



Siemens Princeton Island Grid - Hybrid Power Distributed Energy System

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Princeton Island Grid – a living lab to serve as a platform for researching and demonstrating new technology for commercial building and micro-grid operation



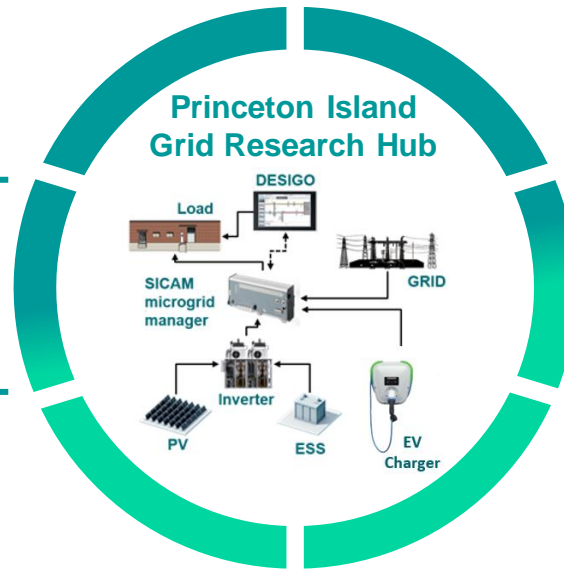
Prime research partner for top universities and national labs in US



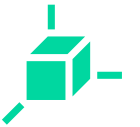
Research hub for the CCT Distributed Energy Systems in US



Develop and evaluate **new technologies** in Siemens products in collaboration with Businesses



