



**DORIS DUKE
FOUNDATION**



Climate Toolkit Symposium – *Facilities Management Breakout*

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Facilities Management Breakout Agenda

1. Duke Farms and Natural Systems Energy Plan overview

- Guided Round Table Discussion Prompt 1

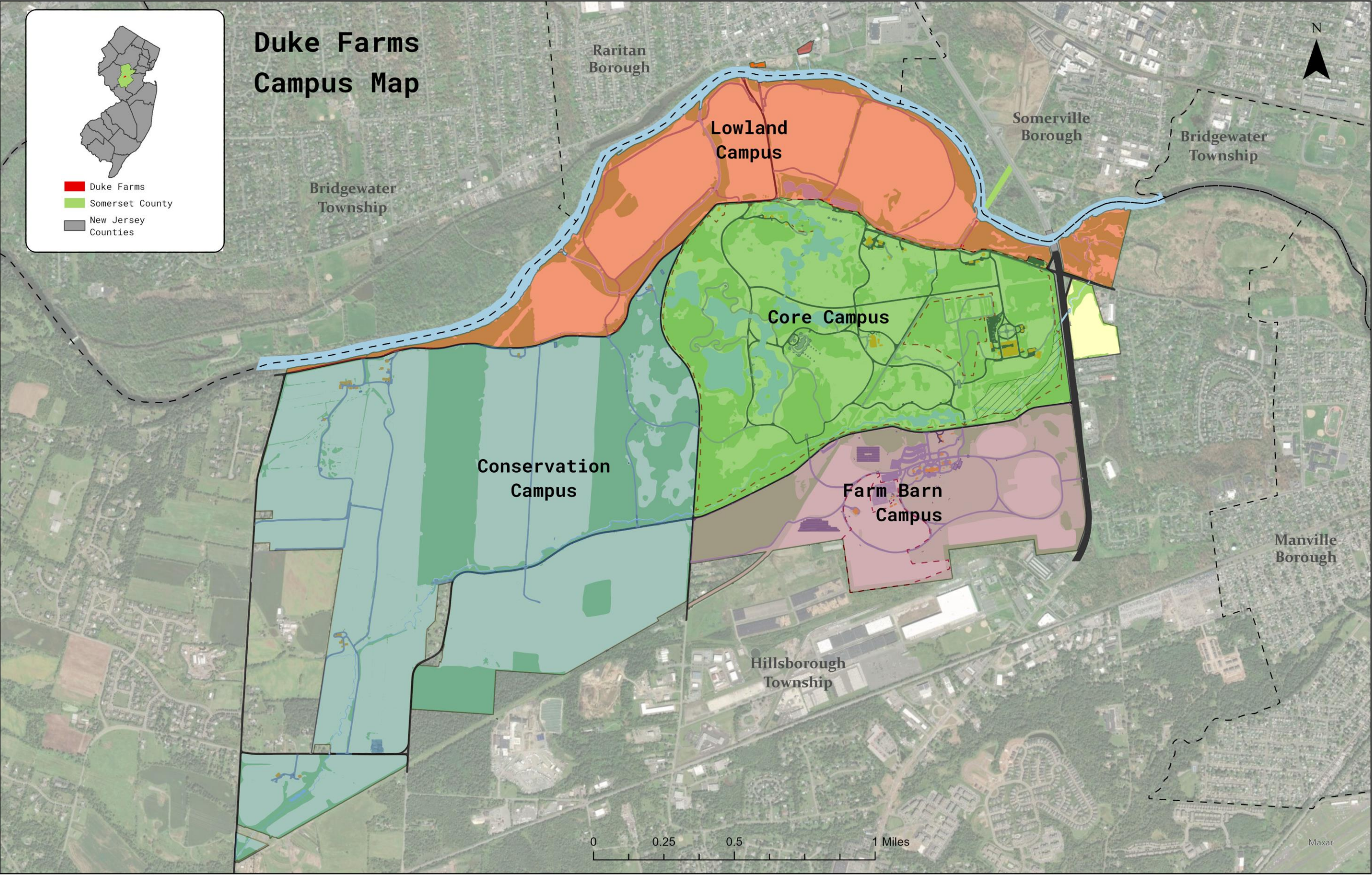
2. Master Planning and Sustainability Framework Overview

