



DRIVING TRANSFORMATION

Behavior, Energy & Climate Change (BECC) / November 12-15, 2023 / Sacramento, CA

Co-Convened by

Stanford

Environmental and Energy
Policy Analysis Center

ciee
California Institute
for Energy and Environment

 **CITRIS**
THE **BANATAO**
INSTITUTE

ACEEE ::

It's Electric! Fostering an energy conscious community through tenant engagement

November 14, 2023

Dr. Julia Day | Presenter | ID+CL Director/WSU

Shelby Ruiz | Research Project Manager/WSU

Zachary Colligan | Presenter | Engagement Coordinator/WSU

Convened by:

Meet the ID+CL Team

Julia Day



Shelby Ruiz



Zach Colligan



Sierra Wilson



Harleen Kennedy



Nick Mayer



Jacob Roibal



Ethan Baum

#BECC2023



Project Pillars

1. **Reduce energy use and costs at WSU:** *inform, educate, and empower occupants to help reduce their personal energy use and encourage their peers to be more conscious of wasted energy on campus.*
2. **Sustainable Community at WSU:** *foster the development of a social and active building culture that inspires community sustainability in meaningful ways.*
3. **Health and Well-being of WSU building occupants:** *empower occupants to take control of their physical and mental health, comfort, and well-being.*



Campaign Targets



LAB/CLINIC



FULL-TIME



HOURLY PAY



HOTEL DESK



GRADUATE



FACULTY



KITCHENETTE

#BECC2023



Campaign Approach and Design



Communicate

Directly engaged with over **600+** staff and faculty



Relate

Organized **8** in-person engagement activities



Educate

Published **17** newsletters



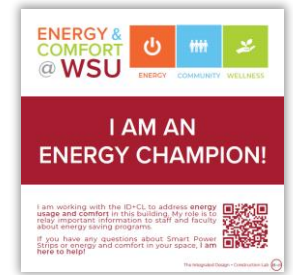
Intervene

Installed **390** Smart Power Strips



Disseminate

Engaged with **55** departments across 9 buildings



Advocate

Recruited **55** Energy Champions

#BECC2023



Newsletters

UPCOMING EVENTS FOR SPRING 2023!

NATIONAL PLANT-A-FLOWER DAY (March 12th, 2023)

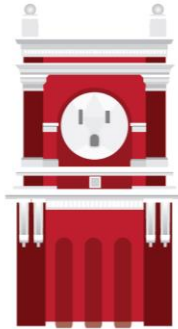
Lookout for the ID+CL staff as we come around on the 12th to engage with departments and staff in our target buildings!

SPRING EQUINOX (March 20th, 2023)

Celebrate the day by spending time outside and limiting your energy usage. Try out recyclable and decomposable decorations and surprises!

EARTH DAY (April 22nd, 2023)

Explore the beautiful Palouse landscape by making a trip to Kamiak Butte or Palouse Falls! Make sure to thank our earth by cutting back on your energy consumption!



National Plant-A-Flower Day: March 12th

Look out for the ID+CL staff throughout the week of the 12th as we celebrate this day by engaging departments and staff in our target buildings! Native wildflowers can increase the biodiversity of an area and provide habitats for all sorts of wildlife. We will be giving out wildflower seed packets to spread at home all week!

Spring Equinox: March 20th

Celebrate the changing of seasons outside this year, limiting your energy usage inside. Enjoy our natural landscape, plant your wildflower seeds, and watch the birds return. Take a moment to be mindful of the nature that surrounds us. Turning off excess lights and heating is a small way to thank our earth for all that it provides us!

Earth Day: April 22nd

Celebrate the earth by exploring our Palouse landscape and protecting our environment. Enjoy the spring air at Kamiak Butte, Steptoe Butte, or the Palouse Falls, but make sure to follow the campsite rule: *leave it better than you found it!* Take the time to be conscious of your energy usage by dressing in layers to maintain thermal comfort. Turn off lights when they are not in use to take advantage of the natural light. Ride the bus to work. Advocate for energy efficiency to three people in the office and make sure to have a Smart Power Strip installed in your office!

WANT TO LEARN MORE?

Check out our website, <https://idcl.wsu.edu/> for more tips and tricks to save energy and stay comfortable in your home or office!

STEP OUTDOORS & DISCOVER THE MAGIC OF SUMMER!

Warm weather is finally here and we ask that you properly prepare for your departure.

