Decarbonization Town Hall

Panelists:

Lela Corson

Frank Hodge

Jan Whittington

Dave Woodson

Facilitator:

Lisa Dulude

October 25, 2023
4:30 p.m.

TRICIA SERIO

Provost and Executive Vice President for Academic Affairs

LOUISA MACKENZIE

Faculty Senate Vice-Chair

Decarbonization Town Hall

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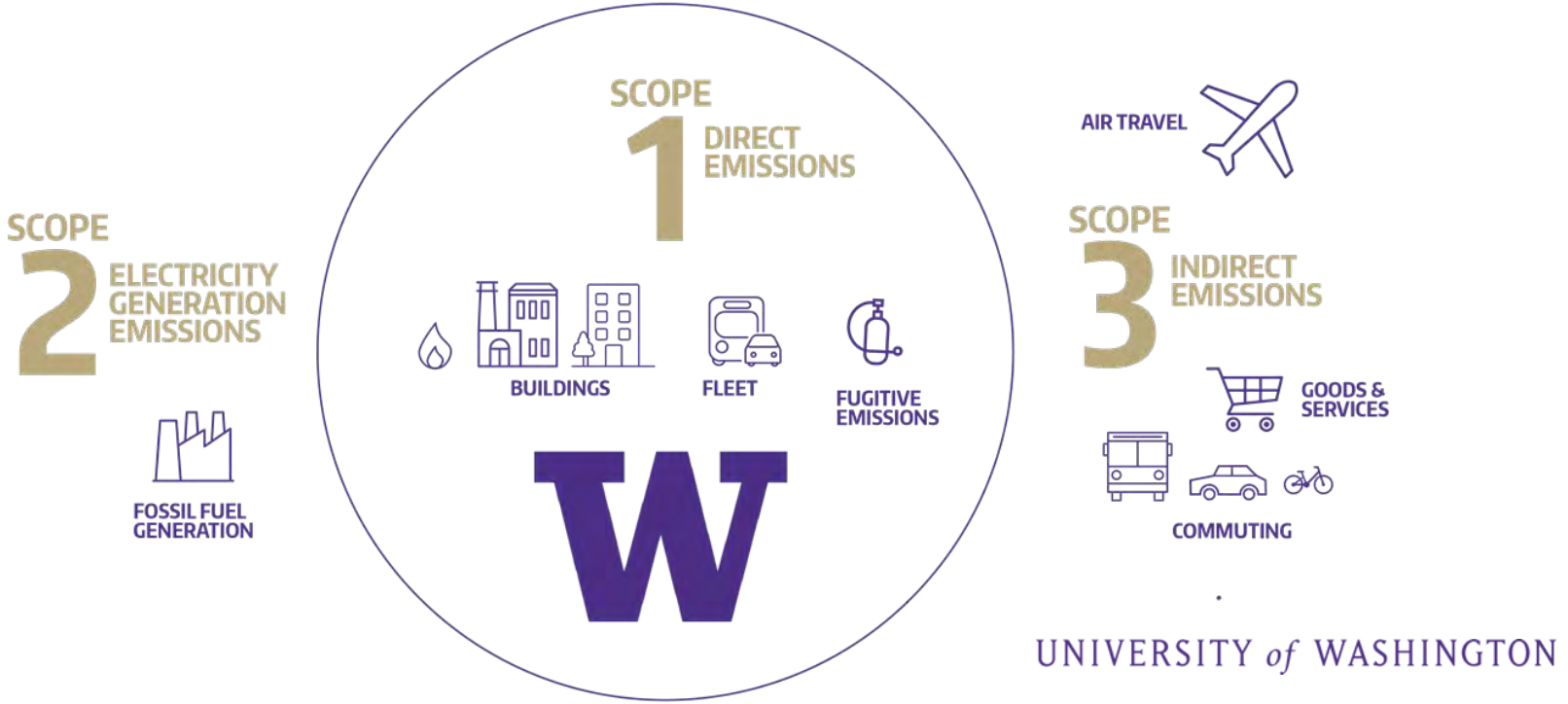
JAN WHITTINGTON

Faculty Council on Campus Planning and Stewardship Co-chair

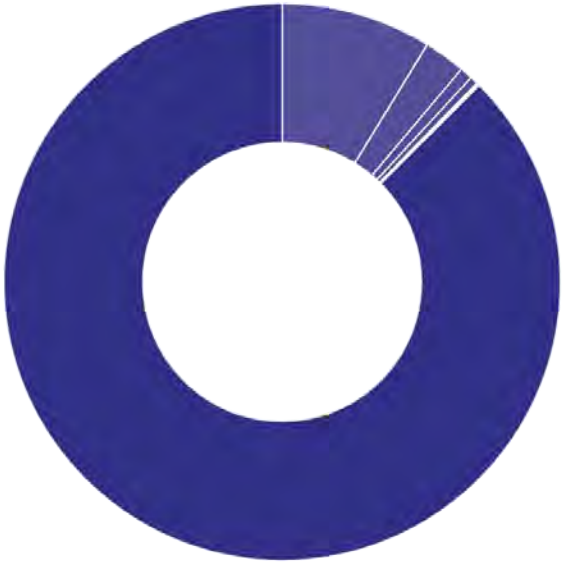
Greenhouse Gas Emissions ‘101’