- Guided Round Table Discussion Prompt 2

3. Maintenance Management Systems Overview

- Guided Round Table Discussion Prompt 3

4. Key takeaways, next steps and close out



Duke Farms: Natural System Energy Plan

Carbon Negative, Nature Positive

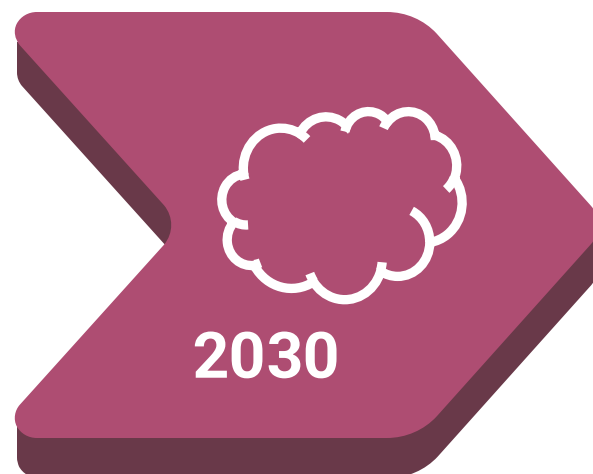
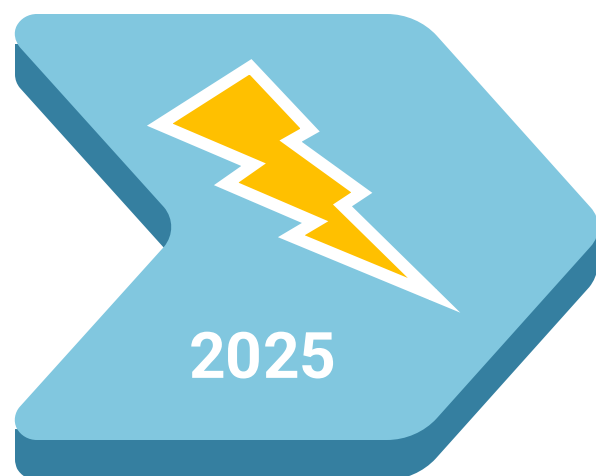
Motivations and Objectives

Take Responsibility: Address the climate crisis, environmental quality impacts, and human public health risks by being accountable for Duke Farms' energy footprint. Fulfill that responsibility by changing the way Duke Farms obtains and uses energy, with a focus on physical reductions in fossil fuel use.

Set a High Bar: Take a comprehensive and rigorous approach to develop and implement the Natural Systems Energy Plan, and "do it right" to deliver authentic and high-integrity physical emission/impact reductions (not just accounting offsets). Lead by example as a sustainable energy trailblazer, with a focus on innovation and synergies that Duke Farms is uniquely able to pursue.

Expand Our Impact: Demystify sustainable energy, conclusively demonstrate feasibility, and illustrate a path to action for other energy users. Duke Farms has intentionally prioritized solutions that can be replicated by others and intends to have an impact beyond its borders that will accelerate and expand deployment of sustainable energy solutions.

Natural System Energy Plan Goals



GOAL	CLEAN ELECTRICITY	REDUCED EMISSIONS	CARBON NEUTRAL	CARBON NEGATIVE
What it means	100% Clean <u>Electricity</u>	80% Clean <u>Energy</u>	Benign Activity, No Harm	Positive Impact and Restoration
Why it matters	Significantly cleaner, enables electrification	Mitigate climate crisis and public-health harm	Achieve long term operational sustainability and environmental health	Reduced emissions isn't enough: those who can do more, must do more
Measured how	100% of all electricity use from renewable sources on a net annual basis	At least 80% of all energy use from renewable sources on an hourly basis (no offsets)	Resilient operations with zero carbon footprint on a Scope 3 basis	Sequester more carbon than all operations emit, net generator of renewable energy

NSEP – Action Plan

Energy Conservation & Efficiency:

- LEED buildings
- Operational changes
- Basic envelope improvements
- LED lighting
- Smart thermostats/controls

De-Carbonize Electricity Supply:

- On-site Solar (100% of load, including growth) – Including EcoVoltaics
- Integrated Battery Storage (short term, possibly long-term storage later)
- Market procurement Of clean energy
- Site distribution system upgrades

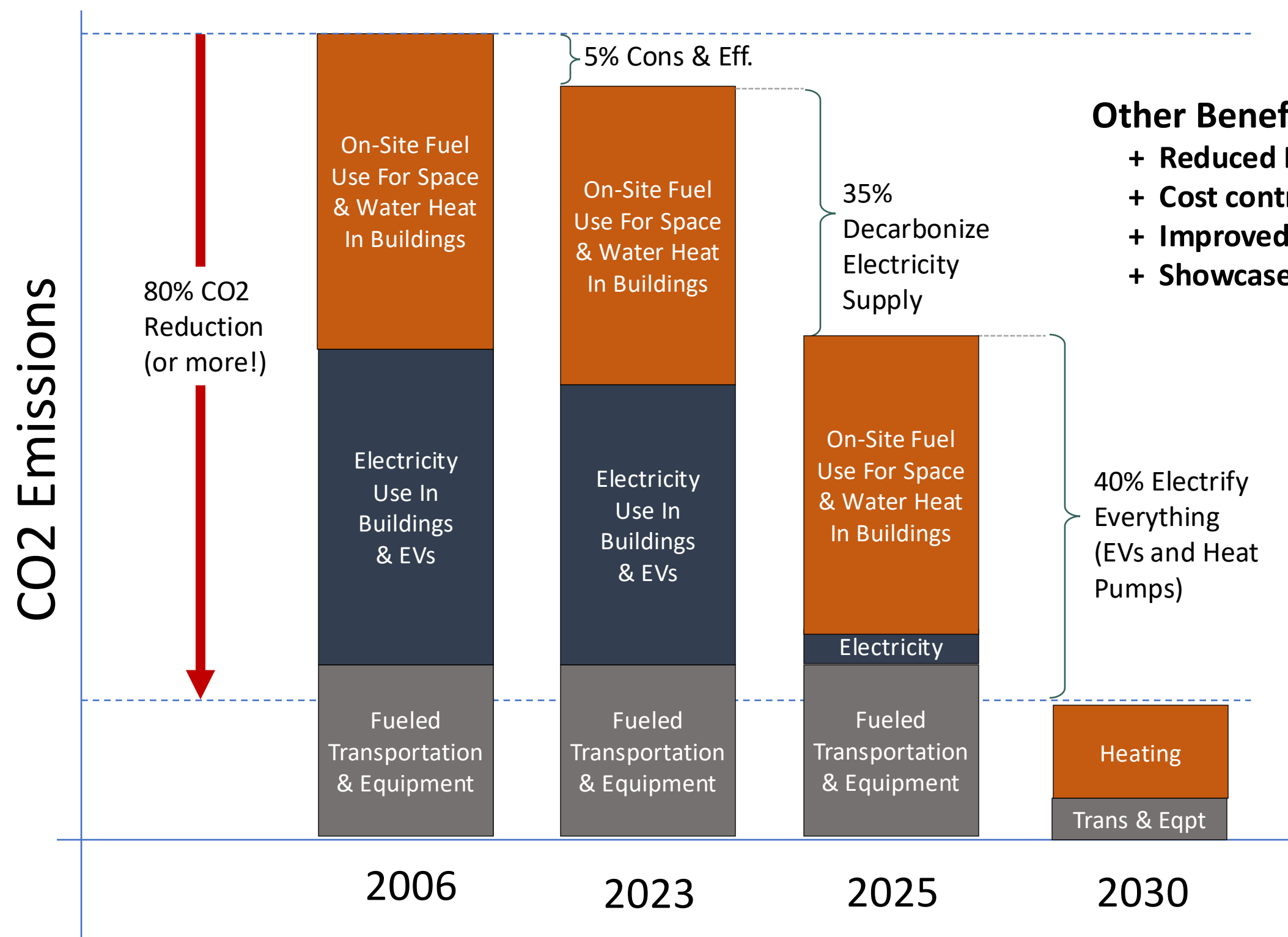
Electrify Everything:

- 100% vehicle electrification (5-yr plan under development)
- Hosting public EV charging infrastructure (Scope 3 impact)
- 100% heat pumps for space/water heating (5-yr plan under development)
- Resiliency enhancements (microgrids, etc)

Specialized Solutions:

- Greenhouse heating
- Synergies between clean energy and agricultural practices

NSEP – Projected Results



- Other Benefits:**
- + Reduced Energy Costs
 - + Cost control, predictability
 - + Improved resiliency
 - + Showcase, Enable Others

Note: Impact Estimates Being Updated Based On Latest Plans And Updated Analysis

Discussion Prompt 1:

Natural Systems Energy Planning

Big "I"

How can long term energy planning align with your organization's broader sustainability and climate goals?

