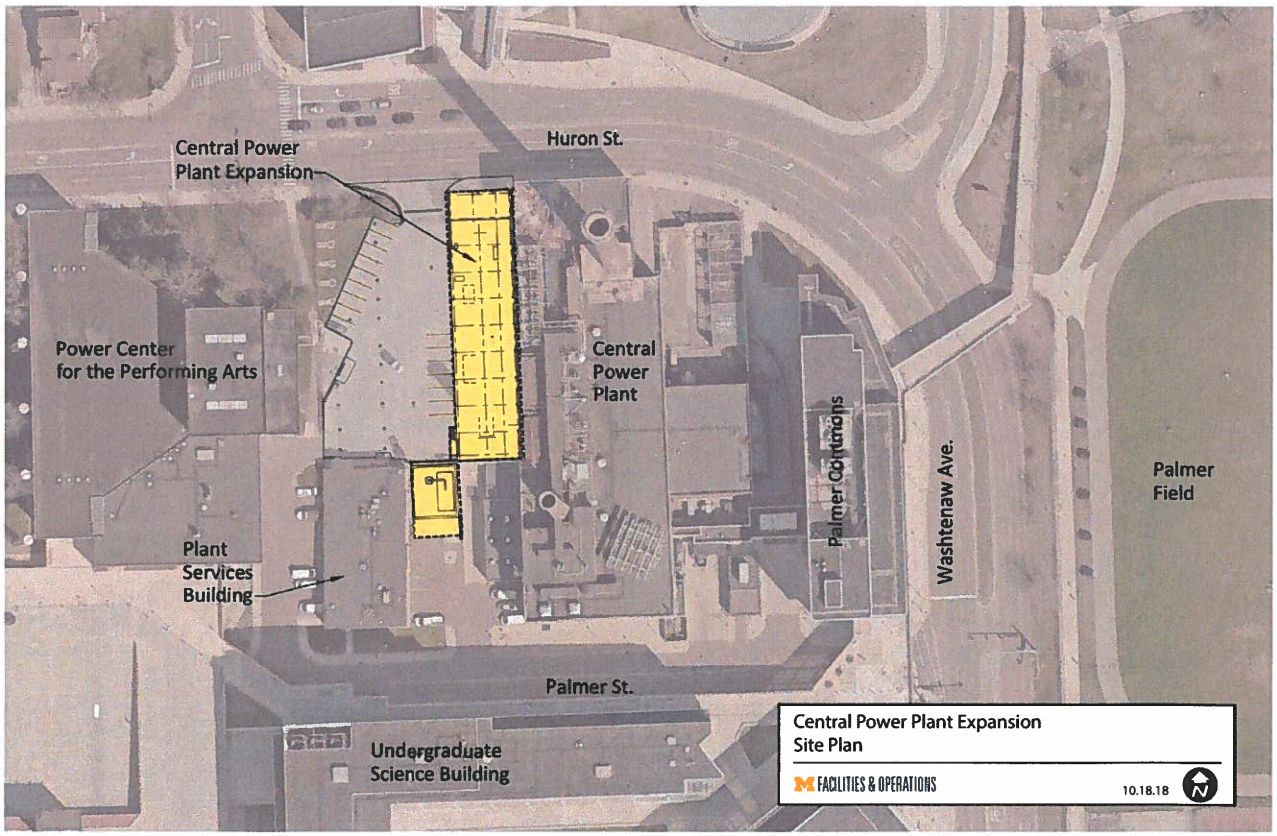

Central Power Plant Expansion
View from Huron Street
FACILITIES & OPERATIONS
10.18.18


Central Power Plant Expansion
Huron St.
Power Center for the Performing Arts
Central Power Plant
Palmer Commons
Washtenaw Ave.
Palmer Field
Plant Services Building
Palmer St.
Undergraduate Science Building
Central Power Plant Expansion
Site Plan
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IMPROVE RELIABILITY

Highly reliable heat and electricity are mission-critical for the university.

- Imagine your home without heat or electricity in the winter.
- Energy reliability is key for many functions across campus, including support of:
  - The hospitals and related health-care facilities;
  - The health, safety, and welfare of more than 10,000 students who call campus home;
  - Highly sensitive research facilities;
  - Educational instruction, and more.

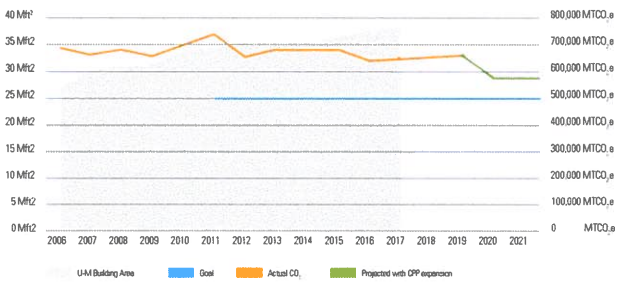
Reliability of utilities is key for the health, safety, and welfare of students, employees, and campus facilities.

INCREASE SUSTAINABILITY

- Support the university and city of Ann Arbor goals of each reducing their greenhouse gas (GHG) emissions by 25% by 2025.
- The project will make significant progress toward achieving these goals.
- Current energy-saving measures on existing and newly built facilities are effective, yet not enough.
- The CPP expansion project is an investment that is part of the university's transition toward carbon-free alternatives. In the interim, we continue to pursue renewable energy opportunities.

