

# University of Connecticut

Carbon Reduction Working Group

Spring Semester 2024

04/26/24

1881

## Agenda

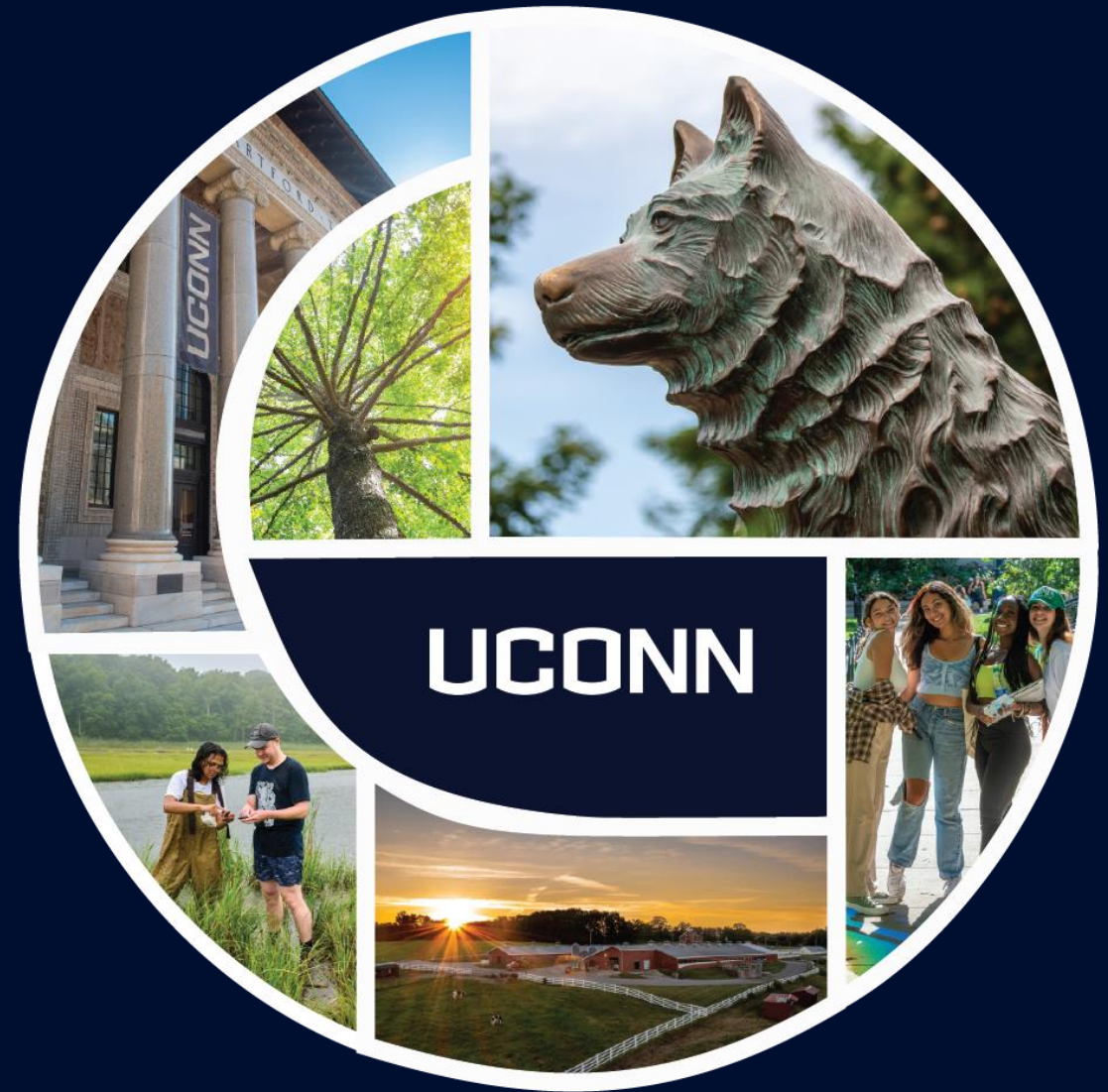
- Okanagan Charter
- Facilities/UPDC Project Updates
- GHG Status Updates