UW SCOPE 1 EMISSIONS

UW SEATTLE BUILDINGS

87%

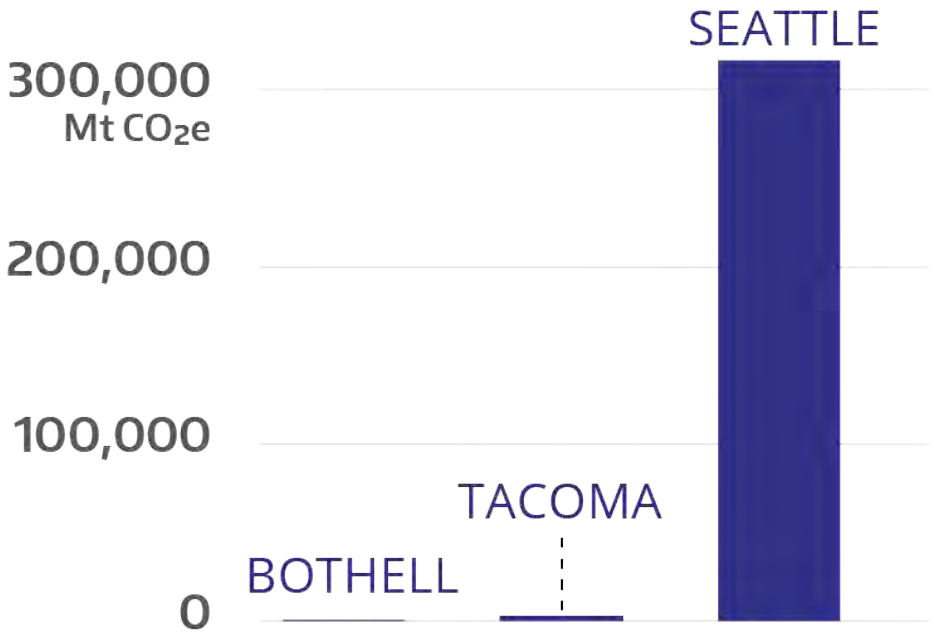


13%

FUGITIVE EMISSIONS 9%
FLEET 2%
UW TACOMA BUILDINGS .7%
UW BOTHELL BUILDINGS .5%
OUTLYING FACILITIES.1%

From 2023 Greenhouse Gas Inventory

UW SCOPE 1 EMISSIONS: campus split



From 2023 Greenhouse Gas Inventory

STATE MANDATES: SCOPE 1 Emissions

Climate Leadership Act

- 2030 target: 45% reduction
- 2040 target: 70% reduction
- 2050 target: 95% reduction

Climate Commitment Act

- Cap, and invest
- >25,000Mt CO_2e must pay to emit
- State-wide GHG reduction targets for 2030, 2040 and 2050

STATE MANDATES: SCOPE 2 Emissions

FOSSIL FUEL
GENERATION

Clean Energy Transformation Act

- ➔ Applies to electric utilities serving retail customers in Washington
- ➔ Milestones to reach 100% clean electricity by 2045

Clean Buildings Performance Standard

- ➔ Energy efficiency performance standards for commercial buildings

STATE MANDATES: SCOPE 3 Emissions

Commute Trip Reduction Law

- ➔ Applies to large employers in Washington
- ➔ Reduce single-occupancy commute trips
- ➔ Promote transit and other alternatives

Executive Order 20-01

Requires Washington State agencies to address emissions and environmental performance. State agencies must consider and lower emissions associated with building materials

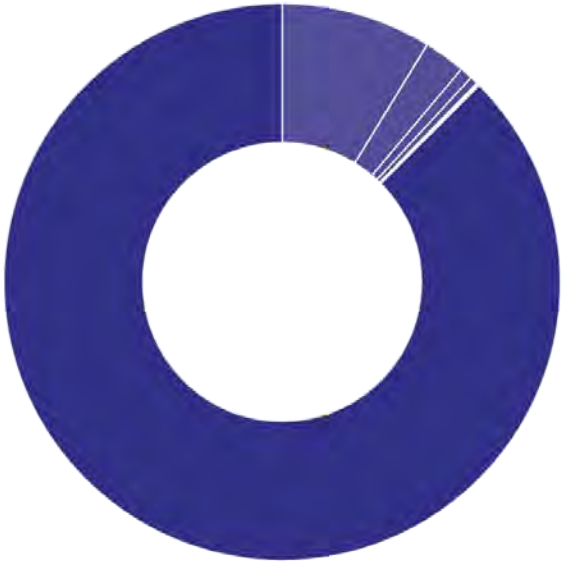
**Stay tuned for more information on UW Scope 3 initiatives at the end of the event.*

