UCONN
FACILITIES OPERATIONS

University of Connecticut

Carbon Neutral Task Force
Meeting #1

February 2023

Welcome!

- Kickoff Meeting/Welcome
- Introductions

Working Together To Make a Difference

What difference can you make?

State Level - Hydrogen Task Force

With the passage of Special Act 22-8, the Hydrogen Task Force was **created to study hydrogen-fueled energy in the state's economy and energy infrastructure**.

Substitute House Bill No. 5200

Special Act No. 22-8

AN ACT ESTABLISHING A TASK FORCE TO STUDY HYDROGEN POWER.

Be it enacted by the Senate and House of Representatives in General Assembly convened:

Section 1. (*Effective from passage*) (a) There is established a task force to study hydrogen-fueled energy in the state's economy and energy infrastructure. Such study shall include, but need not be limited to: (1) A review of regulations and legislation needed to guide the development and achievement of economies of scale for the hydrogen ecosystem in the state, (2) an examination of how to position the state to take advantage of competitive incentives and programs created by the federal Infrastructure Investment and Jobs Act, (3) recommendations for workforce initiatives to prepare the state's workforce for hydrogen-fueled energy-related jobs, (4) an examination of the sources of potential clean hydrogen, including, but not limited to, wind, solar, biogas and nuclear, (5) recommendations for funding and tax preferences for building hydrogen-fueled energy facilities at brownfield sites through the Targeted Brownfield Development Loan Program, (6) recommendations regarding funding sources for developing hydrogen-fueled energy programs and infrastructure, and (7) recommendations for potential end uses of hydrogen-fueled energy.

(b) The task force shall consist of the following members:

Carbon Reduction Vision

Solar Taurus 70 Turbine 1- Central Utility Plant
7.5 MW
Free Thermal (steam) ~ 20,000 lbs/hr

Solar Taurus 70 Turbine 2 - Central Utility Plant
7.5 MW
Free Thermal (steam) ~20,000 lbs/hr

Solar Taurus 70 Turbine 3 - Central Utility Plant
7.5 MW
Free Thermal (steam) ~20,000 lbs/hr

Existing Conditions

Fuel Cell – Science 1
0.5 MW

Fuel Cells – 6 Building Locations
0.5 MW

Solar – Parking Lots
1.5 MW

Other potential projects include geothermal, solar, hydrogen vehicles, wind and continuing with energy conservation program

On-Going Efforts

Solar Turbine – Supplemental Utility Plant
25 MW
Free Thermal (steam) ~60,000 lbs/hr
Includes carbon capture