The following chart shows the potential positive impact of the CPP expansion.

U-M Building Area (millions ft²) vs.
Greenhouse Gas Emissions (metric tons of carbon dioxide-MTCO$_2$e)



REDUCE OVERALL CARBON FOOTPRINT

- Without the ability to produce more electric power, the university will continue to purchase a significant quantity of electric power from our utilities provider.
- Public utility electric power production and delivery:
  - Are not as efficient as the university's CPP and its proposed expansion project; and
  - Are primarily coal-based, resulting in much higher GHG emission.
- By purchasing utility electricity, the university "inherits" the GHG footprint associated with the carbon-intensive process.
- By purchasing less utility electricity, the university's GHG footprint will be reduced.
- Aging equipment will be replaced, and energy efficiency will be maintained as a result.
- A 2015 report from the President's Greenhouse Gas Reduction Committee that included university faculty, students, and staff recommended the Central Power Plant project as the "single largest contributor to meeting the 2025 target" for GHG reduction.

Carbon footprint will be reduced by approximately

80,000
metric tons of carbon dioxide per year

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Equivalent to removing more than

17,000
passenger vehicles from the road*

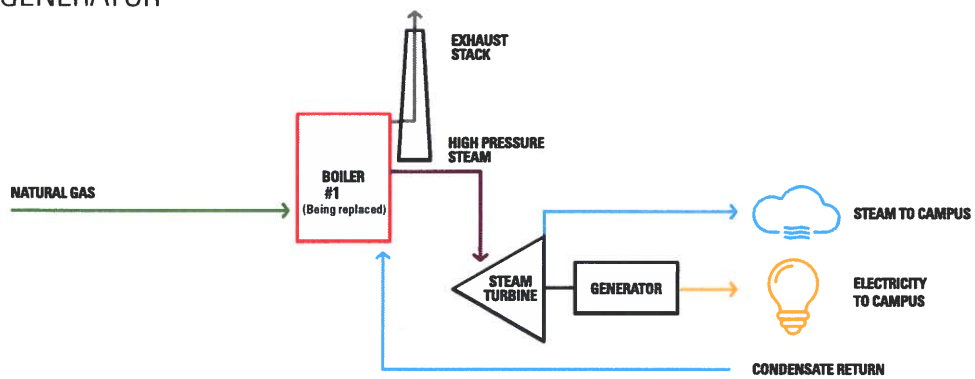
*Based on today's carbon footprint of utility electricity

Central Power Plant Expansion
Project Goals

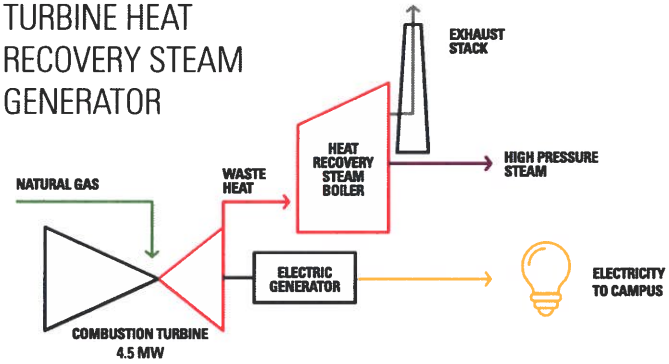
FACILITIES & OPERATIONS

11.1.18

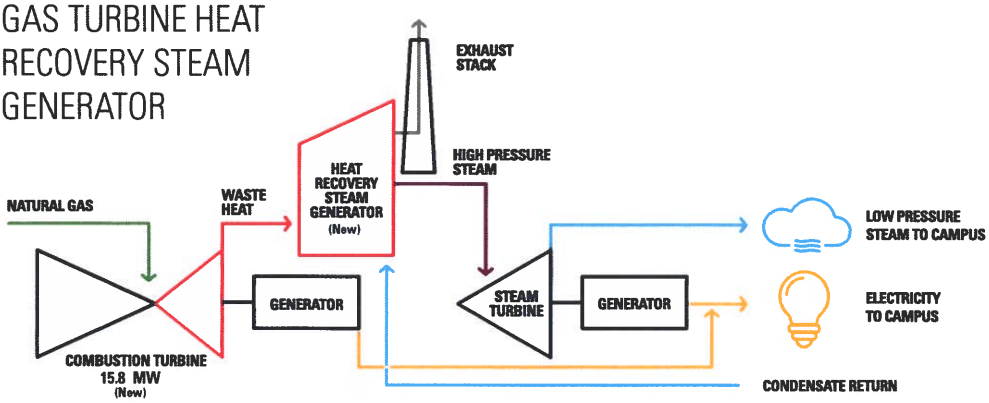
CURRENT CPP BOILER/ STEAM TURBINE GENERATOR



CURRENT CPP GAS TURBINE HEAT RECOVERY STEAM GENERATOR



PROPOSED CPP EXPANSION GAS TURBINE HEAT RECOVERY STEAM GENERATOR



Central Power Plant Expansion
System Overview

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