As the sun shines brightly and the temperatures rise, it's time to put on your adventure hat and step outside to embrace the beauty of summer! Our latest newsletter is here to inspire you to explore the great outdoors, soak up the sun, and create unforgettable memories under the clear blue skies. Before you head out for that long weekend or highly anticipated annual leave, be sure to review our [Annual Leave Checklist](#) to ensure a safe and sustainable departure from your WSU workstation:

ANNUAL LEAVE CHECKLIST

- Be sure to remove or secure any items on your desktop that might blow off your surfaces.

These items could cause a fire if they land on heaters with exposed radiant elements.

- Completely and safely power off and unplug all electronics. This includes:

**Note: if you remote into your computer, you should unplug all monitors and other connected equipment, but leave the computer on.*

- Surge protectors (override SPS programming with "Manual" function; see our website for more information)
- Computer monitors
- Desktop speakers
- Personal fans
- Space heaters
- All printers/scanners
- Electric kettles
- Lamps and warmers
- Adjustable desks
- Coffee machines
- Microwaves
- Other appliances within the shared kitchenette

- Turn off all overhead lights and shut the blinds.

- At your desk, empty trash and remove any food items: things that smell, or could go bad in the time you will be away.



IMPORTANT REMINDER: If you are using a space heater during the summer months due to your space being overcooled, please call FS @ (509)-335-9000!

This project is sponsored by Facilities Services and delivered by the Integrated Design + Construction Lab (ID+CL)

March 22, 2023

ENERGY & COMFORT @ WSU

WSU Tenant Engagement Program Newsletter for French Administration, Lighty Student Services, Smith Center for Undergraduate Education, Johnson Tower, Todd Hall, and Todd Addition building occupants.

SPRING INTO THE NEW SEMESTER

Spring is here! We have officially passed the spring equinox and are ready to welcome in the new season full of regrowth and sunshine. We encourage you to open up your blinds and turn off your overhead lights to optimize the benefits you and your coworkers receive from the sun! Some of these benefits include receiving Vitamin D, a critical nutrient that prevents bone loss, weight gain, various cancers, and heart disease; Reducing depression and anxiety; And improving sleep by re-balancing your natural sleep cycles. Make sure to open up your office space to receive all these benefits! In addition to letting light into the office, this is a perfect time to get out and enjoy our beautiful Palouse landscape to get fresh air and direct sunlight! Check out these opportunities to explore:

LAWSON GARDENS

This is the only formal, public garden in Pullman! Scattered with beautiful flowers, lush greenery, and whimsical gazebos, this is a must see for the spring!

KAMIAK BUTTE

This hike, just 15 minutes out of town, provides an incredible lookout over the rolling hills of the Palouse and is the perfect spot to soak up some sun!

PULLMAN RIVERWALK

This pedestrian and cycle path winds along the South Fork of the Palouse River. The path facilitates a beautiful journey through downtown Pullman!

"HUMANS SPEND OVER 90% OF THE TIME INDOORS"

U.S. Environmental Protection Agency, Indoor Air Quality Report.