# Becoming a Health Promoting University

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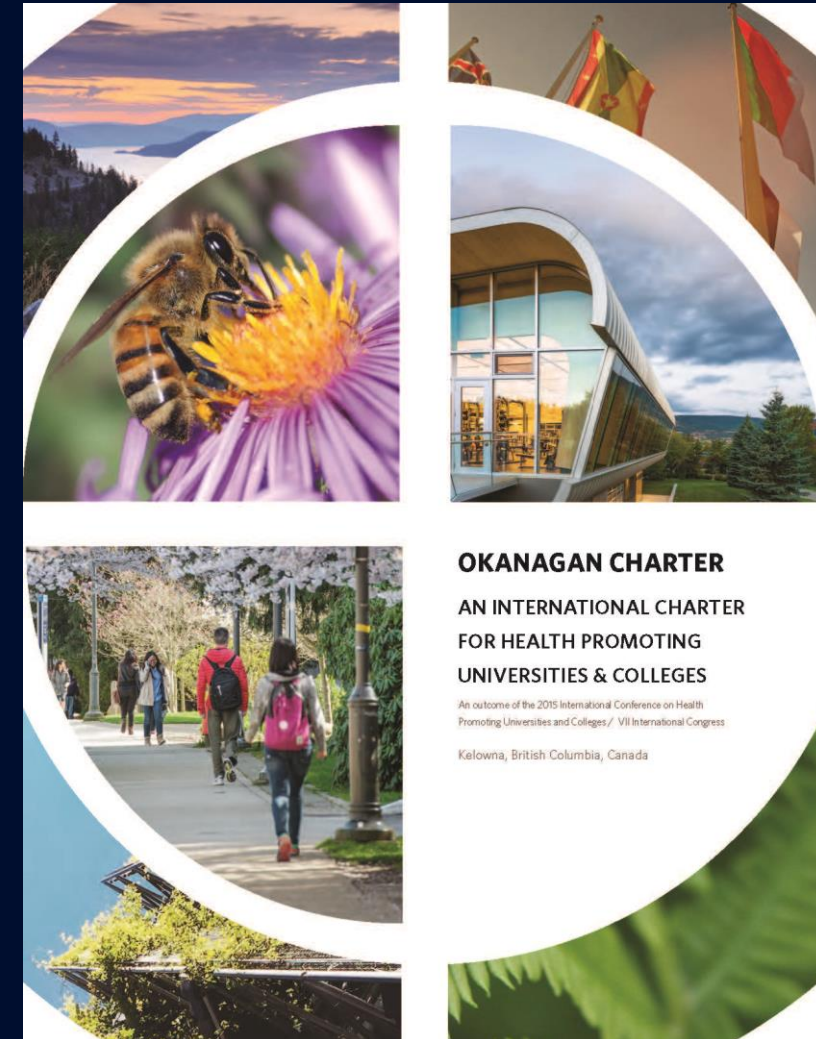


# Well-being in Person, Place, & Planet

“Well-being is a political choice. It is the outcome of the policies, institutions, economies and ecosystems in which people live. It requires a whole-of society approach involving action across all levels, stakeholders and sectors, from communities and within organizations to regional and national government.”

# The Okanagan (OH-kə-NOG-ən) Charter

“Health promoting universities [...] infuse health into everyday operations, business practices, and academic mandates. By doing so, health promoting universities [...] enhance the success of our institutions; create campus cultures of compassion, well-being, equity and social justice; improve the health of the people who live, learn, work, play and love on our campuses; and strengthen the ecological, social and economic sustainability of our communities and wider society.”



Embed  
health in policy

Create  
supportive campus  
environments

Re-orient  
campus services  
toward health

Generate  
a culture of well-being

Support  
personal development

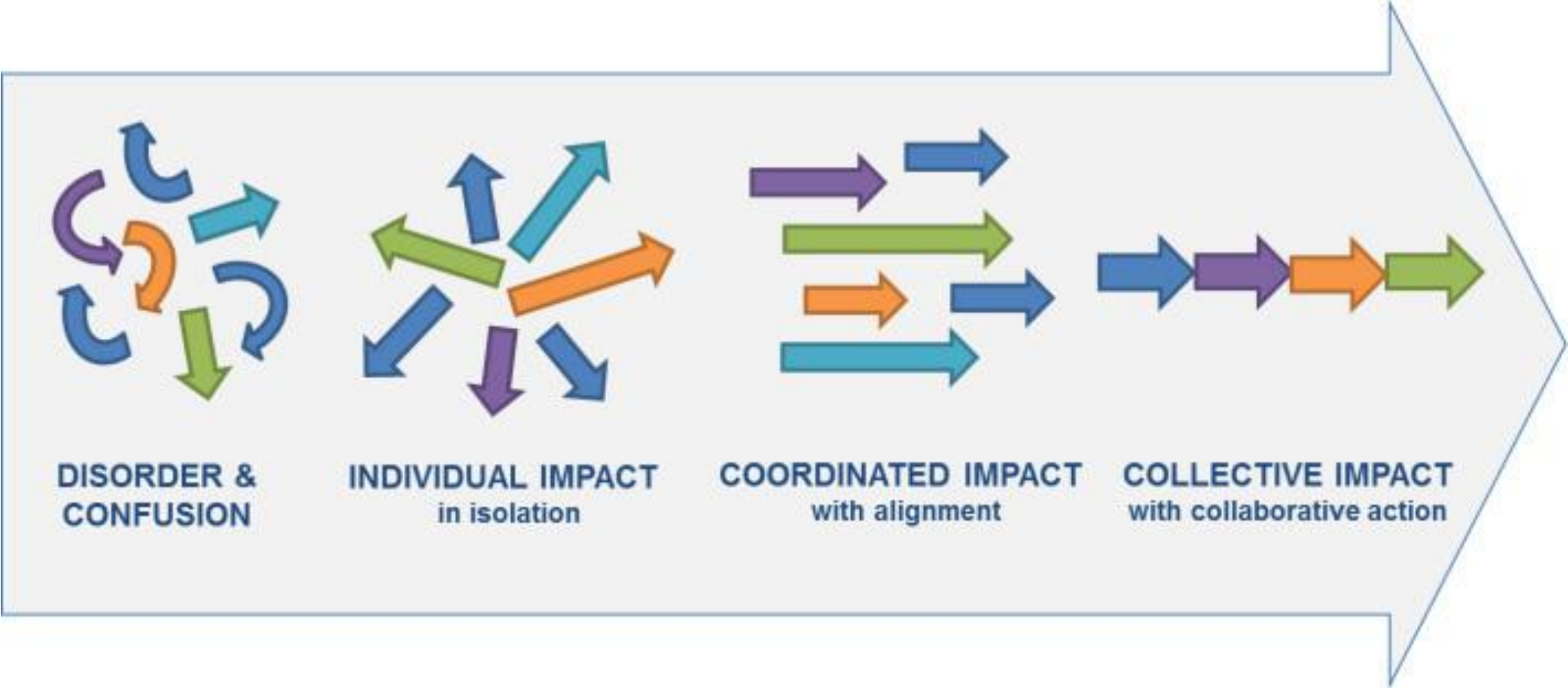
Develop  
change agents  
across campuses