Future Goals

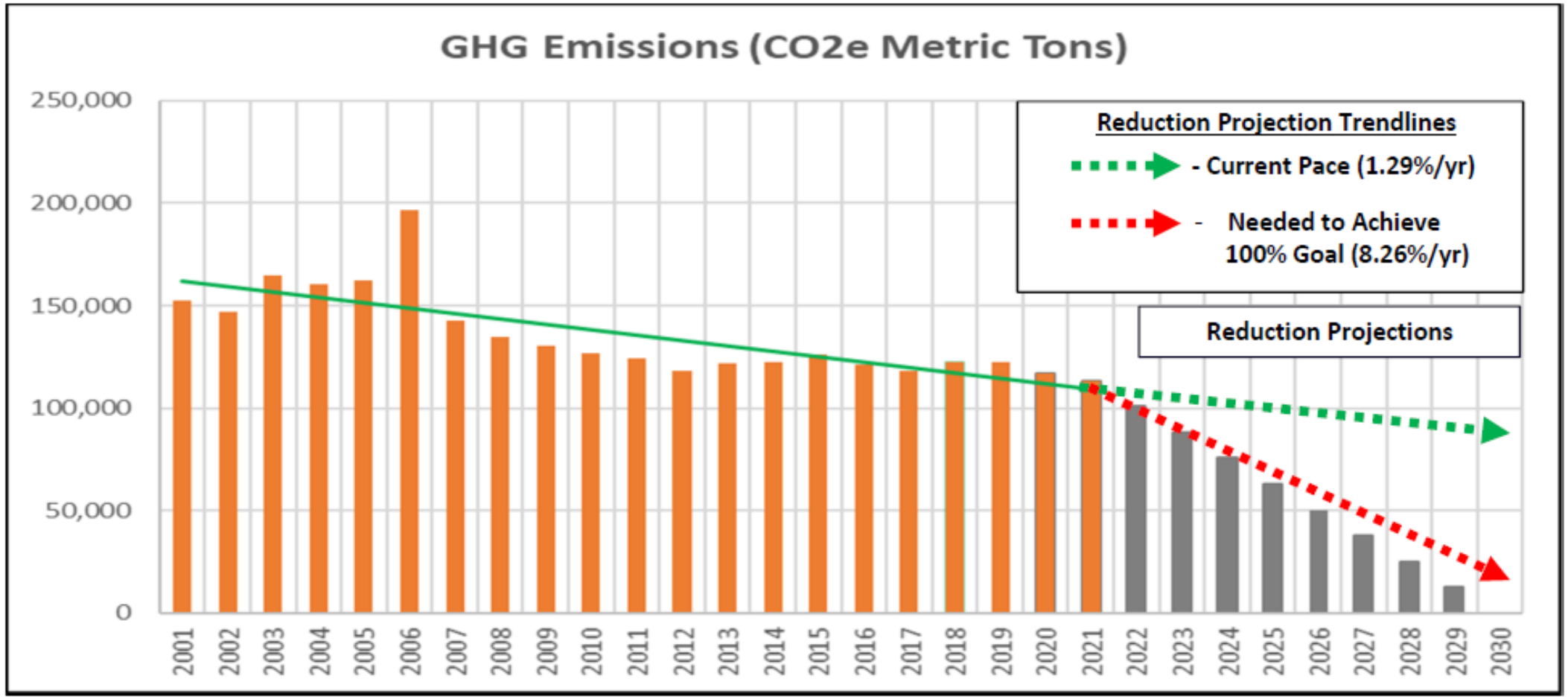
Column 1 - Existing Conditions

- Central Utility Plant/Cogeneration Facility
  - Three gas fired turbines (7.5 MW each)
  - Facility generates electricity and steam for heating/cooling for on-campus needs