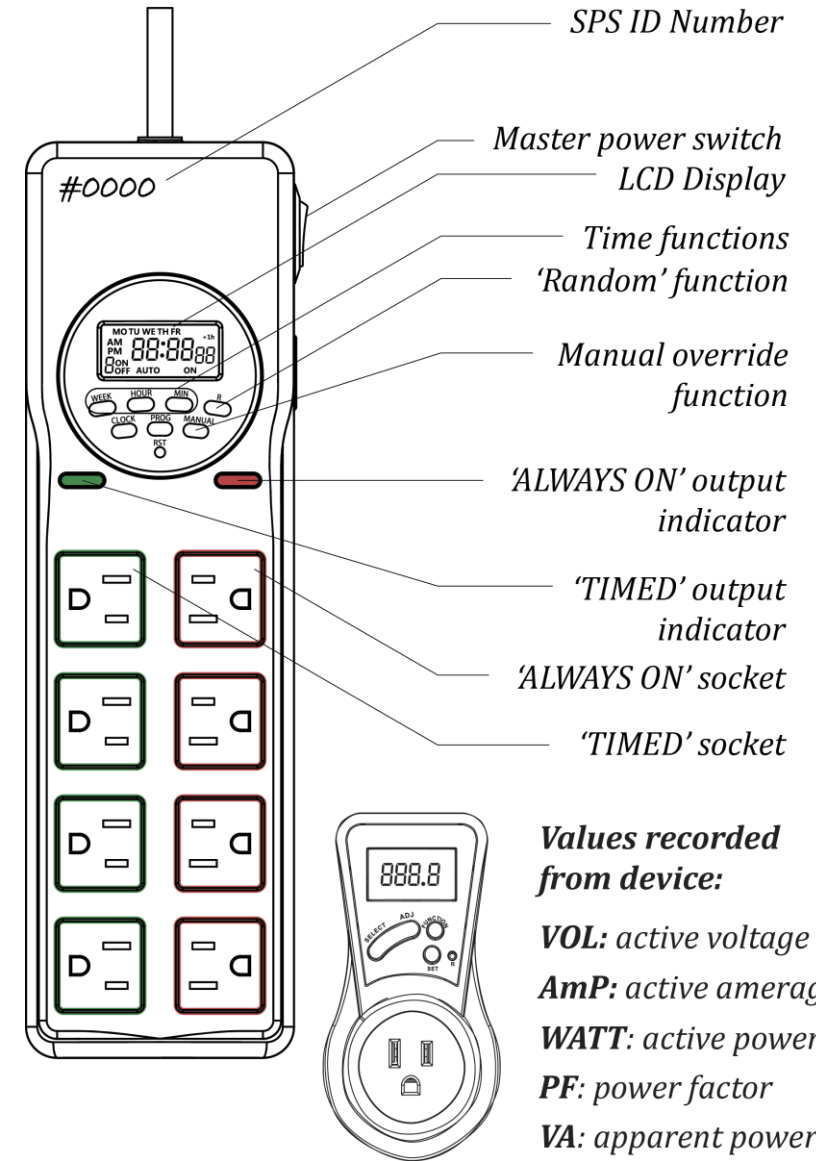
Spending the majority of our time in inside can have adverse effects on our health and well-being. This is because the majority of indoor environments have poor air quality; in some cases they contain a concentration of 2-5 times more pollutants than outdoor environments. Long-term exposure to these pollutants can increase one's risk of depression, fatigue, headaches, heart issues, and some forms of cancer. Although we cannot simply move outdoors, there are steps we can take to mitigate these risks. Avoid the use of any chemical cleaners, paints, and other products that may release pollutants into the air, regularly open your windows to allow for natural ventilation, and take time to step outside and explore nature!

#BECC2023



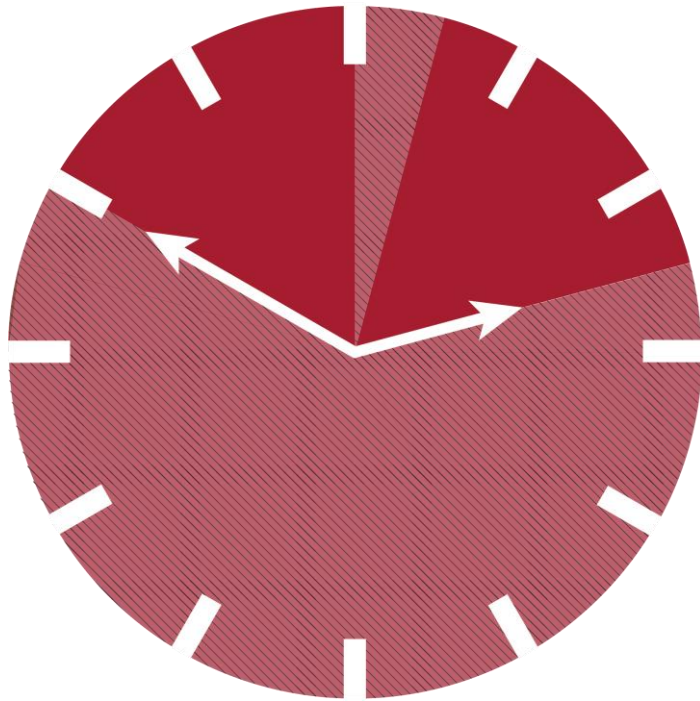
'Smart' Power Strip Intervention

- A buffer is included in settings, ensuring no disruption to the typical workday.
- The device has no Bluetooth or Wi-Fi capabilities, it is strictly a surge protector with an integrated timer.
- The timer is fixed but must be adjusted for Daylight Saving Time and in case the workday runs long.