UNIVERSITY of WASHINGTON

UW SCOPE 1 EMISSIONS

UW SEATTLE BUILDINGS

87%



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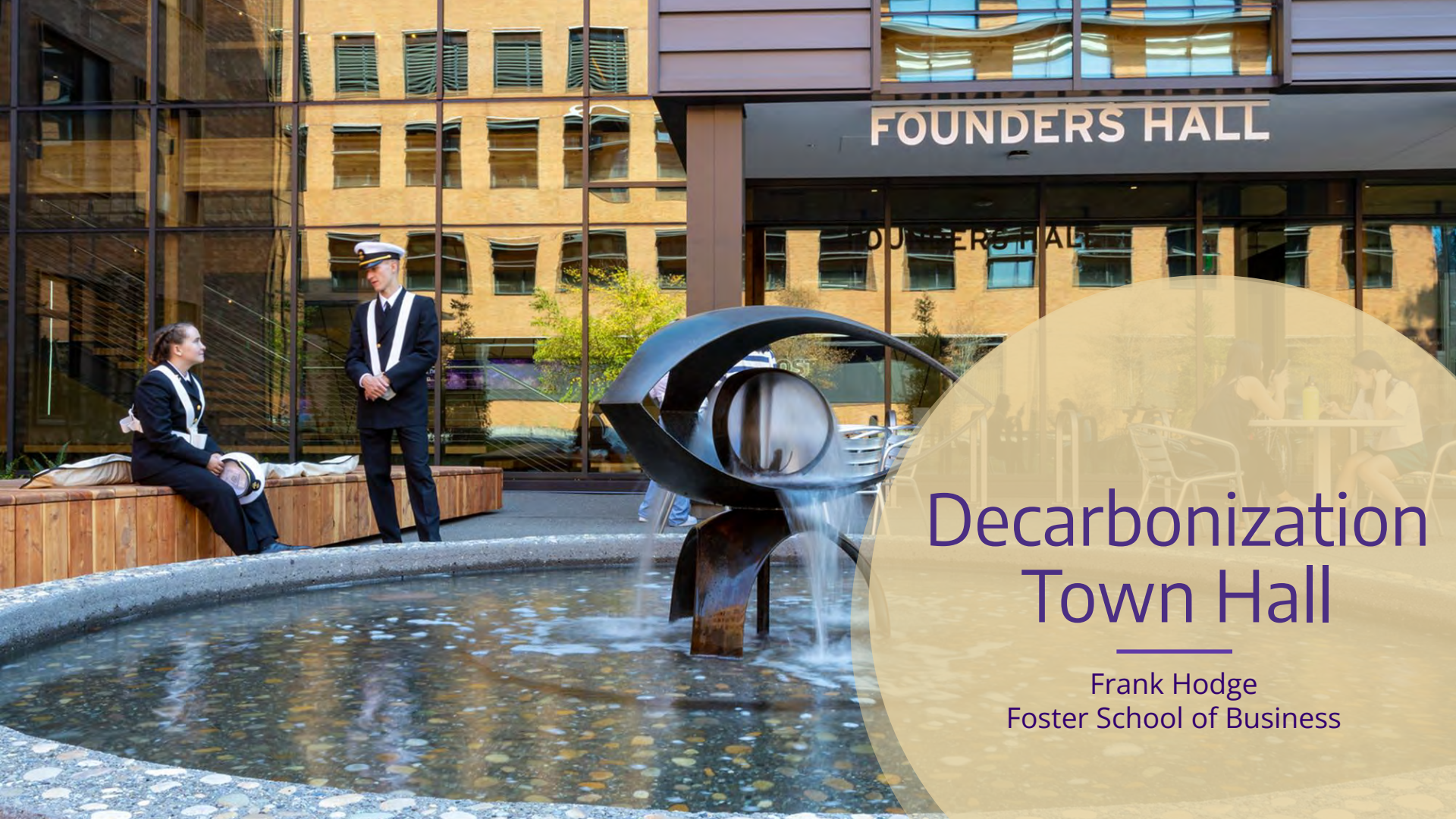
From 2023 Greenhouse Gas Inventory



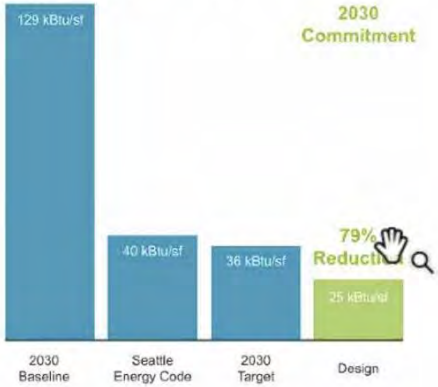
Decarbonization Town Hall

Frank Hodge
Foster School of Business

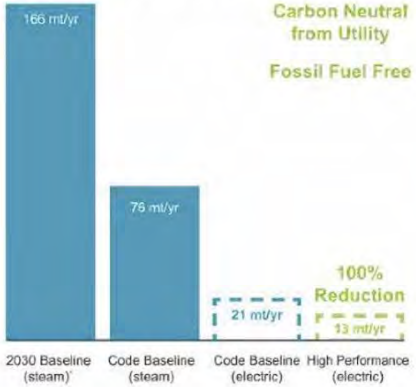

Together...
We Foster Leaders
We Foster Insights
We Foster Progress
...To Better Humanity

Sustainability

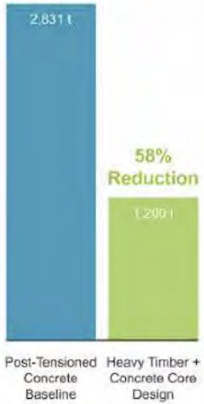
Energy Use Intensity



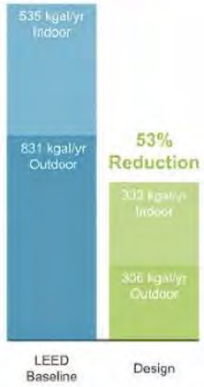
Operational Carbon (CO2e)



Embodied Carbon



Water Use



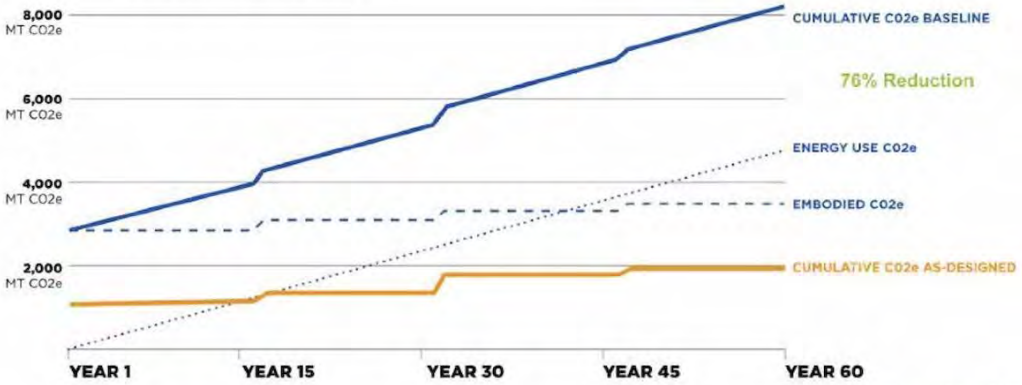
Sustainability Goals

2030 Challenge

UW Green Building Standards

- 50% water use reduction below code
- 15% energy use reduction below code
- LEED NC v4.1 Gold

Cumulative Carbon (60 years, CO2e)



Updated 6 May 2020

PRWeb
Online Visibility from Vocus

Aureus Earth and the University of Washington Execute Ground-Breaking Carbon Offset Transaction for a Mass Timber Building

Project to store 1,000 tons of CO2 for decades in the University of Washington's Founders Hall, keeping carbon out of the atmosphere for the lifetime of the building

BOULDER, Colo. (PRWEB) September 22, 2022 -- Aureus Earth, the leading provider of carbon offsetting incentive programs for the construction industry, today announced its first transaction that values the long-term biogenic carbon storage in a mass timber building. The transaction was accomplished in partnership with the University of Washington (UW) Foster School of Business, using the newly completed Founders Hall mass timber building as a proof of concept.

