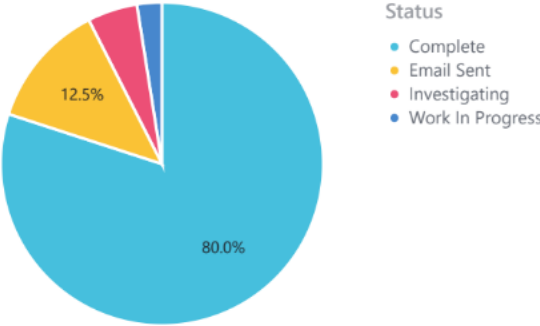
TOTAL GALLONS SAVED FY25

4,344,686

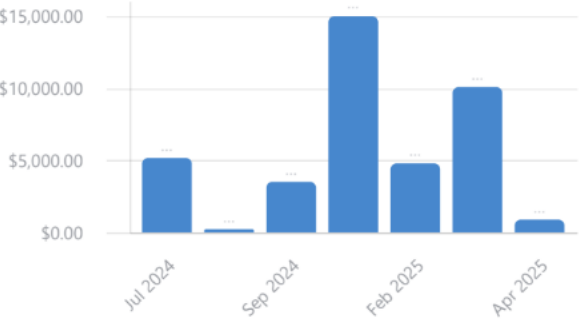
TOTAL \$ SAVED FY25

\$65,365.32

ONGOING/COMPLETE FY25



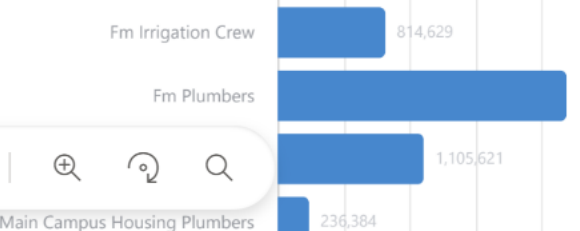
Total \$ Saved (By Month) FY25



Repair Group - Average Days Till Completed FY25



Total Gallons Saved (By Repair Group) FY25



Public Dashboards

 **Is anyone else in the room using Public Dashboards?**

Resources

Maps and Construction Drawings

Campus Waypoints

MyConstructionProjects

Construction Alerts

Energy and Water Dashboards

Facilities Management Storehouse

Transportation and Parking

Energy and Water Use Dashboards

Campus [energy and water dashboards](#) display data from more than 1,200 acres on the UC San Diego main campus and La Jolla Medical Center. Users can choose a specific building (“Topmost Place”) to view more detailed data or view certain building groups. Building groups, organized by primary use, include:

- Complex (labs, clinics, medical spaces)
- Non-Complex (offices, classrooms, restaurants, etc.)
- Housing and Dining
- Academic Affairs
- School of Medicine
- SIO
- La Jolla Medical Center
- Recreation
- University Centers

Through individual and collective efforts to reduce energy and water use, the UC San Diego community plays an important role in contributing to a more sustainable campus. We invite you to view displayed data for buildings that you visit regularly.

To learn more about simple ways to incorporate energy efficiency and water conservation practices into your laboratories, offices, classroom, and residences, see our [Green Programs](#).

