

# Open Energy Dashboard (OED)

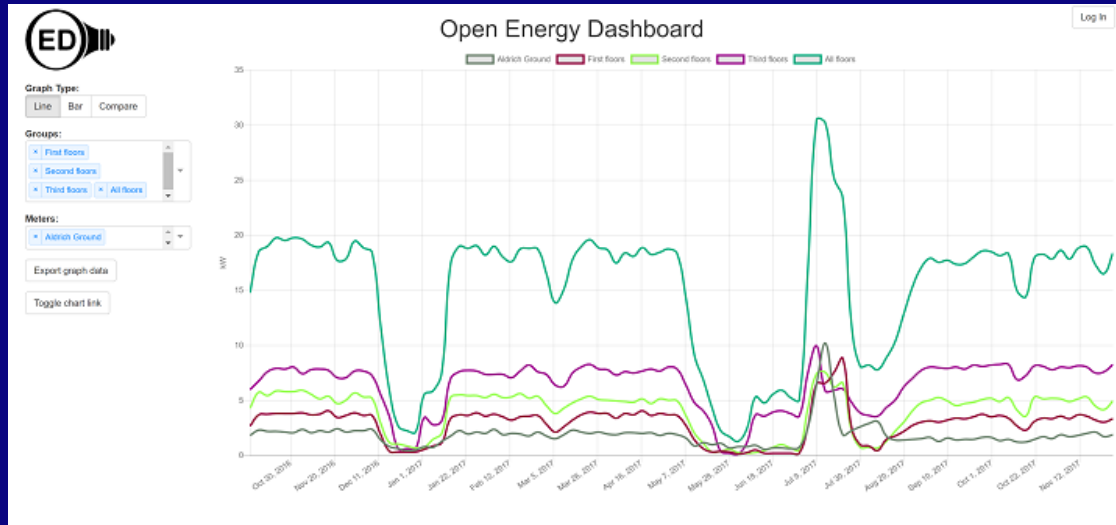
SIGCSE Workshop  
February 27, 2019



Open Energy Dashboard

# What is OED?

- It is a web browser based application to support the sustainability community
- It collects, stores, analyzes & displays energy (really resource) usage



## Why OED Exists?

- Commercial systems are expensive (esp. for academic institutions), can be hard to customize & the data isn't always available
- Most really nice non-commercial dashboards were designed to work at a single institution
- Existing free system are either not currently supported or have limits to applicability
- Beloit College needed a dashboard and instead of doing another one-off I created the OED project
- It took a lot of time initially (and still does) to stay engaged with the sustainability community

## What OED Does

- It acquires resource data, esp. from meters
- It allows sites to combine meters for analysis
- Does significant back-end/database analysis of meter data to allow for rapid display with minimal bandwidth
- Supports graphical display of all data
- Admin features
- Lots of others....
- Lets take a quick look at [OED](#)

## Who Uses OED

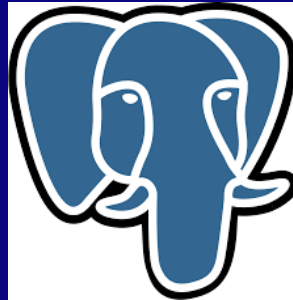
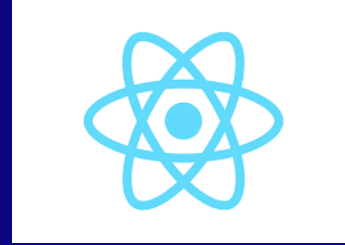
- We have 5-10 schools using OED
- Some are more engaged than others
- The users are students, faculty, staff, sustainability coordinators, energy managers, alumni & granting agencies
- The different users often want to engage with the data in different ways
- An important barrier for many institutions is the range of meters we can read in an automated fashion

## Where Is OED Going?

- Generalizing to all types of resources
- Enhancing the graphics
- Enhancing the admin features
- Adding meter types
- Adding requested sustainability features (lots)
- We are about to release version 0.5 which is a major upgrade
- Being spun off as an independent nonprofit

# OED Technologies

- JavaScript with promises
- React
- Redux
- Plotly graphics
- PostgreSQL
- SQL
- ...



## OED and Students

- From the beginning, OED has been a student-driven HFOSS project in terms of development
- Around 40 student have done development over 2.5 years
- About 25% have been significant contributors
- 10-15 new students start each year
- We are currently redoing code commenting and documentation to allow for easier on ramping



## How to Get Involved in OED

- We use standard GitHub items including
  - Issues that are tagged by area and difficulty
  - A web page with project information and plans
  - A wiki with project info and resources to learn the technologies used
- I provide experienced student mentors for new students
- I am “retiring” at the end of this year to focus on OED so I am also available to help
- You can contact me ([huss@beloit.edu](mailto:huss@beloit.edu)) or the project at [oed@beloit.edu](mailto:oed@beloit.edu)

# Questions/Thoughts