Advance  
well-being research, teaching, &  
training



Transform  
Local and global  
communities

# Moving Towards Collective Impact



Adapted from: <https://thehomelessplan.org/collectiveimpact>



Research and Policy

Culture and Environment

Community and Belonging

Operational support provided by  
Student Health and Wellness, the Health Promotion Team



# UConn's Commitments > University Strategic Plan



## **Research & Policy**

Engage in research and policy revision/development to address health disparities, food insecurity, human & planetary health.



## **Culture & Environment**

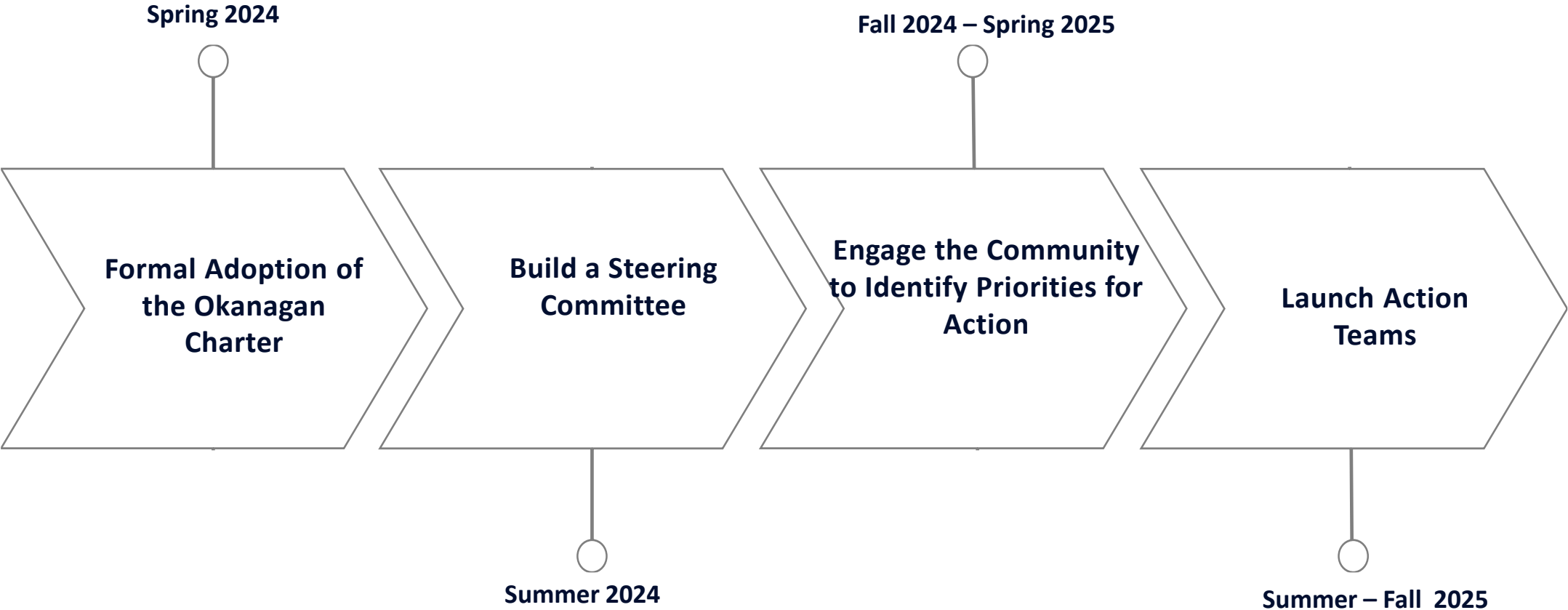
Improve supports for students, faculty, and staff; promoting caring and healthy campus environments.