Full-time

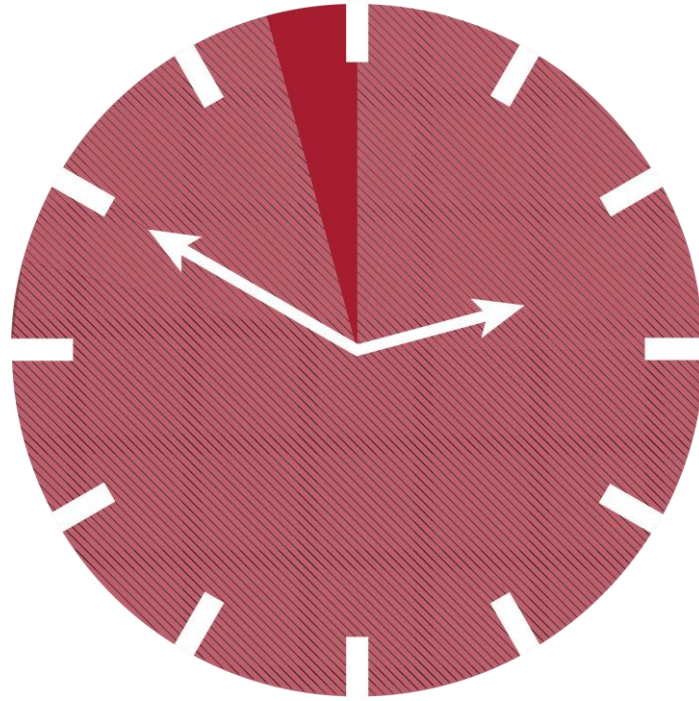
12pm



12am

Hybrid

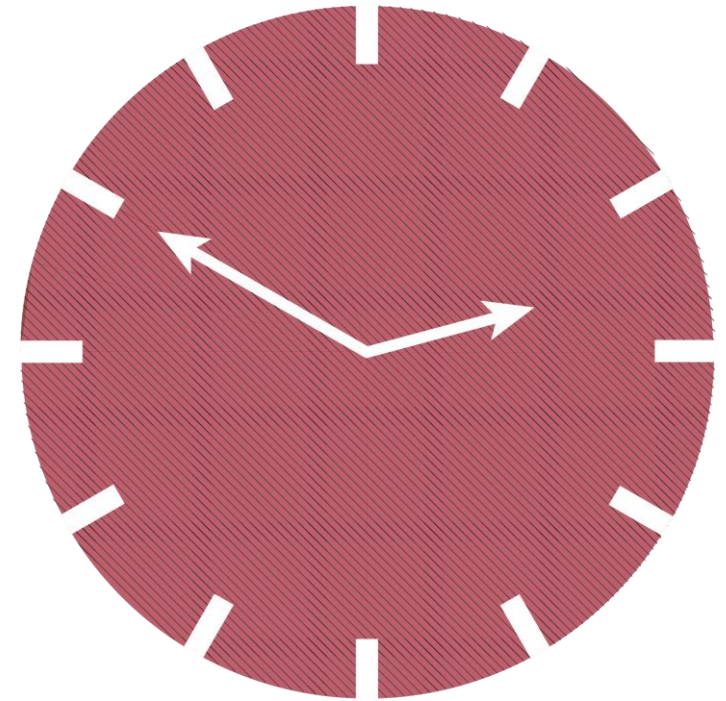
12pm



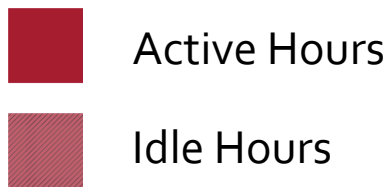
12am

Weekend/off-day

12pm



12am



Fulltime Schedule

- **'Always ON'** = 5 days (8hr ($W_{avg.}$) + 16hr (W_{low}))