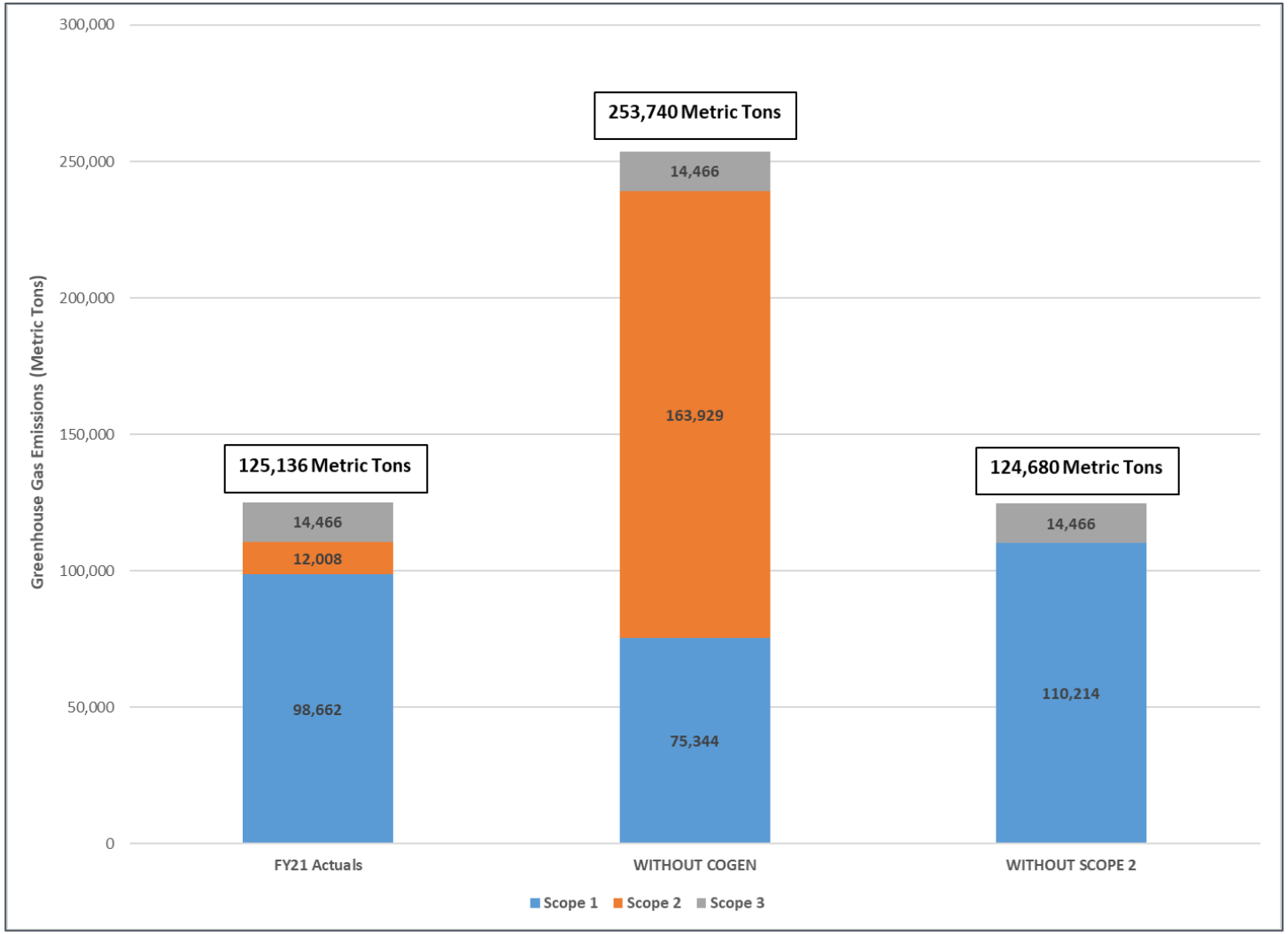
- Energy Conservation Program
  - Strategic goal to lower operating and maintenance costs through energy and water conservation projects
  - Retro Commissioning
  - ASHRAE Audits
  - LED Lighting retrofits
  - Metering Program
  - For more information please visit the Facilities website, utility data:

    https://energystats.fo.uconn.edu/

Storrs/Depot GHG Emissions Pace for 100% Reduction 2001 Baseline



Storrs Campus GHG Emissions – Scenario Totals



Column 2 - Ongoing Efforts

- Hydrogen Fuel Deployment
- Solar Canopies
  - On-site installations – building roofs, parking garages, bus stops
  - Off-site installations
- EV Charging Stations
- Fuel Cells
- Geothermal
- Carbon Capture
- UConn Community Outreach
- Agro voltaic

Column 3 - Future Goals

- “Big Project” – not defined and the UConn team continues to explore all options
- Potentially could involve:
  - Hydrogen/Wind
  - Supplemental Utility Plant – Turbine with Carbon Capture, Fuel Cell, etc.

Reducing Our Paw Print and Next Steps…

- Outreach
  - President Radenka will be reaching out and discussing this topic further with the Governor, Investors and other Stake Holders including Research/Academic, UPDC, and Facilities
    - Inflation Reduction Act
  - Community involvement and collaborations with this Task Force, Students, Staff, Faculty and others
- Transparency
  - Website and Data Transparency
  - More collaboration with the Facility Team – ex: coffee with an expert

Thank you!