Climate-Focused Travel

UW Climate Risk Lab

About the UW Climate Risk Lab

The UW Climate Risk Lab is a cross-campus initiative equipping organizational leaders with the data, analysis and tools they need to manage present and future risks posed by climate change.

Solutions Facilitated by UW CRL

- An open access data platform
- Faculty- and student-led climate risk research projects that bridge the researcher-corporate divide
- Multi-stakeholder forums, networking events and case competitions
- Courses and training for students, faculty and business leaders
- Mentoring and support for data- and software-driven climate tech startups

Partners


UNIVERSITY of WASHINGTON
eScience Institute
DATA SCIENCE FOR SOCIAL GOOD
CLEAN ENERGY INSTITUTE
UNIVERSITY of WASHINGTON
PAUL G. ALLEN SCHOOL
OF COMPUTER SCIENCE & ENGINEERING
MAC
WASHINGTON MARITIME blue
CREATIVE DESTRUCTION LAB
SEATTLE
FIRST STREET FOUNDATION
Duke
NICHOLAS INSTITUTE
for ENERGY, ENVIRONMENT & SUSTAINABILITY

Climate Action & Adaptation

- Ben Packard
  EarthLab
- Charlie Donovan
  Foster School
- Dan Schwartz
  Clean Energy Institute
- Derek Fulwiler
  Population Health Initiative
- Eric Lawson
  Advancement
- Frank Hodge
  Foster School
- Jeremy Hess
  Center for Health and the Global Environment (CHanGE)
- Kate Simonen
  Carbon Leadership Forum
- Kelsea Shannon
  Advancement
- Lisa Thomas
  Advancement
- Maya Tolstoy
  College of the Environment
- Michelle Johnson-Jennings
  Environmentally- and Land-based Healing, Indigenous Wellness Research Institute
- Samantha Snively
  Advancement
- Sara Curran
  Center for Studies in Demography & Ecology
- Shuyi Chen
  College of the Environment