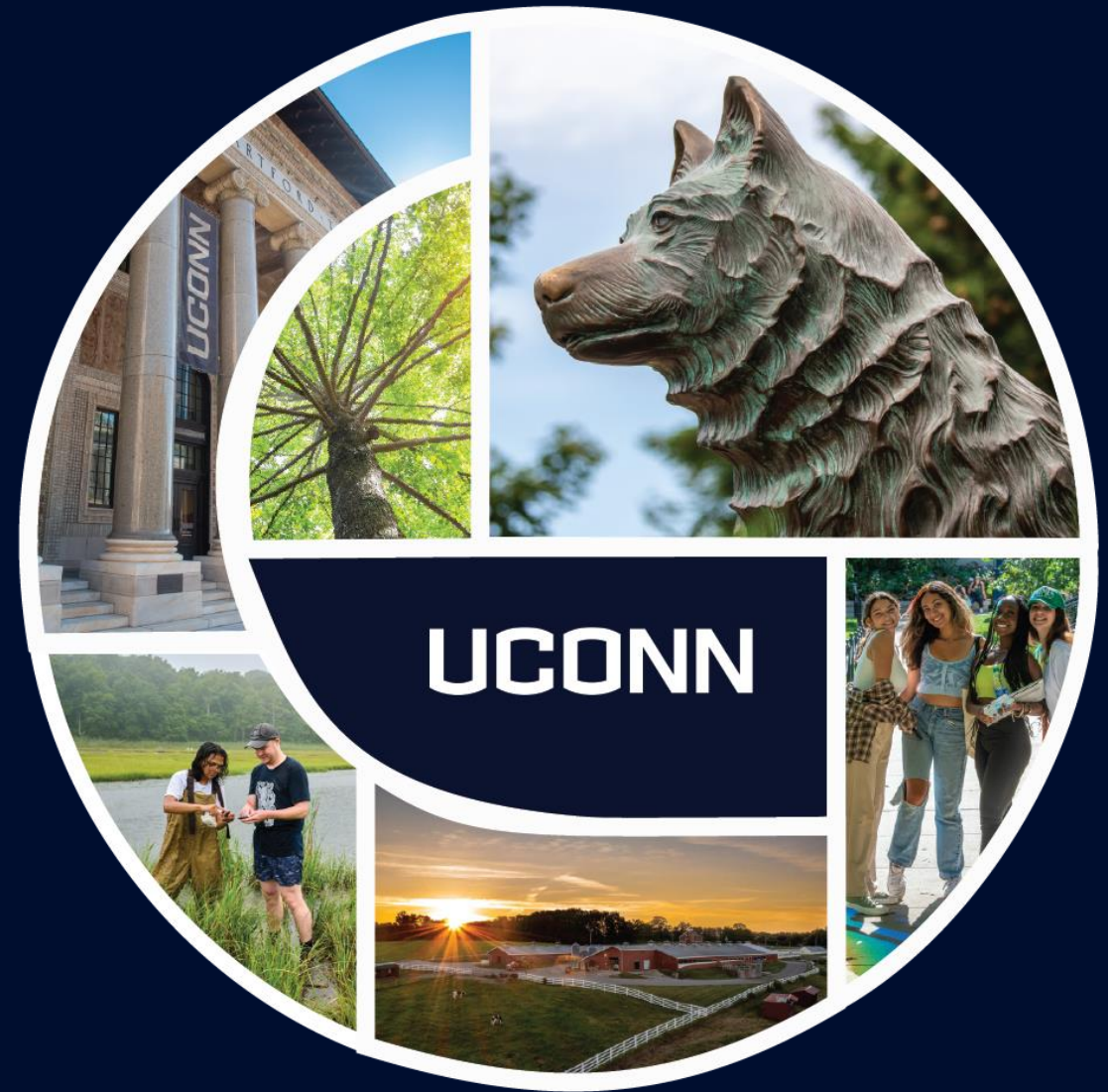
## **Community & Belonging**

Cultivate an environment that promotes belonging and inclusion across cultures, identities, and abilities, and empowers each individual to feel connected to the Husky community.