UCSD Campus Energy and Water Dashboards

Topmost place

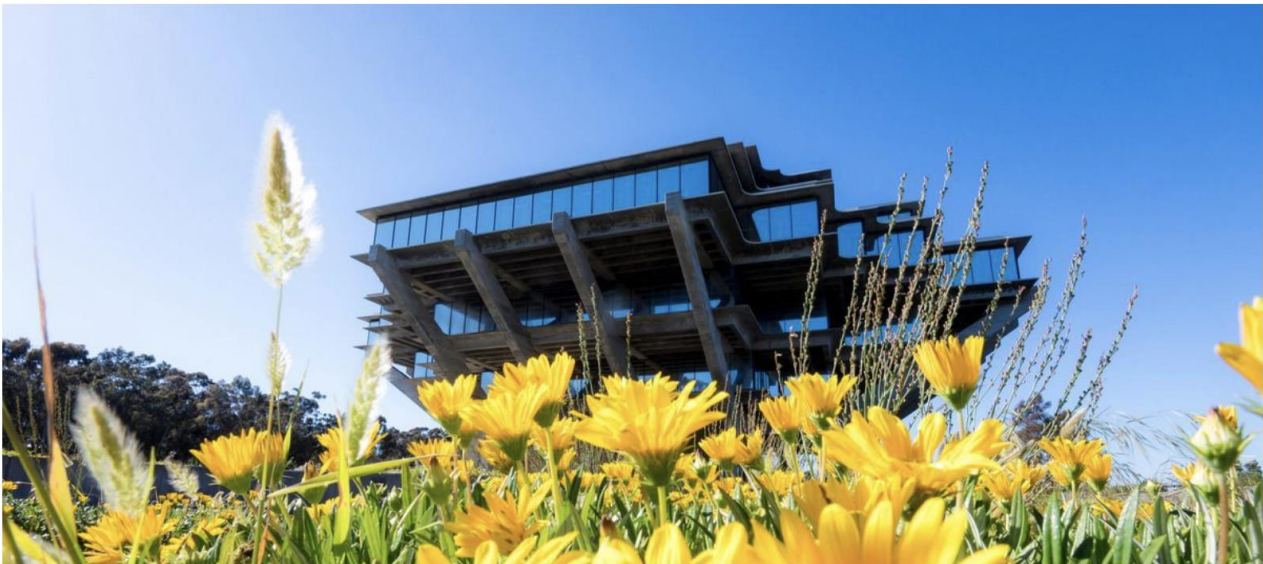
Site group

Search

Search

Reset





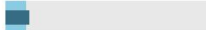

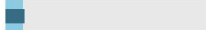

University of California San Diego Utilities



Most Expensive Meters per Building

SAN DIEGO SUPERCOMPUTER CENTER - ELE	\$126,650.94
BIOMEDICAL SCIENCES BUILDING - ELE	\$105,154.88
SAN DIEGO SUPERCOMPUTER CENTER - ELE	\$104,520.05
ATKINSON HALL - ELE	\$92,032.54
TATA HALL - ELE	\$91,675.38
PACIFIC HALL - ELE	\$90,130.97
SAN DIEGO SUPERCOMPUTER CENTER - ELE	\$88,678.18
MCCP USN1 - ELE	\$75,893.51
JACOBS MC-BED TOWER-ELE	\$75,714.81
SAN DIEGO SUPERCOMPUTER CENTER - ELE	\$74,398.46
SAN DIEGO SUPERCOMPUTER CENTER - CHW	\$73,066.46

Rolling 12-Month Performance for Building Utilities

Commodity	Cost	Use	Unit Cost
Total	 \$ 130,727,063 ↑14%	 ↓3%	
Electric	 \$ 98,218,552 ↑15%	 ↓2%	\$ 0.272 /kWh ↑18%
Chilled Water	 \$ 11,987,262 ↑12%	 ↓2%	\$ 15.993 /MMBtu ↑14%
Water	 \$ 9,910,225 ↑15%	 ↑7%	

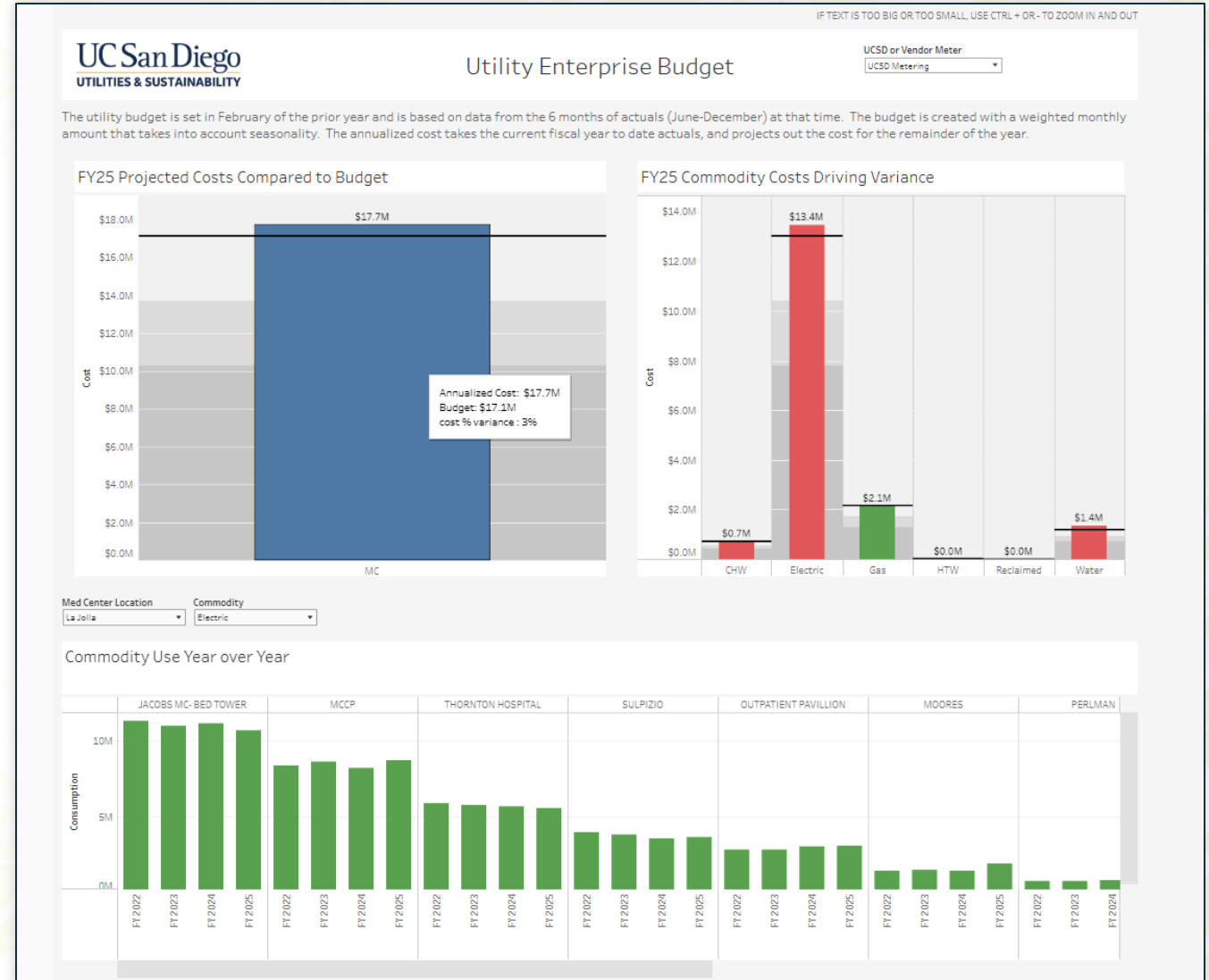
Powered by ENERGYCAP

Work in progress...

Leveraging EnergyCAP's API's and hosting data on internal server

Now have seamless ability to generate automatic reports in Cognos, Tableau, OFC

Allows for data blending between our financial platform and EnergyCAP meter data



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Questions?

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We'd love to hear your thoughts!

Take a moment to share your feedback
for this session in the **Sched app**.

Your input helps us make future events even better.