DAVE WOODSON

Executive Director of Campus Energy, Utilities, and Operations

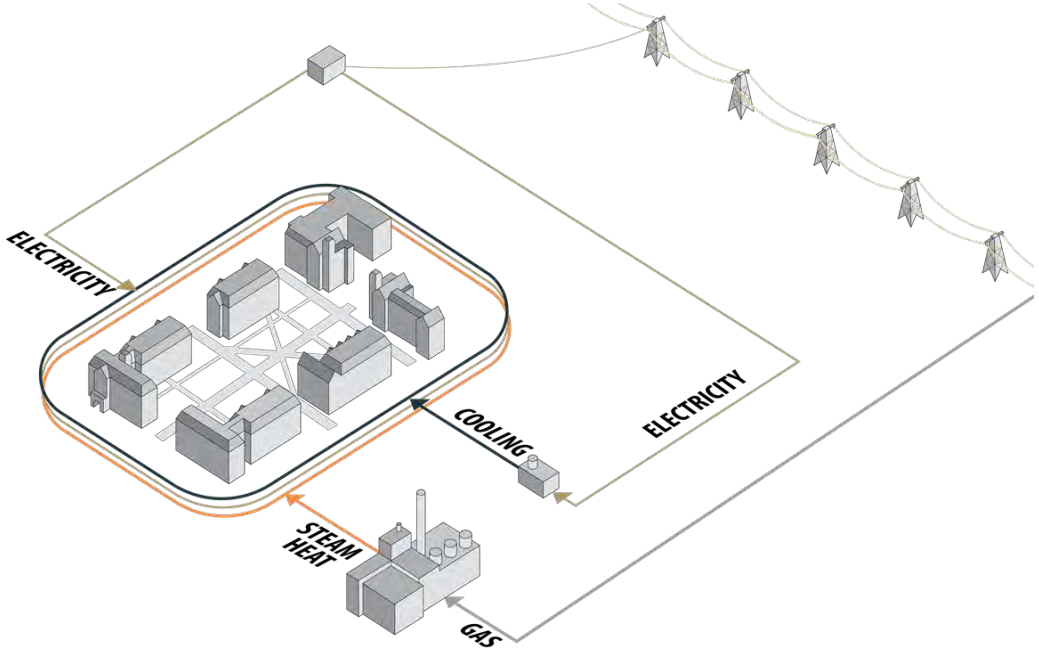
CHALLENGES

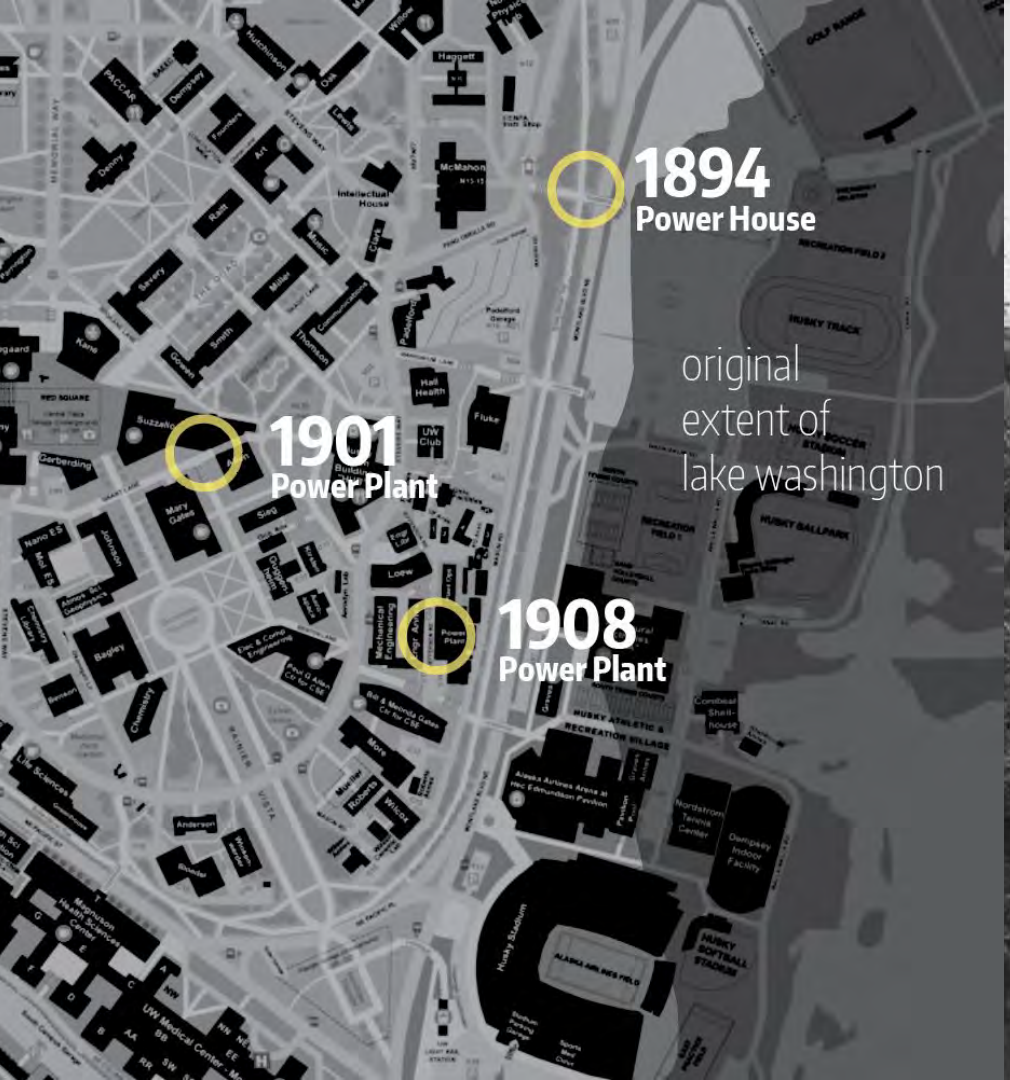
GREENHOUSE
GAS EMISSIONS

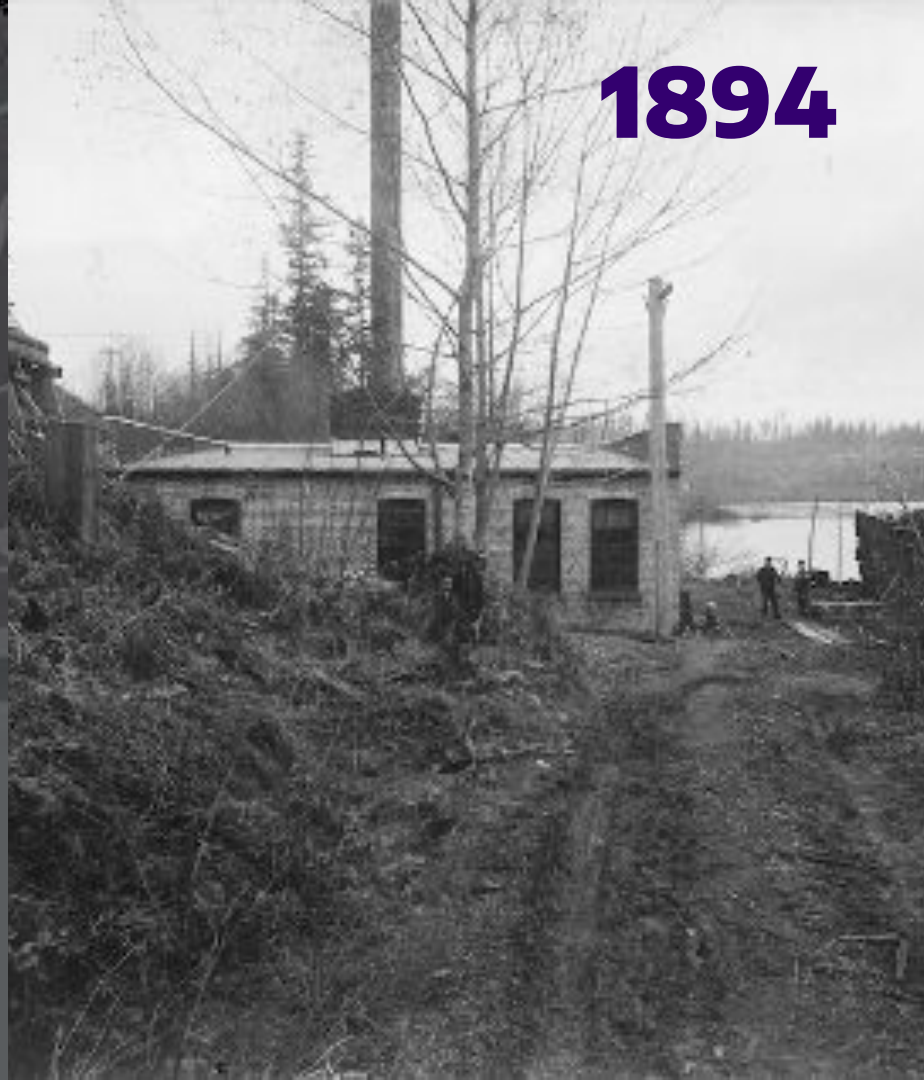
ENERGY EFFICIENCY

ELECTRICAL
CAPACITY CONSTRAINT

AGING
UTILITY INFRASTRUCTURE