# Next Steps in Becoming a Health Promoting University



# Questions & Discussion



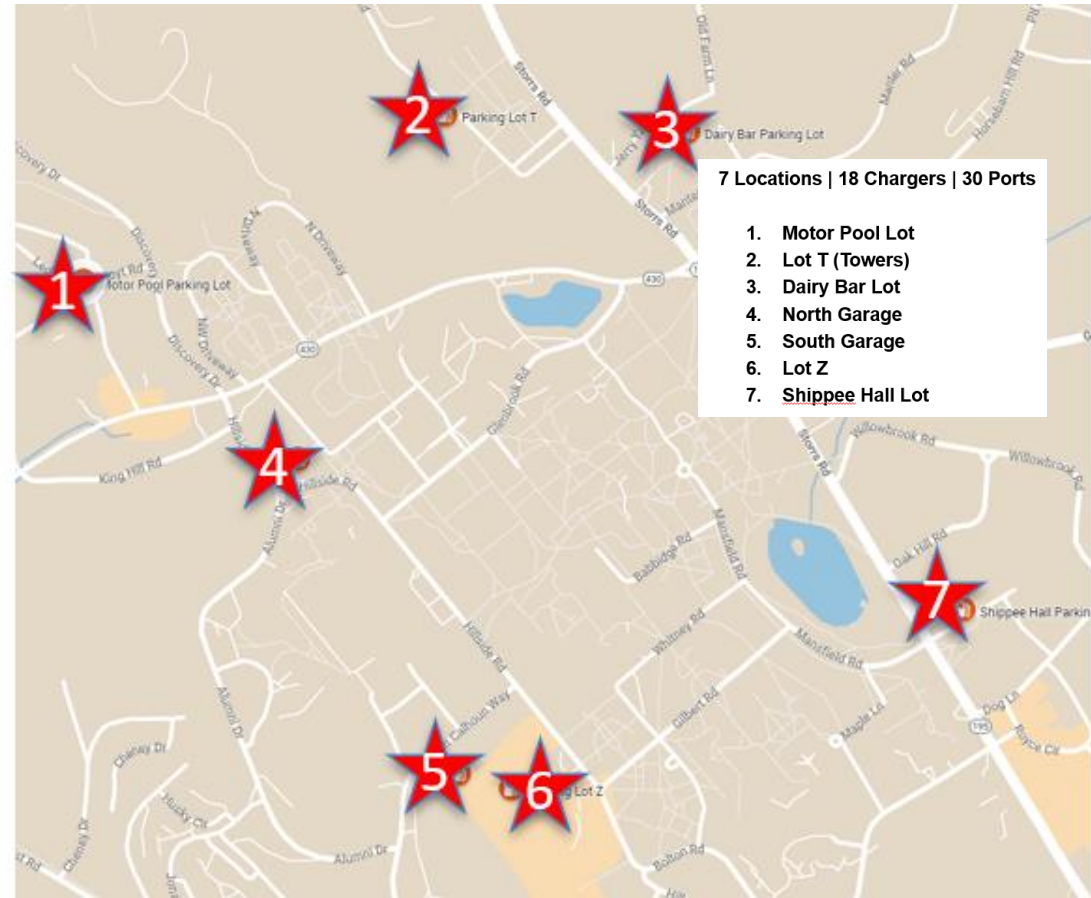
# Electric Vehicle Charging Infrastructure and Service Upgrades

Scope: The project will install new EV charging equipment and upgrade infrastructure associated in 7 new locations at the Storrs Campus. This accelerates carbon mitigation towards reaching the Carbon Neutrality Goal by 2030. This aligns with the strategic initiatives Seven World-Class Campuses, One Flagship University and Wellness of People and Planet.

Budget: \$957,200 Approved Final

Schedule: Construction May 2024.

GHG Emissions (metric tons): Scope 3, GHG emissions TBD



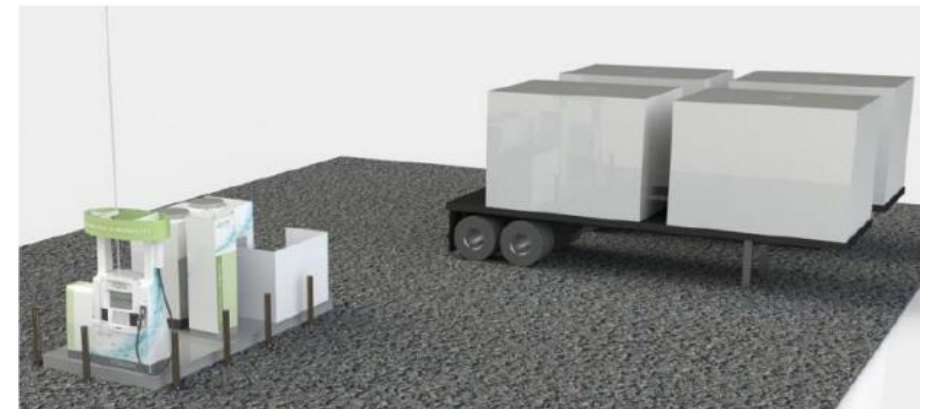
# Hydrogen Fuel Dispenser

Scope: The project will install a hydrogen fuel dispenser at the Reclaimed Water Facility at the Storrs Campus to fuel light-duty vehicles (NEXOs and Mirai). The fuel dispenser includes (1) Electrical Enclosure, (1) Tube Trailer Stanchion, valve panel, cooling system, chiller, all piping for the interconnections and commissioning. This project accelerates carbon mitigation towards reaching the Carbon Neutrality Goal by 2030. This aligns with the strategic initiatives Excellence in Research, Innovation, and Engagement and Wellness of People and Planet.

Budget: \$835,500 Approved Final

Schedule: Construction May 2024.

GHG Emissions (metric tons): 48 for the purchase of 12 vehicles



# Fuel Cell Installations- IPB and Putnam/Hilltop

Scope: Energy Services Agreements will install and operate two 250 kW Fuel Cell Energy fuel cell units at IPB and two 460 kW Doosan Fuel Cell units at Putnam Hilltop. This project accelerates carbon mitigation towards reaching the Carbon Neutrality Goal by 2030 and provides additional electrical generation on campus. This aligns with the strategic initiatives Excellence in Research, Innovation, and Engagement and Wellness of People and Planet.