Full-time

12pm



12am

Hybrid

12pm



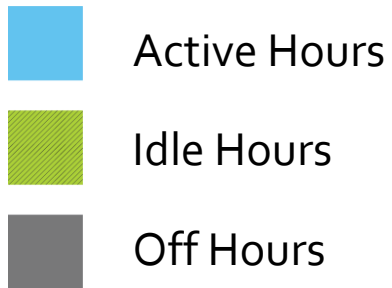
12am

Weekend/off-day

12pm



12am



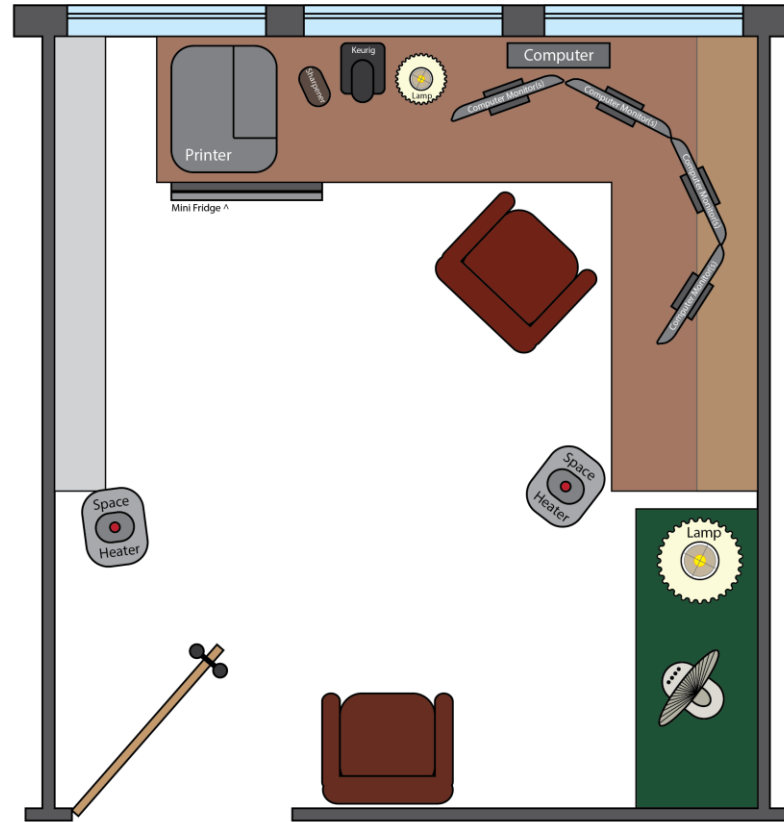
Fulltime Schedule

- **'Timed'** = 5 days (8hr ($W_{avg.}$) + 3hr (W_{low}) + 13hr (W_{OFF}))



For this one office...

- Daily Costs: \$7.55
- Daily Energy Use: 96.5 kWh



Existing Condition

"WORST CASE SCENARIO"

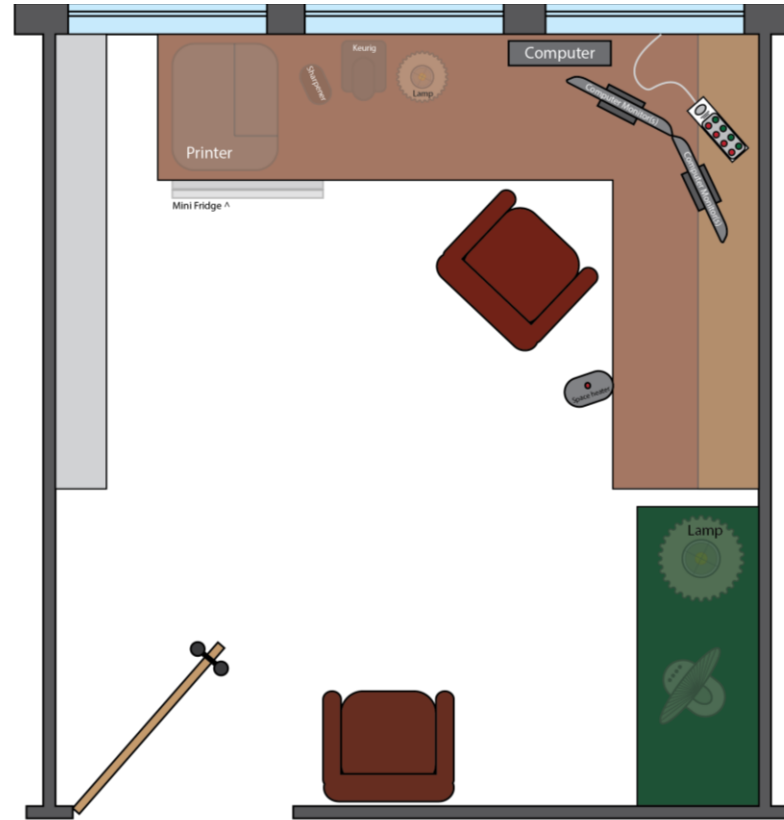
Before any tenant engagement
and smart strip install





For this one office...