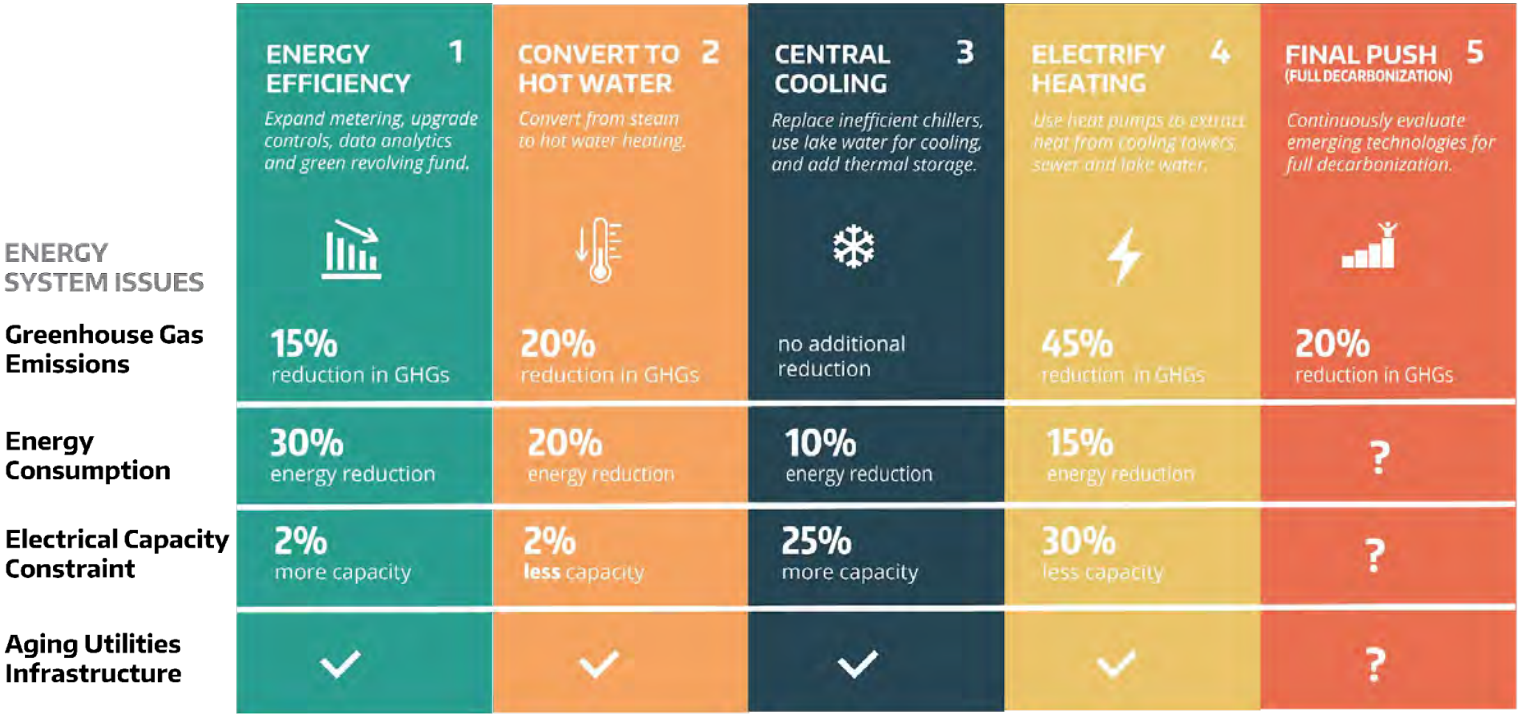



1894
Power House
1901
Power Plant
1908
Power Plant
original
extent of
lake washington


1894

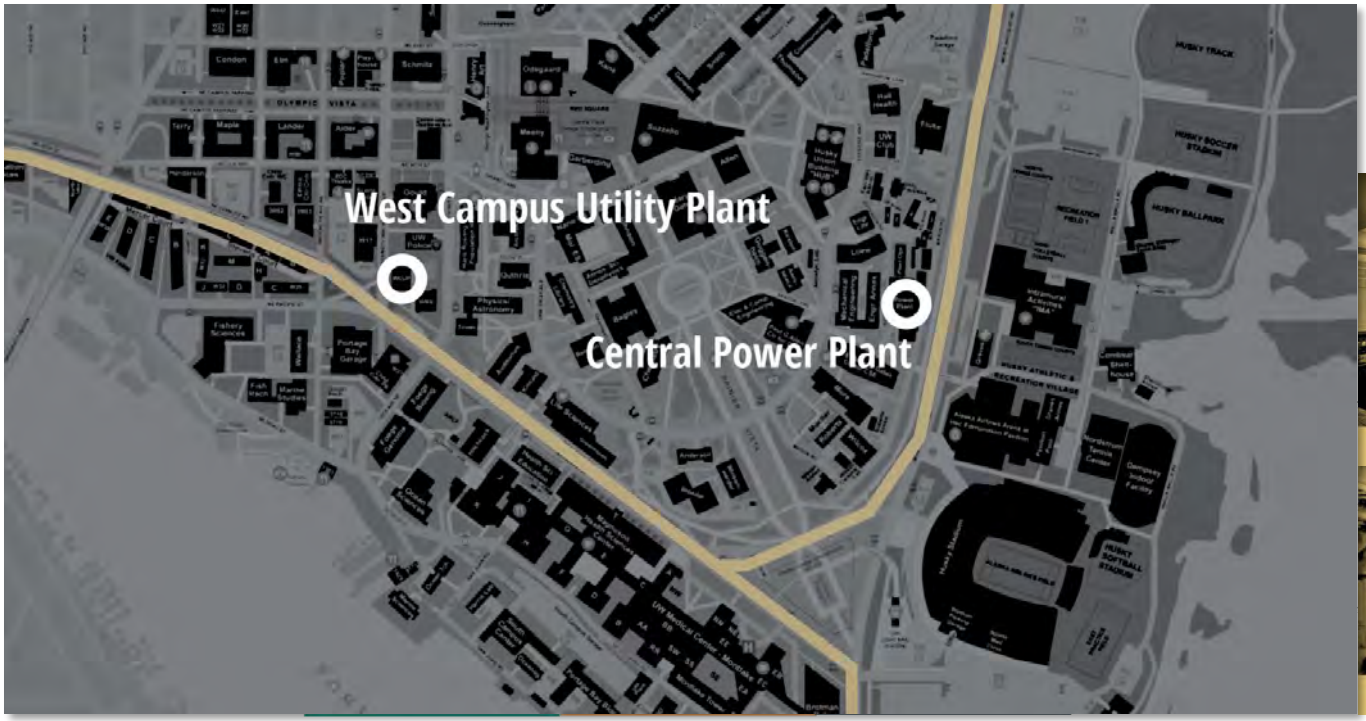

1957

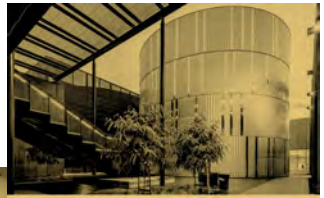
ENERGY TRANSFORMATION STRATEGY



PHASE 5 will remove the remaining carbon from our energy system