Budget: FCE \$13 Million/8 Years  
VFS and Doosan \$15 Million/20 Years

Schedule: Schematic Design 2024-Q2  
Construction Commences 2024-Q4

GHG Emissions (metric tons): ~923



# Dining Hall Ventilation Upgrades

Scope: Dining hall ventilation upgrades to support energy conservation measures for 6 locations (Northwest, Towers, North, Rome, Buckley, and Shippee). This project accelerates carbon mitigation towards reaching the Carbon Neutrality Goal by 2030. The upgrades to aging software for buildings and infrastructure extends the building asset life. This aligns with the strategic initiatives in Wellness of People and Planet and Seven World-Class Campuses, One Flagship University.

Budget: \$892,700 Approved Final

Schedule: Northwest Dining Hall upgrade is complete, and Towers Dining Hall is in design, construction for Summer 2024.

GHG Emissions (metric tons) : 1532



# South Campus Chiller Plant – Geothermal

Scope: This project is an enabling project for the South Campus Residence Hall. The infrastructure project includes the installation of ground source heat exchange system via seventy-eight, 750- foot geothermal boreholes for heating and cooling.

Budget: \$13M

Schedule: In Construction

GHG Emissions (metric tons) : 2050





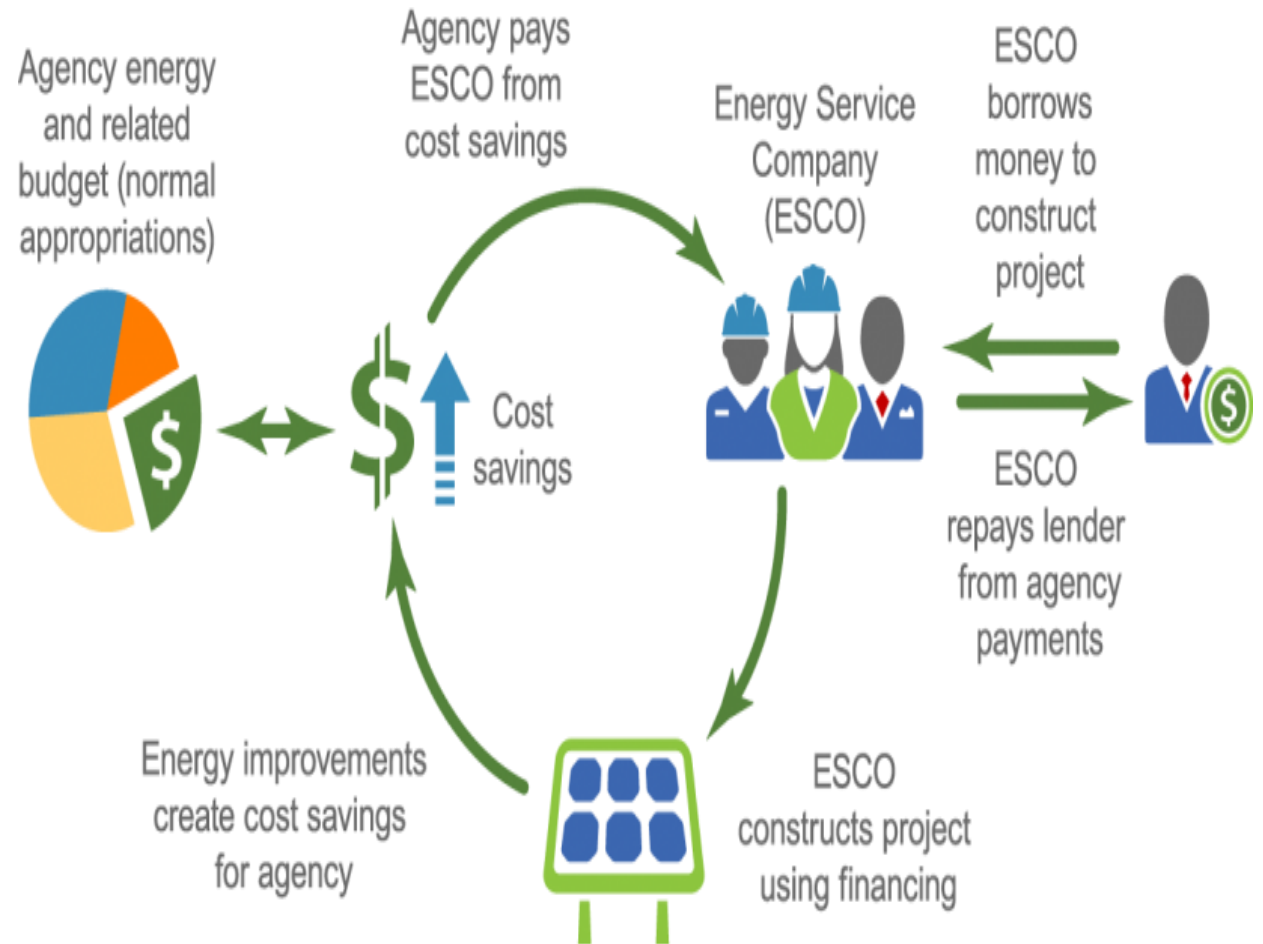
# Energy Services Performance Contract Phase 2

Scope: This project includes Energy Conservation Measures (steam/condensate line replacement, Retro-Commission 24 buildings (3M sq ft), LED Lighting Conversion 44 buildings (2.1M sq ft), Solar Canopies on various parking lots (1.6M sq ft). This project accelerates carbon mitigation towards reaching the Carbon Neutrality Goal by 2030. This aligns with the strategic initiatives Excellence in Research, Innovation, and Engagement and Wellness of People and Planet.