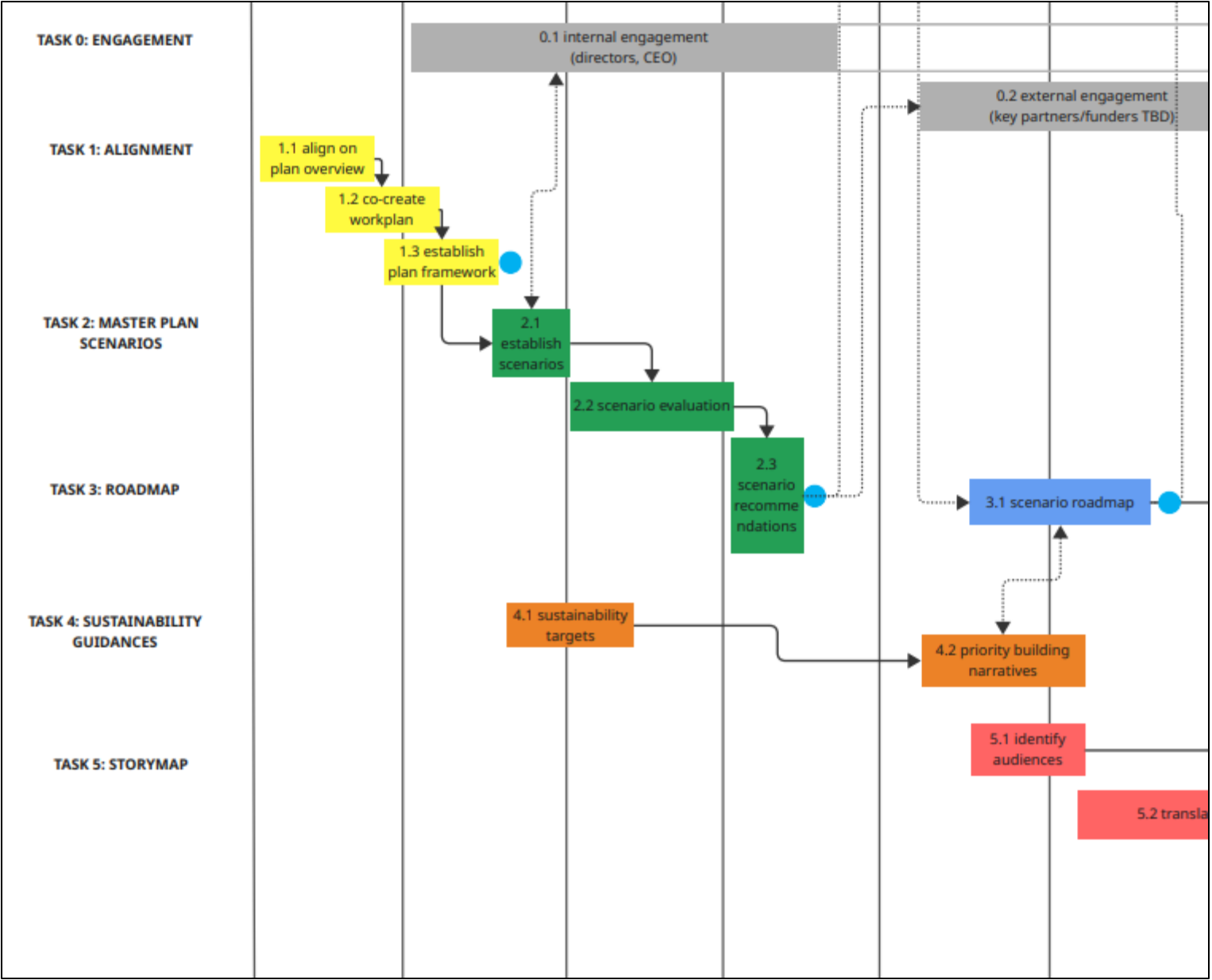
i.e. what commitments have you made for the next 5-10 years.

Little "I"

What specific steps or technologies have been most effective in reducing Scope 1 and Scope 2 emissions at your facility?

Master Planning and Sustainability Framework Overview

ng				
Data Automations Interfaces Forms				
Innovations and Capital Improvement Projects Phase 1a: Foundational Optimization ALL DF IPs Facilities Lock Core Inventory Facility Rooms Facilities Doors Phase 1: Renovations Pre Mortem DF GIS Statistics Phase 1: Im				
				
03 Boathouse 03	04 Filter House 04	05 Power/Pump House 05	07 House 07	08 House 08
Facility Number: 3	Facility Number: 4	Facility Number: 5	Facility Number: 7	Facility Number: 8
Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0
Phase 2 Costs 2026: \$0	Phase 2 Costs 2026: \$0	Phase 2 Costs 2026: \$0	Phase 2 Costs 2026: \$0	Phase 2 Costs 2026: \$0
Phase 2 Costs 2027: \$0.00	Phase 2 Costs 2027: \$0.00	Phase 2 Costs 2027: \$0.00	Phase 2 Costs 2027: \$0.00	Phase 2 Costs 2027: \$0.00
Phase 2 Costs 2028: \$0.00	Phase 2 Costs 2028: \$0.00	Phase 2 Costs 2028: \$0.00	Phase 2 Costs 2028: \$0.00	Phase 2 Costs 2028: \$0.00
Phase 2 Costs 2029: \$234,777.41	Phase 2 Costs 2029: \$329,105.55	Phase 2 Costs 2029: \$577,186.24	Phase 2 Costs 2029: \$0.00	Phase 2 Costs 2029: \$0.00
Phase 2 Costs 2030: \$0.00	Phase 2 Costs 2030: \$0.00	Phase 2 Costs 2030: \$0.00	Phase 2 Costs 2030: \$270,934.98	Phase 2 Costs 2030: \$239,446.32
				
13 House 13	21 House 21	22 Motor Pool 22	23 Classroom and Building	24 House 24
Facility Number: 13	Facility Number: 21	Facility Number: 22	Facility Number: 23	Facility Number: 24
Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0	Phase 2 Costs 2025: \$0



Discussion Prompt 2:

Master Planning

Big “I”

What criteria should be included in a modern sustainability framework for a 10-year master plan?

Little “I”

How are you integrating sustainability guidelines into daily operations, capital planning, or construction standards (waste stream and procurement).

Maintenance Management Systems Overview



Calendar

Work List

Maintenance Requests

Planned Maintenance

Buildings

Equipment

Resources & Locations

Users & Contacts

Bulk Imports

Reporting

Admin Settings

Help & Updates

My Logs

Maintenance Requests

New request

70

Search

Filter

Clear

Export

Settings

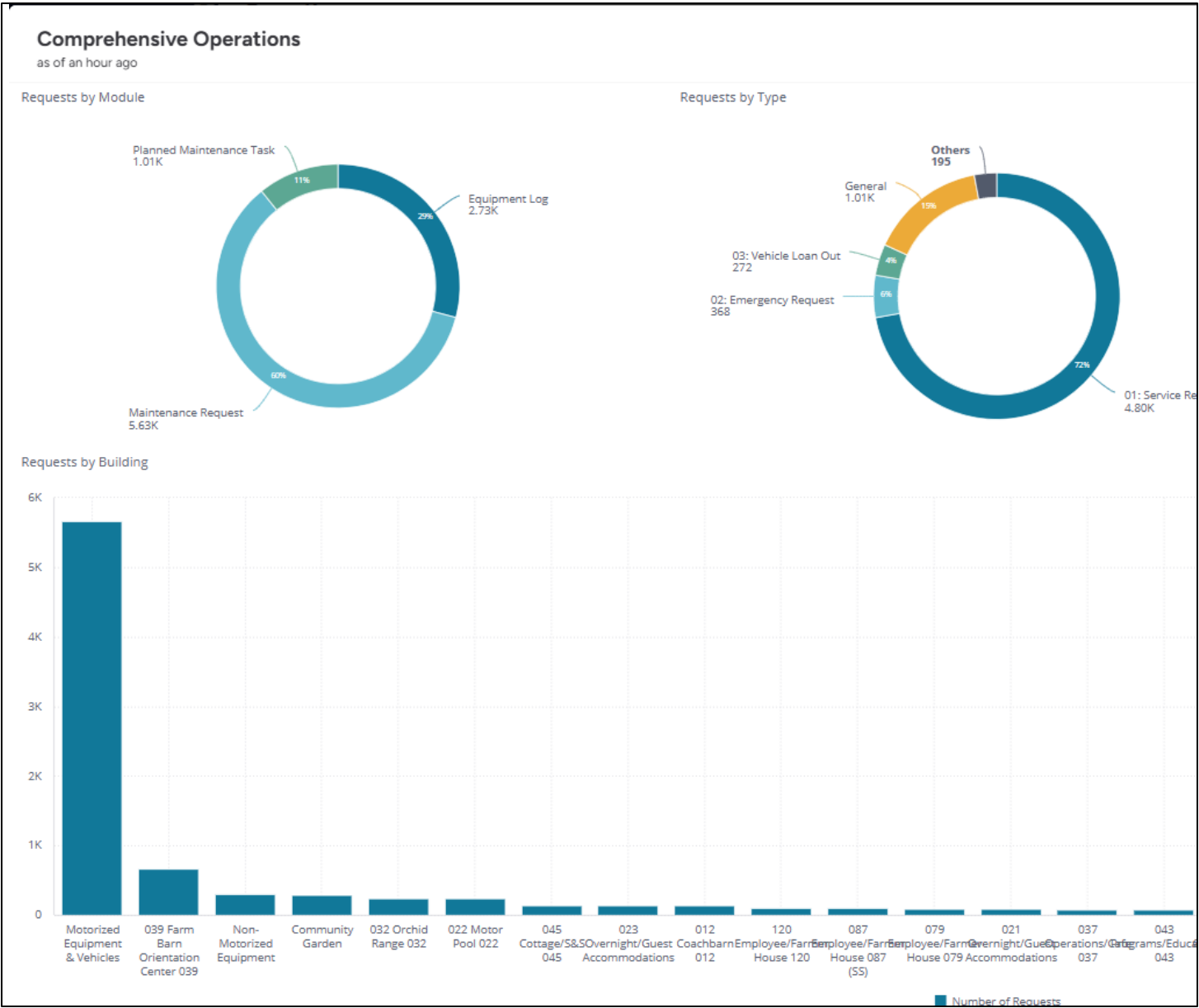
Building: 039 Farm Barn Orientation Center 039

Name	Building	Type	Opened	Due	Status	Assign
8531098 - Classroom set up requested by 8am 11/20	039 Farm Barn Orientation Center 039	01: Service Request	Wed, Oct 22, 2025, 4:30pm	Thu, Nov 20, 2025	Pending my approval	
8521530 - Event Set up for SNAPP 10/21-10/23	039 Farm Barn Orientation Center 039	01: Service Request	Wed, Oct 15, 2025, 6:19pm	Tue, Oct 21, 2025	Pending my approval	
8521091 - Please check changing table in all gender restroom in Farm Barn	039 Farm Barn Orientation Center 039	01: Service Request	Wed, Oct 15, 2025, 2:13pm	Fri, Oct 31, 2025	Pending assignment	
8516746 - Install junction box for wires for Cafe kitchen	039 Farm Barn Orientation Center 039	01: Service Request	Mon, Oct 13, 2025, 10:45am	Wed, Oct 15, 2025	Pending resolution	Matt Kurucz

Showing 1-20 of 635 records

Show records 20

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Discussion Prompt 3:

Maintenance Management Systems

Big “I”

How can technology and data systems transform how we manage and measurement facility performance?

Little “I”

Which CMMS tools or processes have improved workflow efficiencies and mitigated staffing and budget constraints.

Key takeaways, next steps & close out



Scan QR to learn more about Duke Farms Natural System Energy Plan and download the Blueprint.

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