ENERGY RENEWAL STRATEGY





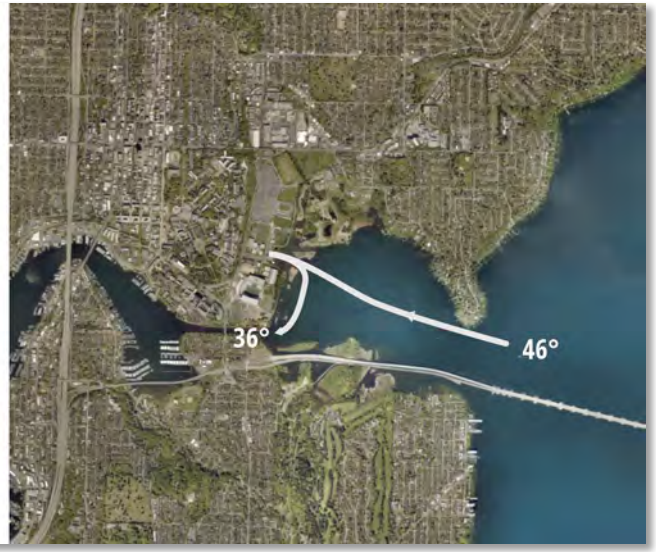
THERMAL STORAGE

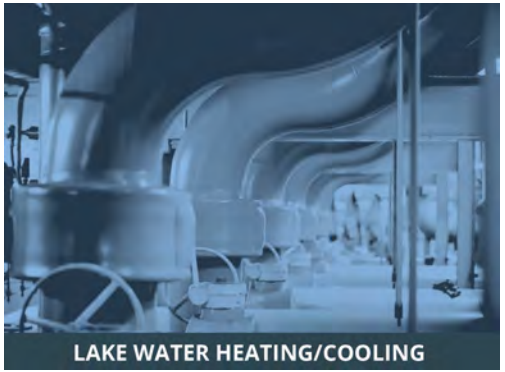
LAB HEAT RECOVERY

SEWER HEAT RECOVERY

ENERGY TRANSFORMATION STRATEGY

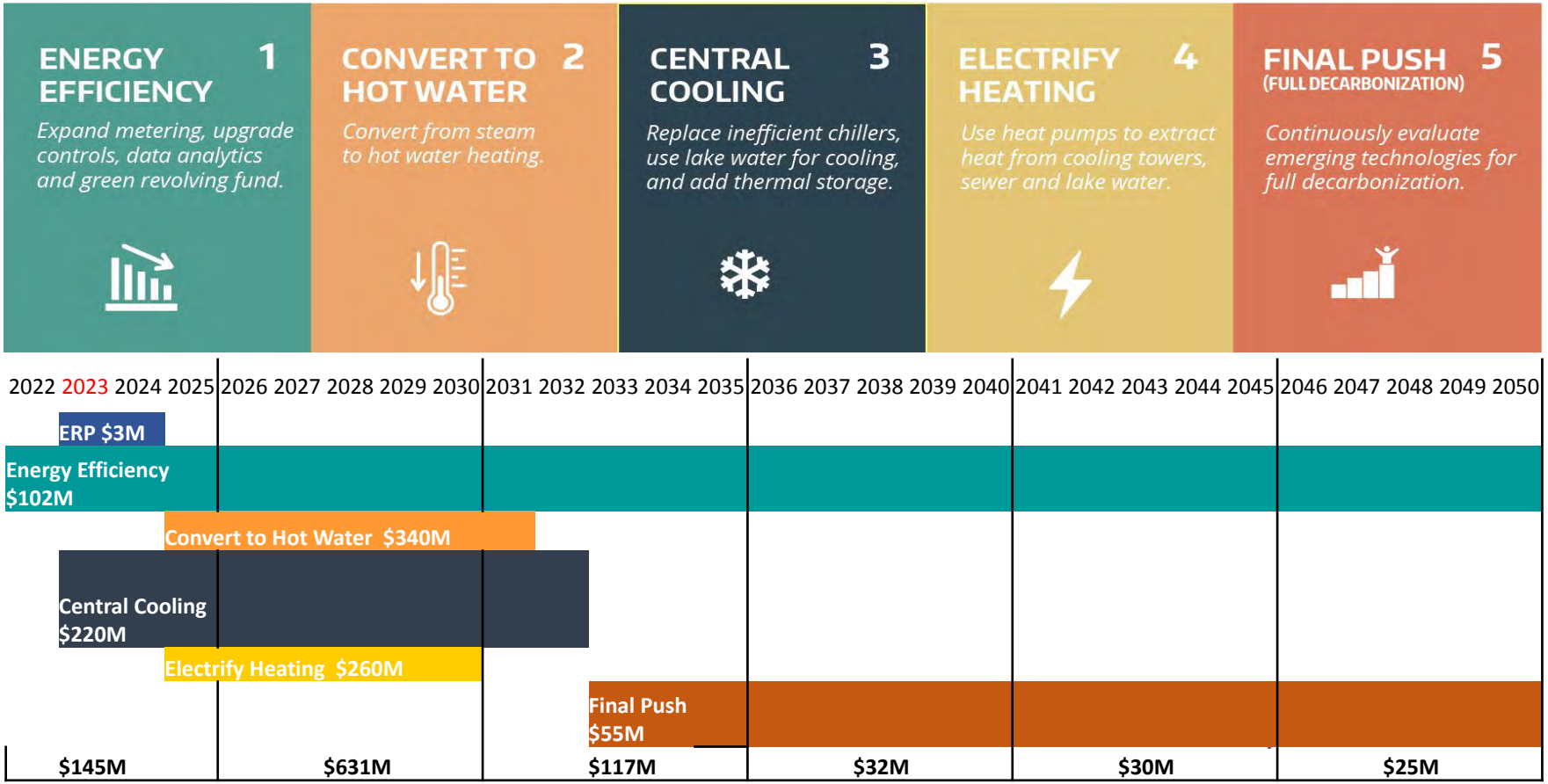
PART 3: reduces energy costs and frees up electrical capacity