Budget: \$500,000 Approved Planning

Schedule: Procurement 2024-Q2  
IGE Audit Complete 2024-Q4

GHG Emissions (metric tons): Anticipated steam line repair ~ 1531



# Solar Canopies

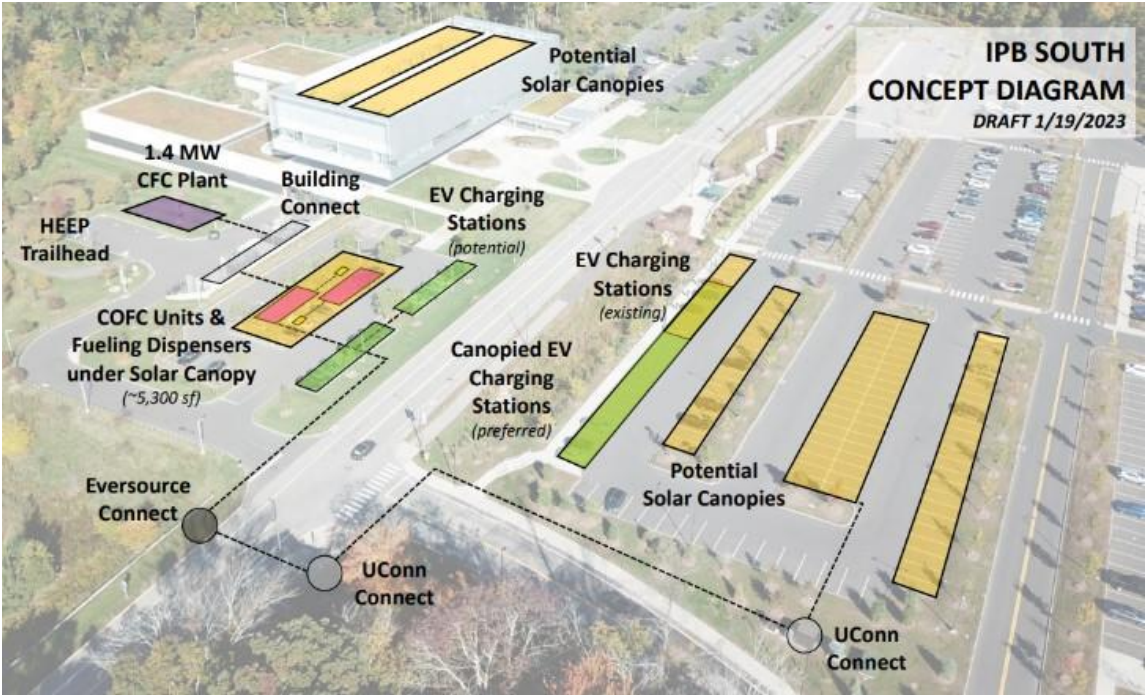
Scope: As part of the ESPC Phase 2, this program will review the construction of solar canopies to be installed on parking lots at the Storrs campus creating up to 7.5 MW of clean solar power generation onsite.



Budget: TBD

Schedule: TBD

GHG Emissions (metric tons) : 5684



# Turbine at Cogen Facility

Scope: This task includes modifying the cogeneration facility turbines to operate on blended hydrogen fuel which is anticipated to decrease emissions by 30%.

