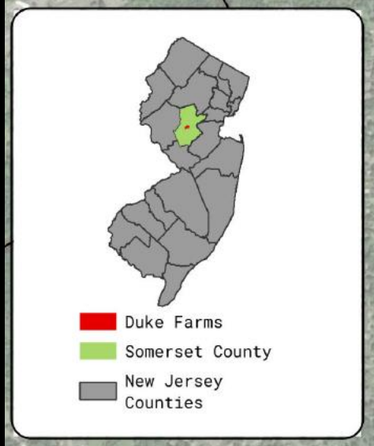
Smart Stewardship Smart Operations

Duke Farms' Blueprint for Campus-Scale Decarbonization

Duke Farms Property Map



Raritan Borough
Somerville Borough
Bridgewater Township
Hillsborough Township
Raritan River
Headgate Dam
Duke Island Park
River Road
Lowland Fields
Filter House (4)
Pump House (5)
Nevius Street Bridge
Frog Lake (15)
Snake Lake (9)
Boathouse Lake (10)
North Gate
Arboretum Gate
Arboretum
Heron Lake (25)
Turtle Lake (25)
Wood Duck Lake (27)
Great Falls Lake (45)
Otter Lake (31)
Vista Lake (45)
Oak Meadow
Fox Meadow
Fox Hollow
Coach Barn (12)
Overlook Way
Spruce Grove
Nursery Way
Oak Way
Orchid Range (32)
Research Woods
Old Foundation
Duke Reservoir (81)
Great Meadow
Migration Woods
Hay Barn Meadow
Hay Barn
Habitat Way
Central Way
Motor Pool (22)
FP
Dukes Brook
South Gate
Route 206
2012 Solar Array
Recycling Center
Service Lane
Roycefield Road
Eagle Gate
Dukes Parkway West
Farm Barn Orientation Center
Community Garden
2024 Solar Array
Farm Woods
Ohlgart/Kaufman Farms
Kaufman Woods
Skeet Shoot Fields
McCreary Woods
PSEG Easement
Ohlgart Fields
Kaufman Fields
Everett Farm
Duchess Farm
Beekman Lane
Oasis Woods
Oasis Fields
Peninsula Woods
Davis Farm
New Centre Road
Dukes Brook
0 0.25 0.5 1 Miles

1

Establish a Baseline

Quantify energy use and emissions across all systems

2

Clarify Goals

Set phased decarbonization goals from 2025–2040

3

Prioritize Strategies

Choose high-impact actions (solar, EVs, efficiency)

4

Implement & Optimize

Deploy solar + storage, electrify buildings and fleet

5

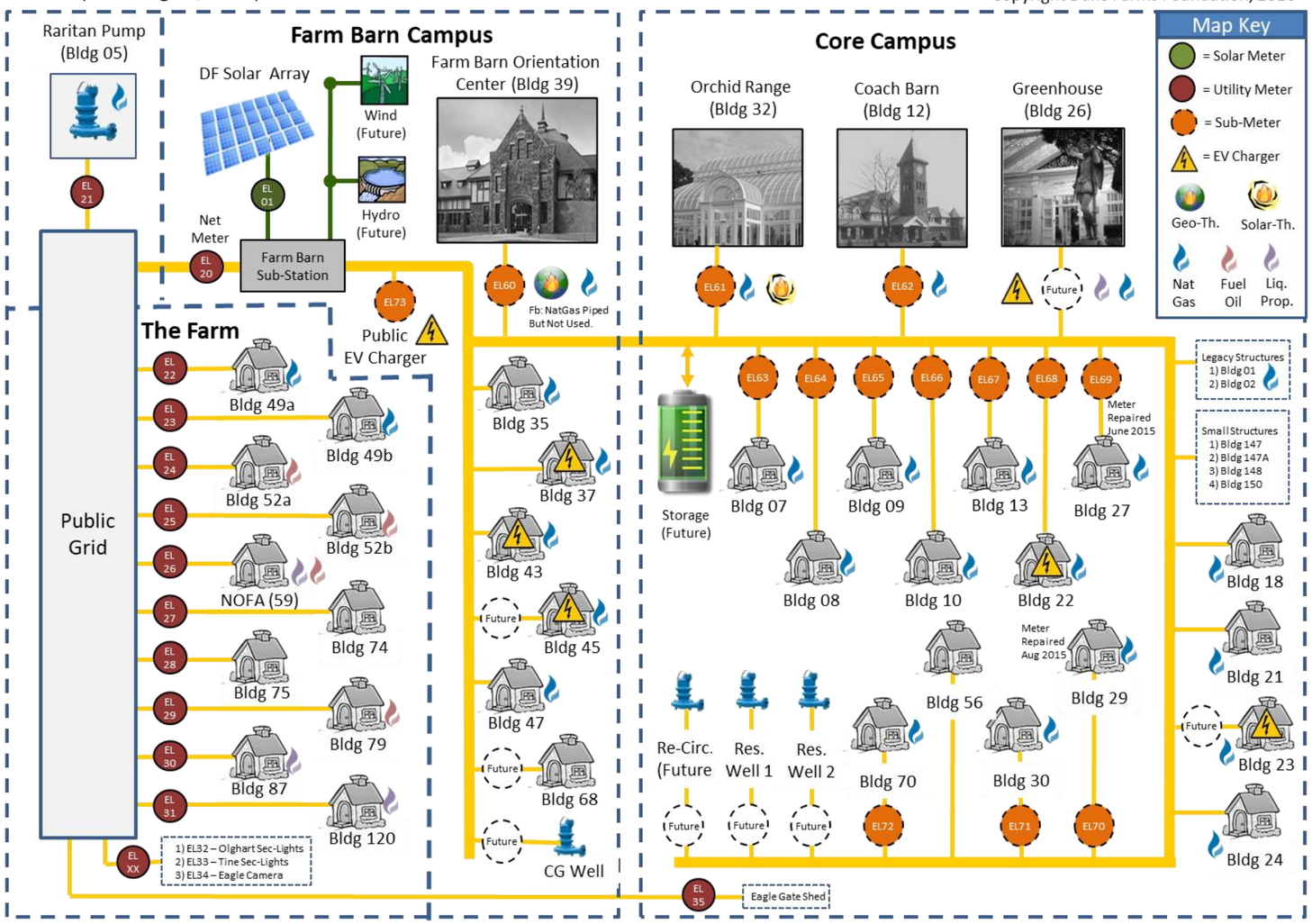
Track, Visualize, Refine

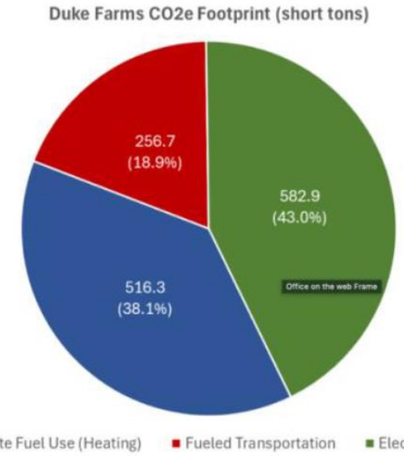
Use dashboards and data to adaptively manage

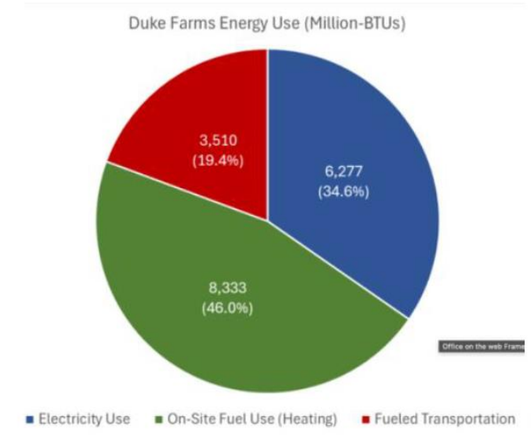
Establish a Baseline

Quantify energy use and emissions across all systems

Ver 5.0 (as of August, 2016)

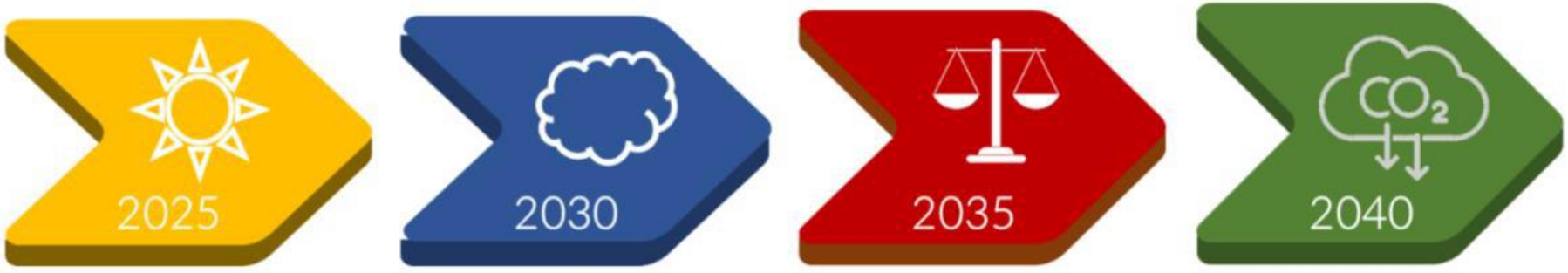






Clarify Goals

Set phased decarbonization goals from 2025–2040



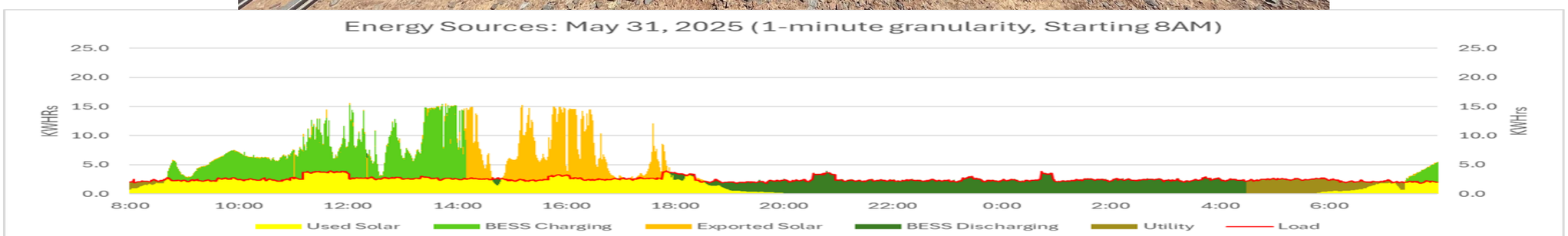
GOAL	CLEAN ELECTRICITY	REDUCED EMISSIONS	CARBON NEUTRAL	CARBON NEGATIVE
What It Means	100% Clean Electricity	Clean Energy -> 80% Emissions Reduction	Long Term Sustainability	Restoration
Why It Matters	Significantly Cleaner, Enables Electrification	Mitigate Climate Crisis And Public-Health Harm	Achieve Long Term Operational Sustainability and Environmental Health	Reduced Emissions Isn't Enough: Those Who Can Do More, Must Do More
How Measured	100% Of All Electricity Use From Clean Sources On A Net Annual Basis	Most 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

Prioritize Strategies

Choose high-impact actions (solar, EVs, efficiency)

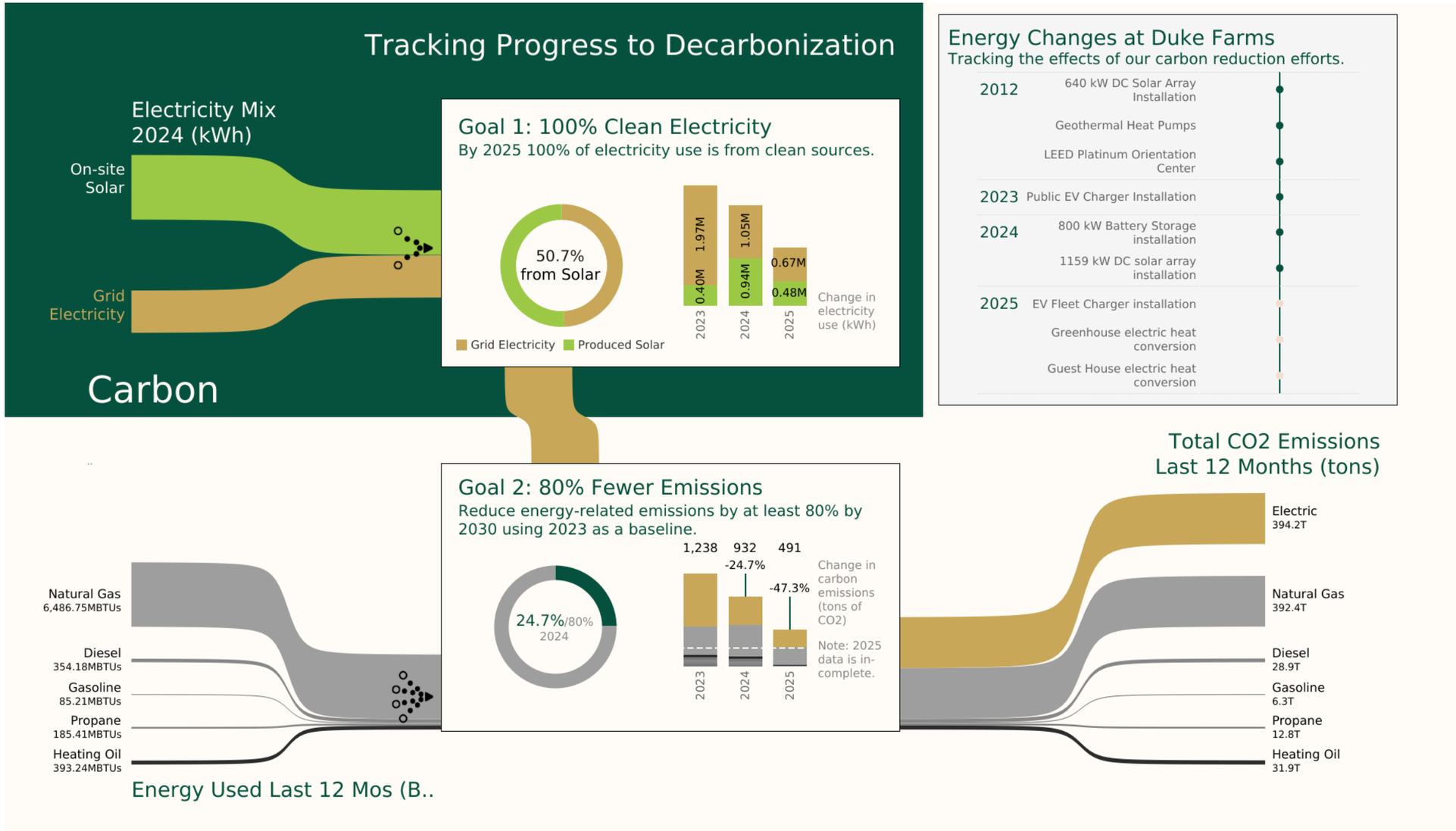
Implement & Optimize

Deploy solar + storage, electrify buildings and fleet



Track, Visualize, Refine

Use dashboards and data to adaptively manage



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