LAKE WATER HEATING/COOLING

5-PART TRANSFORMATION STRATEGY



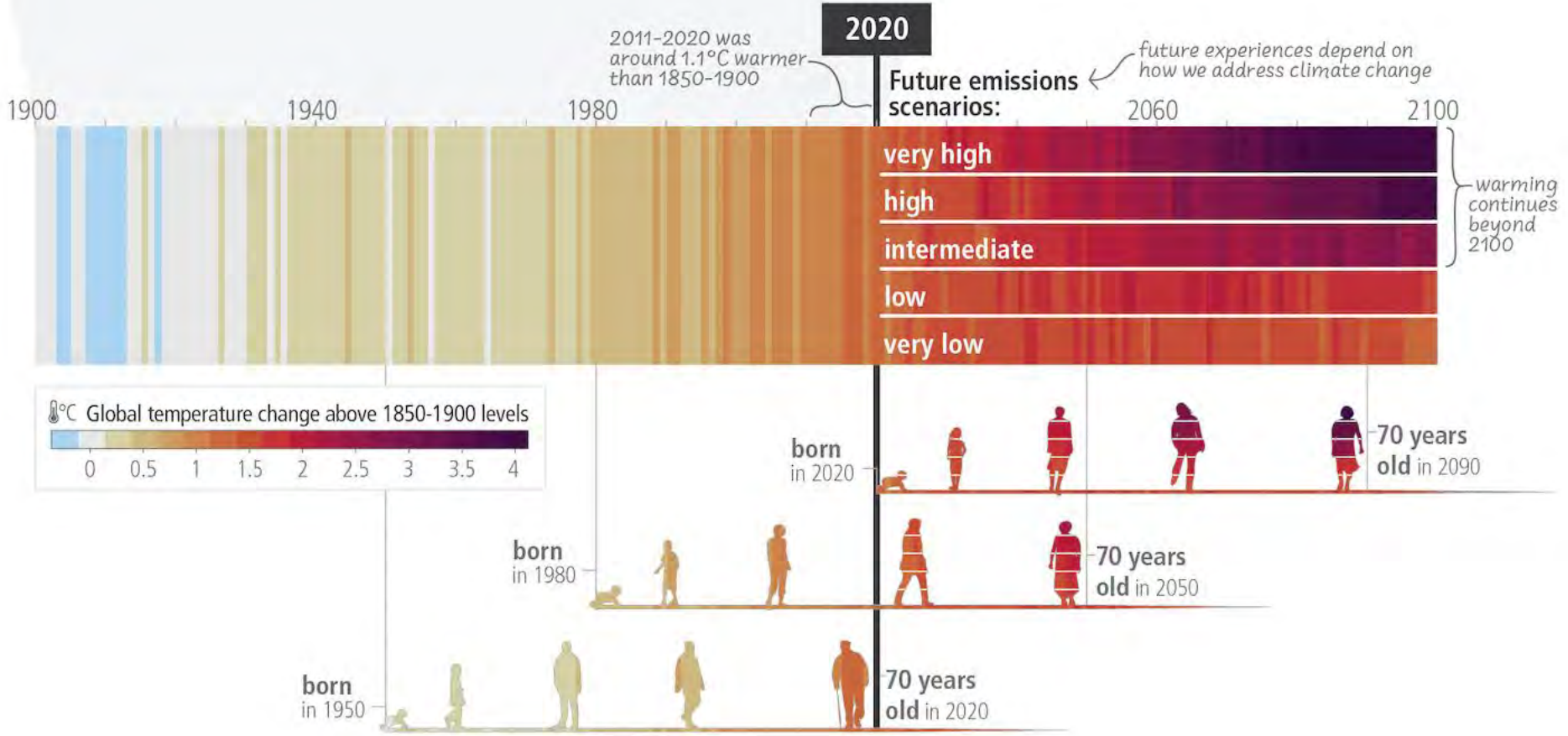
LELA CORSON

Institutional Climate Action Student Group

The Youth Perspective

- Young people (16 – 25) across all countries:
  - 59% are **very** or **extremely worried**
  - 84% are at least **moderately worried**
- "45% of respondents said their feelings about climate change negatively affected their daily life and functioning"
- Emotions: sad, anxious, angry, powerless

(Hickman et. al, 2021)



UN IPCC Report, AR6

The Student Perspective

Dargan Frierson

Grant Vu

Margo Polley

We've Done it Before!

- Husky Stadium Remodel
  - $261 million in < 2 years
  - **$139 million/yr**
- Interdisciplinary Engineering Building
  - $102 million in 2 years
  - **$51 million/yr**
- Methane Gas Plant?
  - $700 - $900 million in 12 years
  - **$75 million/yr**

“Like many others of this generation, climate change is existential to them…”

- Quote from a president’s blog

Be Leaders - Act Now!

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