Budget: TBD

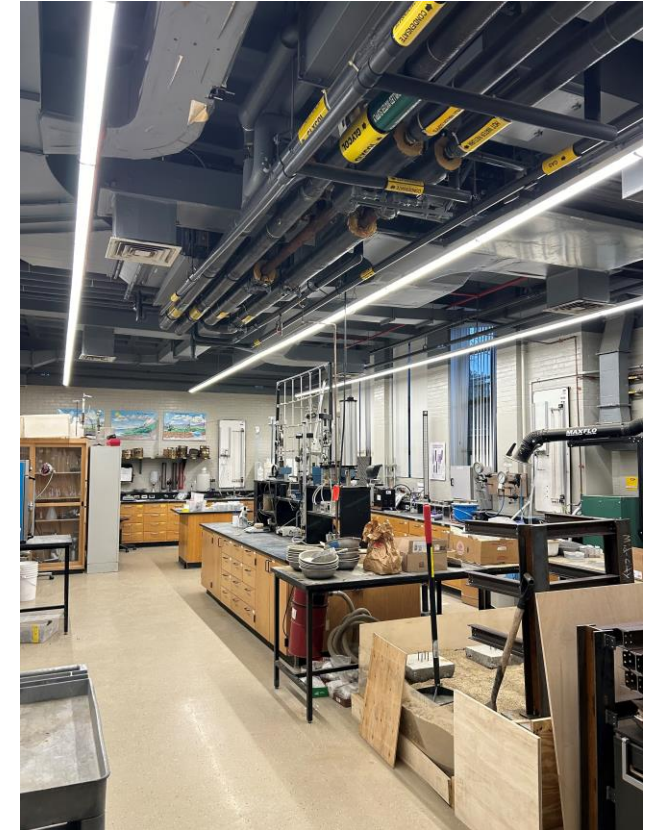
Schedule: TBD

GHG Emissions (metric tons) : TBD

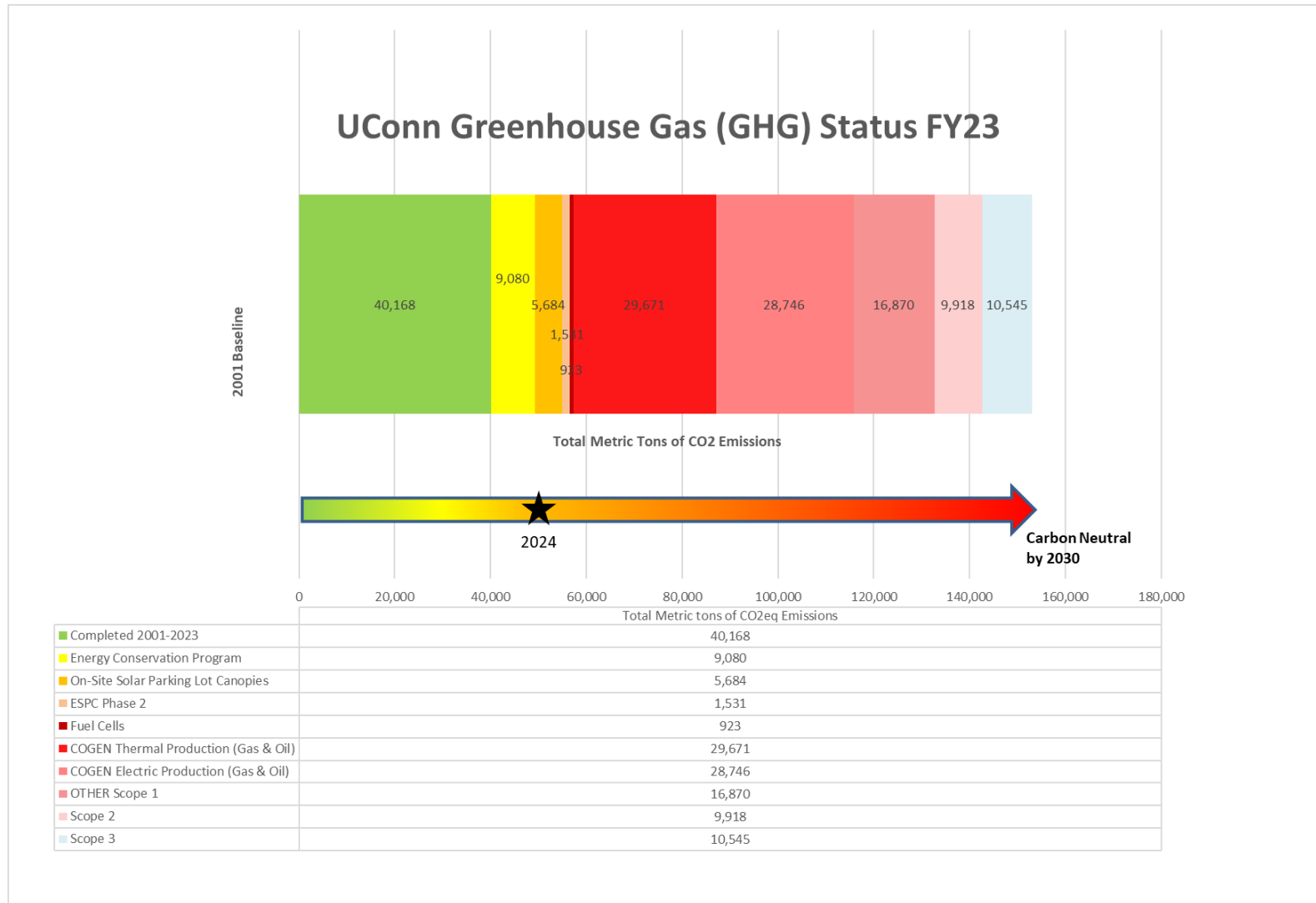


# Energy Conservation Projects

- Storrs Lighting Upgrade Projects
  - Projects completed - Winter/Spring 2024
    - Dodd (Phase 1)
    - Babbidge Library Second Floor
    - Gampel Kinesiology
    - Castleman and
    - ITEB
  - Projects In Construction - Buckley (both towers) – Summer 2024
    - School of Business – Summer 2024
    - Dodd (Phase 2) – Summer 2024
    - Atwater – TBD
  - Projects in Design -
    - Gampel, Wilbur Cross, Student Union, Jorgensen
- ASHRAE Energy Audit Group 1 – Tentative completion date end of April 2024
- Stamford RCx Implementation – Tentative completion date end of April 2024
- Husky Village HVAC equipment/heat pump – Design Summer 2024
- Regional Campus Projects –
  - Law School – Mackenzie Hall Lighting Upgrade – May 2024



# GHG Status Graph



# Open Discussion

