# Sustainability At Duke

Green Lab Certification Outreach and Engagement





# 2019 Climate Action Plan

- Energy
- Transportation
- Carbon Offsets
- Education
- Communication



### Becoming A Carbon Neutral Campus

# **Energy Recommendations**

- Increase efficiency of buildings on campus
- Educate key decision-makers on campus about building energy use
- Investigate ways to scale the use of biogas on campus instead of natural gas
- Large-scale, offsite solar

# **Communications Recommendations**

- Host departmental-specific workshops about sustainability at Duke
- Develop departmental- or school-specific Climate
  Action Plans
- Bolster the Green Certification program for workplaces, labs, classrooms, dorms, and events

### **Communications Recommendations**

#### **Outreach and Communications Recommendations:**

- Develop a robust network of Sustainability Champions in all workplaces, classrooms, labs, and dorms.
- Develop a formal network of Sustainability Champions, who serve as both advocates and ambassadors of sustainability at Duke.
- Gather stories from Sustainability Champions about their experiences and share them with the Duke community.
- Host a recognition ceremony for students, staff, and faculty Sustainability Champions.
- Provide sustainability challenges to Sustainability Champions and newsletter recipients.

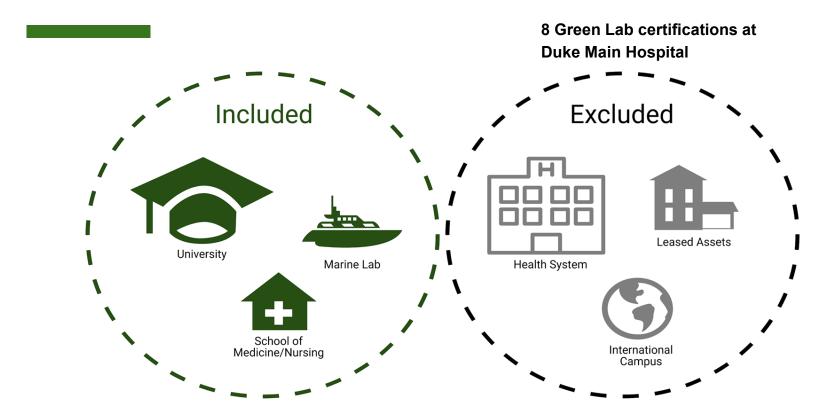
- **2013** 10 Green Certified Labs
- **2014** 49 Green Certified Labs
  - The Battle of the Schools sustainability competition resulted in a 390% increase in the number of green certified laboratories.
- **2021** 80 Green Certified Labs at Duke

# Sustainability Strategic Plan

- CAP Focus Areas
  - Emissions
  - Water
  - Waste
  - Natural Resources
  - Food
  - Procurement



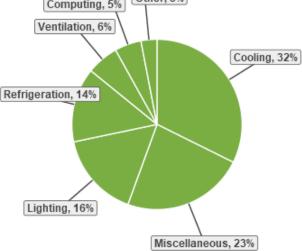
# **Geographic Boundary**



### Importance of Energy Reduction in Labs

- Labs are 5 times more energy intensive than other campus spaces, on average.
- Cost to operate a fume hood at Duke is \$5000 per year. Same cost as running 3.5 houses.
- Cost to operate an ultralow freezer at Duke is \$1200 per year.
- Shut the Sash Campaign saved \$3,000 in energy costs per year.





Electricity end uses

Notes: May not total to 100% due to rounding. Miscellaneous is a CBECS category. Other combines end use categories < 5%: Office equipment, Heating, Cooking.

© E Source: 2012 data from the US Energy Information Administration

### **Pratt Greengineering Campaign**



#### Greengineering



### **Pratt Greengineering Campaign**



#### Duke Engineering Commits to Sustainability

#### JUNE 10, 2019

School-wide 'GREENgineering' initiative to reduce waste, boost recycling and save energy



Savannah Volkoff, a PhD candidate in environmental engineering, prepares reagent samples in her Hudson Hall lab and then recycles used plastic pipette-tip boxes.

"We are a top-10 school in environmental engineering, and I felt strongly that we could use our expertise to improve our local environment and show leadership on campus."

RAVI V. BELLAMKONDA VINIK DEAN OF ENGINEERING

#### Presentation: Greening Your Lab

MAY 2, 2019

Research and teaching labs are energy-intensive—using about five times more energy than other campus spaces, on average.

This presentation provides a brief but comprehensive overview of the why and how to obtain Green Lab Certification at Duke.

View and download presentation »

Green Labs Certification-Presentation-PPT.pptx -

#### GREENING YOUR LAB: Green Lab Certification

- GREENgineering at Pratt
- Duke Office of Sustainability
- Green Labs at Duke



#### GREENgineering: Duke Bleeds GREEN

MARCH 1, 2020 | BY ASHA MALLAPRAGADA

Initiated by Dean Ravi Bellamkonda, GREENgineering is working toward a greener and more sustainable Pratt School of Engineering



Members of the GREENgineering team talk to Pratt School of Engineering members about their efforts in making Duke greener and more sustainable.

### **Pratt Greengineering Campaign**

- Identify activated and motivated stakeholders in your institutions different silos
- Provide Deans and Departments with incentives like awards and publicity in newsletters

Outstanding Leadership in Sustainability – Student

Trisha Dupnock, Ph.D student, Environmental Engineering



With her actions and ideas, Dupnock has helped make the Pratt School of Engineering greener.

### **Celebrate Efforts and Action**

#### The IVQAC Receives Gold Level Green Lab Certification





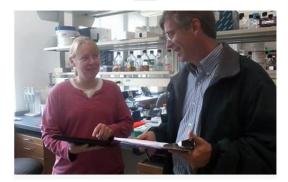
### **Celebrate Efforts and Action**





DUKE SCHOOLS 'BATTLE' FOR SUSTAINABILITY

Faculty and staff improve sustainable status of classrooms, offices, labs





# Questions?

Rebecca Hoeffler rebecca.hoeffler@duke.edu