- Daily Costs: \$0.49
- Daily Energy Use: 6.03 kWh



Intervention C

"BEST CASE SCENARIO"

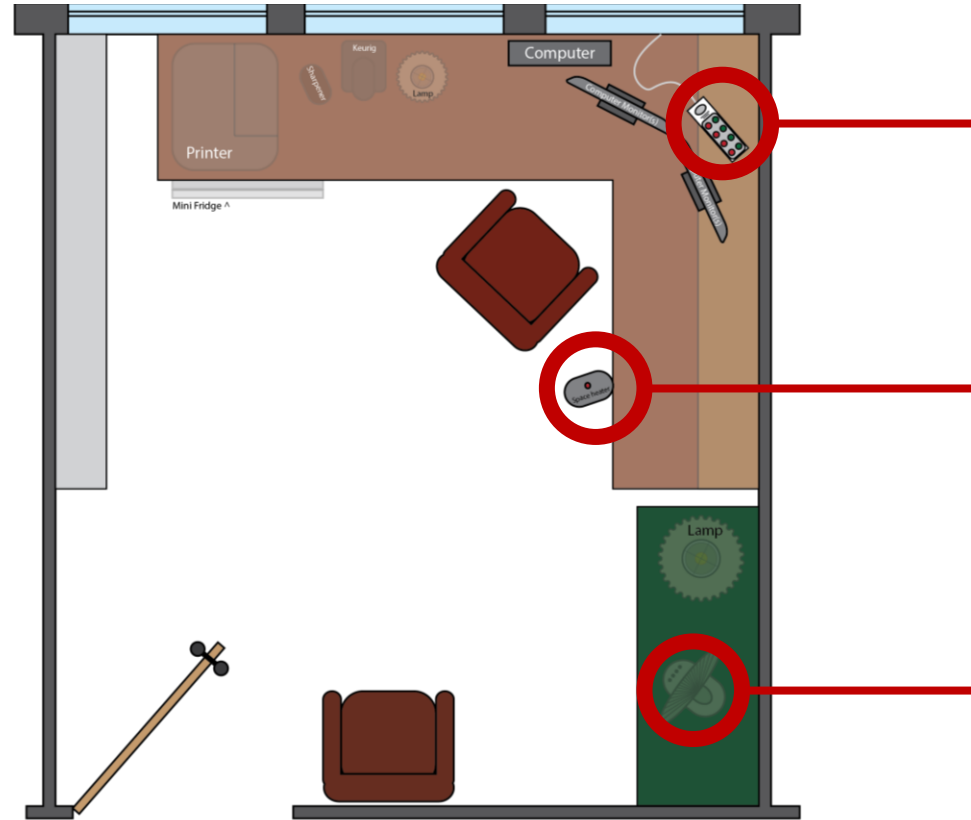
Interventions A + B + Removal of printer, 2 monitors, and replacement (or removal) of high wattage space heater.





For this one office...

- Daily Costs: \$0.49
- Daily Energy Use: 6.03 kWh



Smart Power Strip (SPS) installed on the desktop to maintain accessibility.

Energy efficient, policy compliant, <200-WATT space heaters working smarter, not harder.

In favor of dressing in layers, energy consuming desktop accessories become obsolete.

Intervention C

"BEST CASE SCENARIO"

Interventions A + B + Removal of printer, 2 monitors, and replacement (or removal) of high wattage space heater.



What have we learned in this process?



Communicate



Relate



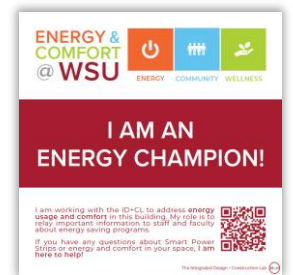
Educate



Intervene



Disseminate



Advocate

Limitations

- Only hear about problems when they reach critical mass, from the most vocal
- Not very 'Smart' Smart strips due to IT limitations:
 - Security concerns
 - Estimates based on initial collection
- Balance of convenience vs. efficiency
 - Accommodating people's schedules, different backgrounds, level of interest, tolerance for disruption
- Getting meaningful feedback from participants, surveys, interviews, we are all busy!



Project Evolution

Goals/Strategies

PAST

PRESENT

FUTURE

- High rate of in-person engagement
- High rate of **attempted** installs
- High number of **completed** installs
- Engagement with multiple buildings
- Website utilization
- Specialized occupant type engagement
- Maintain privacy and security
- Consistent feedback on program



Thank you to WSU Facilities Services for sponsoring this project!

Questions?

November 14, 2023

Dr. Julia Day | ID+CL Director/WSU

Shelby Ruiz | Research Project Manager/WSU

Zachary Colligan | Engagement Coordinator/WSU

Convened by: