

State-Level Organizing on Climate-Smart Healthcare



**Moderator: Lisa
Del Buono**

*Executive Director
Michigan Clinicians
for Climate Action*



Anna Goldman

*Co-Founder
Clean Power Prescription
Boston Medical Center*



Lauren Koch

*Sustainability Program Manager
Ohio State Wexner
Medical Center*



Noe Copley-Woods

*Assistant Dean for
Sustainability
University of Pittsburgh School
of Medicine*



The Medical Society Consortium on
CLIMATE & HEALTH

Clean Power Prescription at Boston Medical Center

Anna Goldman, MD, MPA, MPH



Boston University School of Medicine

EXCEPTIONAL CARE. WITHOUT EXCEPTION.

Energy Insecurity among BMC patients

We ask patients about energy insecurity as part of our “Social Determinants of Health” screening

6500+ patients screened positive in 2022

1340+ letters written by providers to prevent disconnection

The average low-income household in Massachusetts spends 10% of income on energy costs.¹

¹ <https://www.mapc.org/planning101/reducing-energy-burden-resources-for-low-income-residents/>



Origin Story: Community Solar at BMC?

Clean Power Prescription

357 kW array on a BMC administrative building at 960 Mass Ave

Produces virtual net metering credits which we will distribute to patients

Approximately \$50 per month appears directly on patient bills x 12 months

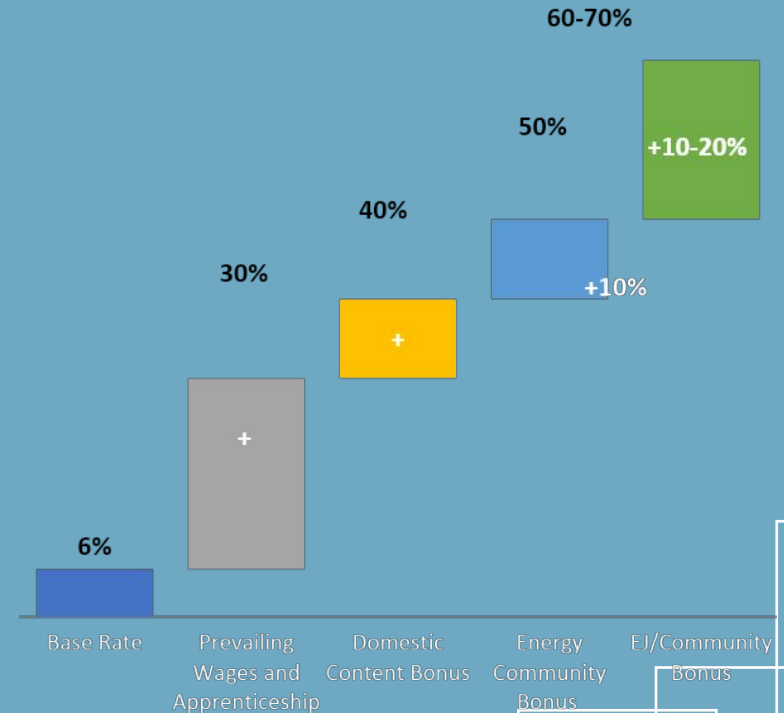
Goal of 80-100 households in pilot phase



The screenshot shows the top portion of a news article. At the top left, there are navigation icons for 'MENU' and the Boston Globe logo, followed by the text 'WATCH: GLOBE'. To the right, it says 'WELCOME, A TODAY'S PAPER' with a user profile icon. In the top right corner, there is a blue banner that reads 'Help Globe Santa Deliver Joy This Season Give Now!'. The main headline is 'Boston Medical Center writing prescriptions for electricity' in a large, bold, black serif font. Below the headline, it says 'By Jessica Bartlett Globe Staff, Updated October 16, 2023, 2:39 p.m.' To the right of the byline are social media sharing icons for bookmark, email, Facebook, Twitter, print, and a comment bubble with the number '4'. The main image of the article shows three people (two men and one woman) standing on a rooftop solar farm. They are looking at a panel of solar panels. The background shows a city skyline under a cloudy sky.

The Role of the Inflation Reduction Act

- IRA subsidies can cover up to 70% of a community solar project installation cost
- Low income communities bonus credit --> if project is located in or serving low income communities
- Elective pay mechanism allows non-profits and local government to participate



Community Partnerships

ABCD Energy Division

Low Income Heating Energy Assistance Program (LIHEAP)

Discount electric rate

Arrearage management

Home energy efficiency upgrades

Weatherization

Air Source Heat Pumps

Energy Allies

“Energy bill check-up”

Clean Power Prescription: Looking Forward

Opening enrollment now

IRA Tax Credit Application pending

External partnerships to increase solar capacity

Challenges: Energy donation to patients

Legal concern that these might appear as inducements

We have addressed this by routing the program through our Complex Care Management Program

Challenges: IRA Low Income Community Bonus Credits

Delays in BMC solar array operation

Uncertainty around caps and allocation process for EJ Bonus

Tax credits/elective pay mechanism does not subsidize costs of siting, permitting, and interconnection

Challenges: Interconnection in Massachusetts

Aging grid infrastructure creates problems for distributed generation

Long “studies” of grid capacity creates years-long delays, economic uncertainty

Need for a state or regional plan and shared cost of improvements to grid infrastructure

Challenges: Community Solar for Low-Income Massachusetts Residents

Community solar offers a long-term solar option for low-income households and renters

In Massachusetts, billing complexity and automatic billing creates barriers for low income residents

Consolidated billing exists in only NY, VA, OR, IL

Organizing Clinicians for Planet Earth

Noe Woods, MD, FACOG

Assistant Dean of Healthcare Sustainability

Assistant Professor of Obstetrics and Gynecology

University of Pittsburgh School of Medicine, UPMC

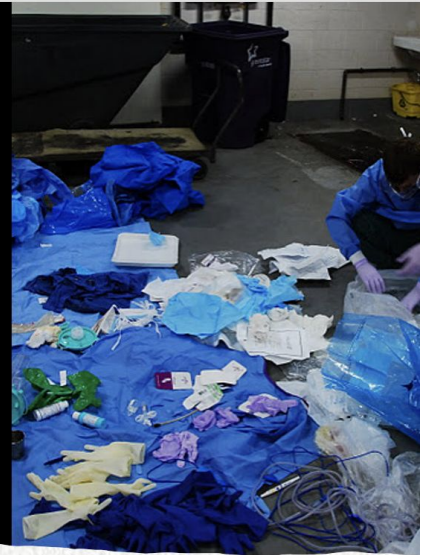
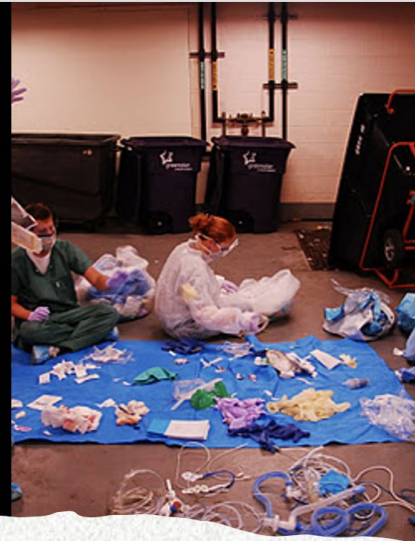


UPMC | **CENTER FOR SUSTAINABILITY**









Hysterectomy LCA

Lots and Lots of Trash

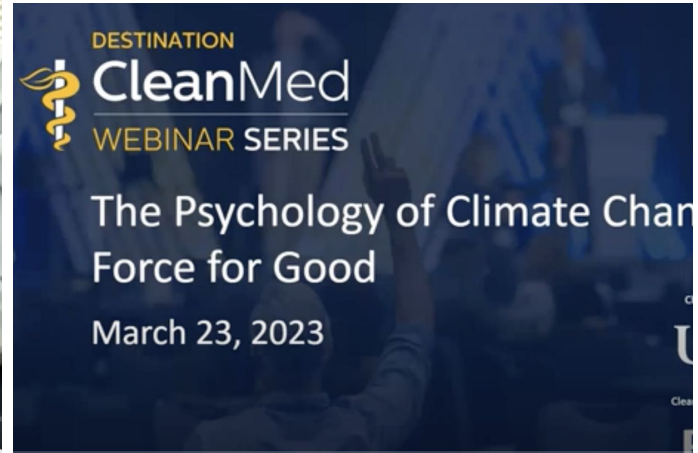


Life Cycle Analysis of HealthCare

- Life Cycle Perspectives on Delivering an Infant in the US. Sci Total Environ 2012
- Environmental Impacts of Surgical Procedures: Life Cycle Assessment of Hysterectomy in the US. Environmental Science and Technology Dec 2014
- Sustainable Healthcare and Environmental Life-Cycle Impacts of Disposable Supplies: A Focus on Disposable Custom Packs. Journal of Cleaner Production 2015
- Strategies to Reduce Greenhouse Gas Emissions from Laparoscopic Surgery. American J of Public Health, 2018 Apr
- Going green in gynecology: a call to action. Am J Obstet Gynecol, 2023 Apr 26
- The Utilization of Disposable Supplies in a Urogynecology Operating Room: Measuring Suburethral Sling Surgical Waste by Cost and Weight” Urogyn 2023







Office for Sustainability in the Health Sciences

University of Pittsburgh School of Medicine Faculty working in Healthcare Sustainability

Faculty



Gabriel Cisneros, MD



Amanda Artsen »
Assistant Professor



Melissa Bilec »
Professor



Michael Boninger »
Chief Medical Sustainability
Officer



Thuy Bui »
Professor



Stephanie Maximous »
Assistant Professor



Isabela Angelelli »
Co-Chair, Clinicians for Climate
Action



Keith Somers, MD



Maya Ragavan »
Assistant Professor



Noe Woods »
Chair, Clinicians for Climate
Action



Mark E. Baratz, MD
Program Director, Hand Fellowship
Program
Clinical Professor of Orthopaedic
Surgery



Pam Moalli
Professor



Marc Cordero
Clinical Assist Prof



Christiane M Hadi
Clinical Assist Professor



Clinicians for Climate Action

Healthcare professionals committed to reducing greenhouse gas emissions from healthcare systems



550+ members

including MD, OD, PT, RN, PA, NP, cRNA and dental

6 working groups involving education, equity, sustainable practices, research, communication/advocacy and outpatient medicine.

Presentations at National and Regional Scientific Meetings, Publications, Workshops and Educational Sessions

Interdisciplinary Projects, Research collaborations

www.c4ca.pitt.edu



Fall 2022 – Gathering at Tree Pittsburgh



Spring 2022– Gathering at Tree Pittsburgh



Letter to UPMC

Released for signature
On Earth Day - April 22, 2022

Asks

- 1. Demonstrate Intent**
- 2. Develop a Climate Plan** by 2023 that charts a course to achieve carbon neutral status
- 3. 100% renewable electricity** (wind, solar, hydroelectric) for UPMC operations by 2030
- 4. Divest** UPMC's reserve portfolio from fossil fuel companies
- Create a **UPMC Climate and Health Center** that brings together transdisciplinary teams to support carbon mitigation and environmental justice efforts
- Integrate **environmental quality metrics** into UPMC's educational, research and operational goals



UPMC | CENTER FOR SUSTAINABILITY



THE WHITE HOUSE

FACT SHEET: Health Sector Leaders Join Biden Administration's Pledge to Reduce Greenhouse Gas Emissions 50% by 2030

Valley Health System, Tufts Medicine, University Medical Center of El Paso, University of Arkansas for Medical Sciences, University of California Health, University of Nebraska Medical Center, University of Pittsburgh Medical Center, University of Utah Health, UW Medicine, Valley Children's Healthcare, WellSpan Health, Western Wisconsin Health

UPMC Sustainability Strategic Plan



Facilities

Operations
Energy (Solar,
Wind, Hydrogen)
Water
Design



Environmental Services

Recycling
Chemicals



Surgical Services

Desflurane
HVAC
Setback in
OR



Sustainable Models of Care

Single use of
plastics



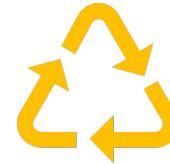
Supply Chain

Closed loop
solutions



Transportation

EV Charging
Stations
Ride Share
Programs
Fleet Transport



Food

Composting
Donation
Production/
Selection

NPR'S CLIMATE WEEK

Health care has a massive carbon footprint. These doctors are trying to change that

OCTOBER 2, 2023 · 6:00 AM ET

HEARD ON [MORNING EDITION](#)

By Reid Frazier

FROM  THE ALLEGHENY FRONT

Local & National Presence

Medscape Friday, December 15, 2023

[NEWS & PERSPECTIVE](#) [DRUGS & DISEASES](#) [CME & EDUCATION](#) [ACADEMY](#) [VIDEO](#) [DECISION POINT](#)

RSV IMMUNIZATION
can protect pregnant patients' babies

Advertisement

[Medscape Medical News > Features](#)

Gynecologic Procedures Can Be Less Wasteful. Why Aren't They?

Kaitlin Sullivan
December 13, 2023



FIERCE Healthcare

Providers ▾ Health Tech ▾ Payers Regulatory Finance Special Reports Fierce 50 ▾

PROVIDERS

UPMC is taking major steps to tackle climate change. How's how doctors led the charge to revamp its sustainability efforts

By Anastassia Gliadkovskaya · Apr 24, 2023 7:00am

[Home](#) > [Popular](#) > [Good News](#)



Dr. Isabella-Cajiao Angelelli, one of the cofounders of Clinicians for Climate Action and a clinical director at UPMC Children's Hospital of Pittsburgh. (Credit: UPMC)

Pittsburgh-area hospitals tackling climate emissions, pollution and waste

"We realized early on that we need to be part of the work, not just make an ask of the

And more to come...



About Us

Clinicians for Climate Action was formed in 2022 when several physicians in Pittsburgh

UPMC | **CENTER FOR SUSTAINABILITY**



OSUWMC Case Study: Leveraging the IRA Funding

Lauren Koch, MA, MENR
Sustainability Program Manager

2.12.24



We are central Ohio's only academic medical center

7

hospitals

1,506

beds

9

multispecialty
centers

NCI

designated
comprehensive
cancer center

100+

facilities



Wexner Medical Center (WMC) Strategic Plan Pillars



Talent and Culture



Research



Education



**World Class
Care**



**Operational
Excellence**



Health Equity

SUSTAINABILITY



Resource Stewardship Goals

University Fleet's Carbon Footprint

Reduce carbon footprint of university fleet per thousand miles traveled by 25% by 2025



Carbon Neutrality

Achieve carbon neutrality by 2050 per Presidents' Climate Leadership Commitment



Locally Sourced Food

Increase production and purchase of locally and sustainably sourced food to 40% by 2025



Ecosystem Services

Increase Ecosystem Services Index score to 85% by 2025



Potable Water Consumption

Reduce potable water consumption by 10% per capita every 5 years – reset every 5 years



Zero Waste

Achieve Zero Waste by 2025 by diverting 90% of waste away from landfills



Building Energy Consumption

Increase the energy efficiency of the university by 25% per building sq. ft. by 2025



Preferred Products

Develop and Implement standards by 2025

FY23 Sustainability Results

4.5%

less energy use
than FY22



65%

Decrease in anesthetic
gas emissions from 2018
baseline



900

Green Team members,
an increase of 15%



9,200 pounds
of medical devices
reprocessed and
\$1 million in savings



Telehealth avoided
emissions of **1100**
cars for a year



38%

diversion of waste



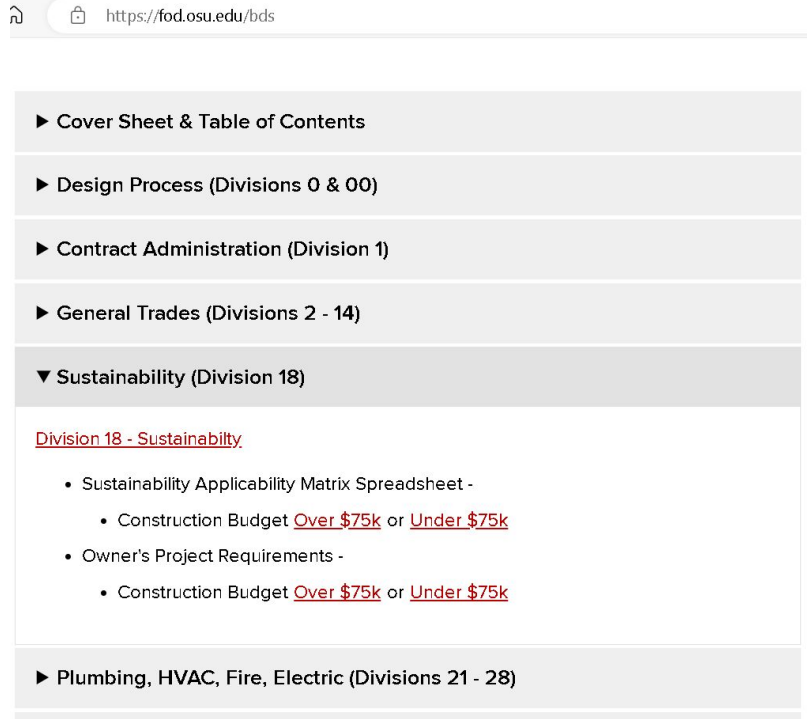
32.4%

carbon neutral electricity



Building Design Standards: Division 18

Ohio State's custom sustainability standards



https://fod.osu.edu/bds

- ▶ Cover Sheet & Table of Contents
- ▶ Design Process (Divisions 0 & 00)
- ▶ Contract Administration (Division 1)
- ▶ General Trades (Divisions 2 - 14)
- ▼ Sustainability (Division 18)
 - [Division 18 - Sustainability](#)
 - Sustainability Applicability Matrix Spreadsheet -
 - Construction Budget [Over \\$75k](#) or [Under \\$75k](#)
 - Owner's Project Requirements -
 - Construction Budget [Over \\$75k](#) or [Under \\$75k](#)
- ▶ Plumbing, HVAC, Fire, Electric (Divisions 21 - 28)

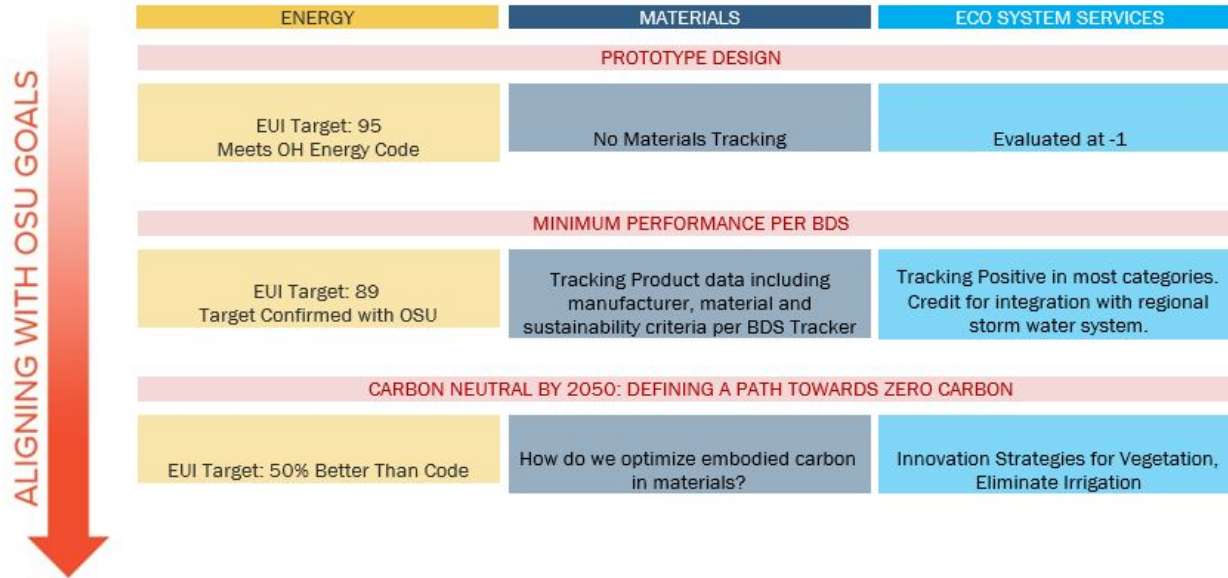
Outpatient Care Powell

200,000 sq ft of medical office and ambulatory health services



Goal Setting through Sustainability Charrette

How do we improve on sustainability from previous ambulatory locations?



Sustainable design – how do you pay for it?

Enter America Is All In case study on IRA cost savings.



HEALTH
CARE
CLIMATE
COUNCIL

AMERICA IS
ALL IN

IRA Cost Savings Analysis for New OSU Wexner Medical Center
Outpatient Center

Authors: Jubing Ge and Tansy Massey-Green
June 1, 2023

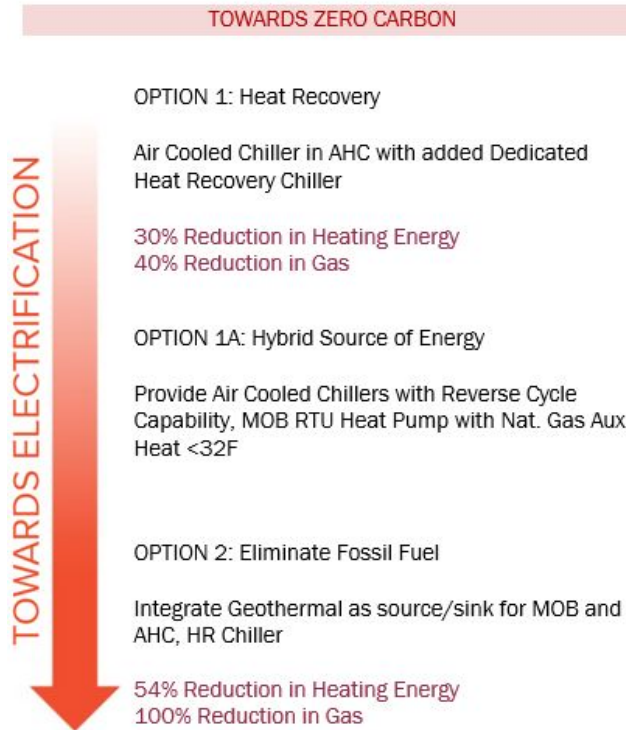
Table of Contents

Overview	1
Relevant IRA Programs and Provisions	1
Investment Tax Credit (ITC)	1
Production Tax Credit (PTC)	4
Commercial Energy Efficient Buildings Deduction (179D)	5

Source: [An All In Case Study \(The Ohio State University Wexner Medical Center - A Case Study of IRA Funding for Sustainable Design\).pdf \(americaisallin.com\)](https://americaisallin.com/case-study-of-ira-funding-for-sustainable-design)

Outcomes

Added heat recovery chiller to design



Outcomes

Solar-ready roof approved for design



Area
19,000 SF

Estimated Annual
Solar Energy
Production
361,800 kWh
(1,235,000 kBtu)

47,000 SF

895,000 kWh
(3,054,000 kBtu)

Outcomes

Exploring 179D pass through with construction company

Potential Amount of Commercial Building Energy Efficiency Tax Deduction for Powell Medical Center

	Ambulatory Health Center (56,000 sf)		Medical Office Building (151,530 sf)	
Assumed percentage reduction in building energy usage compared to standard	25%	50%	25%	50%
Total tax deductions per square foot	\$2.50	\$5.00	\$2.50	\$5.00
Amount of tax deduction (based on assumed energy use reduction)	\$140,000	\$280,000	\$378,825	\$757,650

Note: *These estimates assume the project meets the prevailing wage and apprenticeship requirements. Reduction in building energy usage will be evaluated based on final building design.*

Other Next Steps

What other projects qualify?

- Exploring another recent project (opened in August 2023)
- Exploring another project in construction (opening in 2026)
- Exploring opportunity to bundle deferred maintenance with an LED retrofit (existing community hospital)

Lessons Learned

And there were many.

1. Start early and include a buffer in the project budget before design even starts.
2. Identify a champion for sustainability (at the senior leader level) since this still is not always a cost savings.
3. Looking to not just new building projects, but energy reduction strategies, master planning, and deferred maintenance for IRA opportunities.

Thank You

Lauren.Koch@osumc.edu

[Sustainability | Ohio State Wexner Medical Center \(osu.edu\)](#)