A hands-on demonstration site for Siemens products and solutions with Businesses



Reduce CO₂ footprint as the Siemens US lighthouse project



Generate funding opportunities via partnership with external collaborations



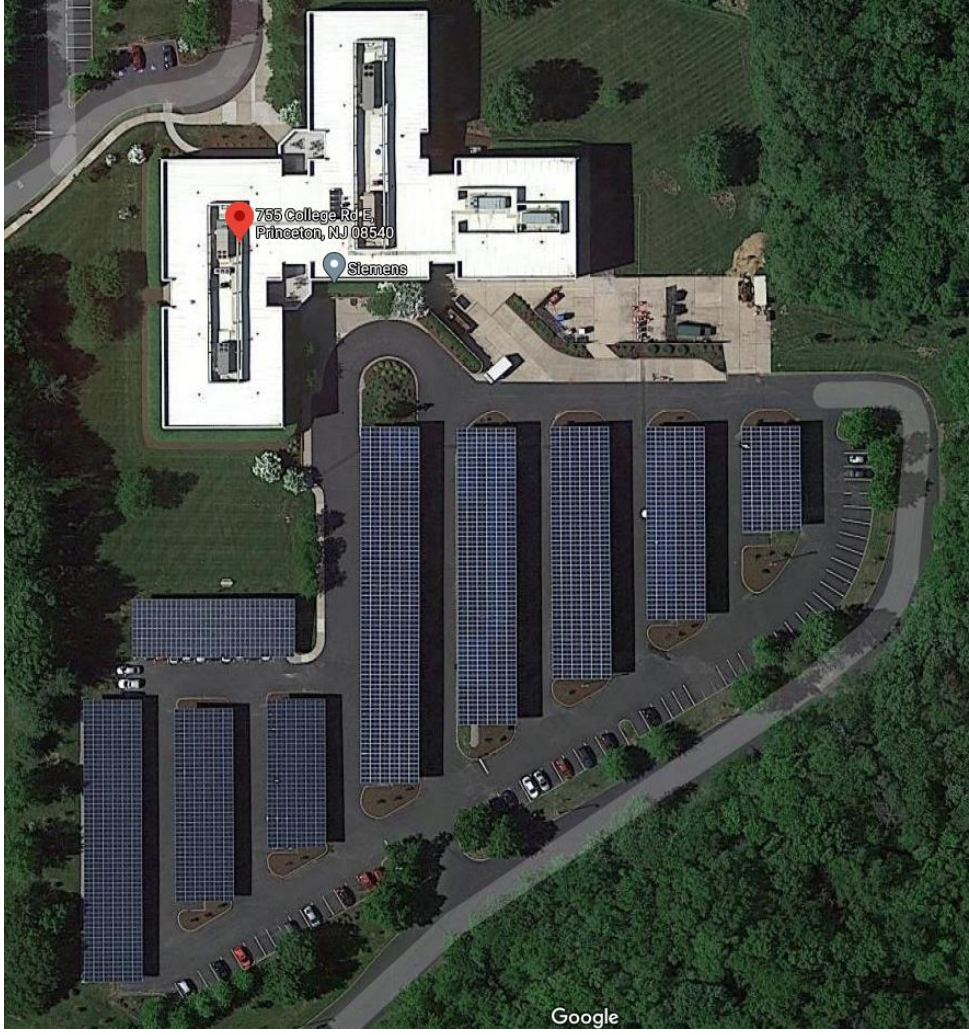
Platform

- **Siemens DESIGO CC/Navigator:** building management system
- **Siemens MGC:** microgrid controller (based on SICAM)
- **Siemens ESS System:** 500kw/1000 kWh energy storage system
- **PV:** 836 kWp photovoltaic system
- **Siemens Level 2 VersiCharger x6**

Research Focus

1. Grid and Building Optimization & Control
2. Internet of Things
3. Data Analytics
4. Simulation and Digital Twins

Construction of Princeton Island Grid – PV + BESS



Princeton Microgrid – EV Charging



The Princeton Island Grid contributes to Siemens CO₂ footprint

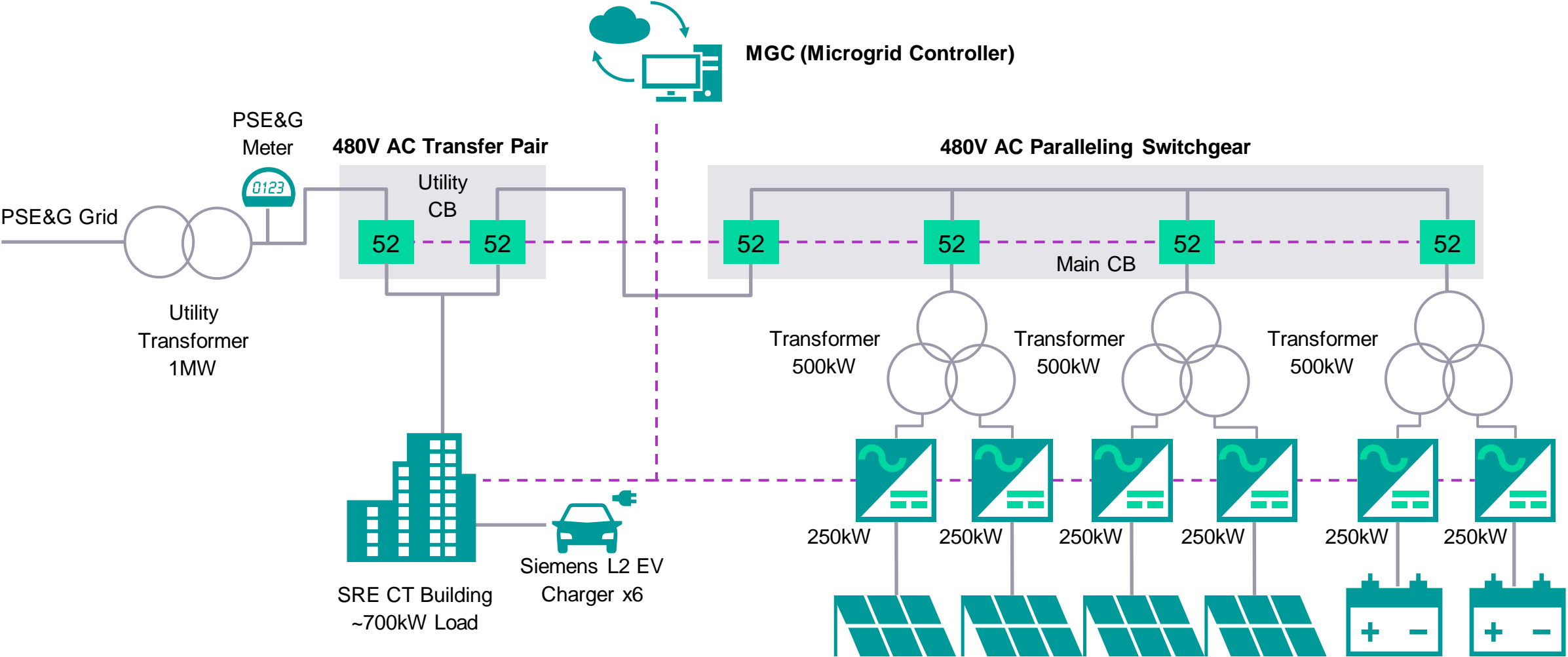


- Increase **energy efficiency** of the building
- Reduce CO₂ emissions through **renewable energy**
- Alignment with Siemens global policy
- Alignment with AIA 2030 Commitment

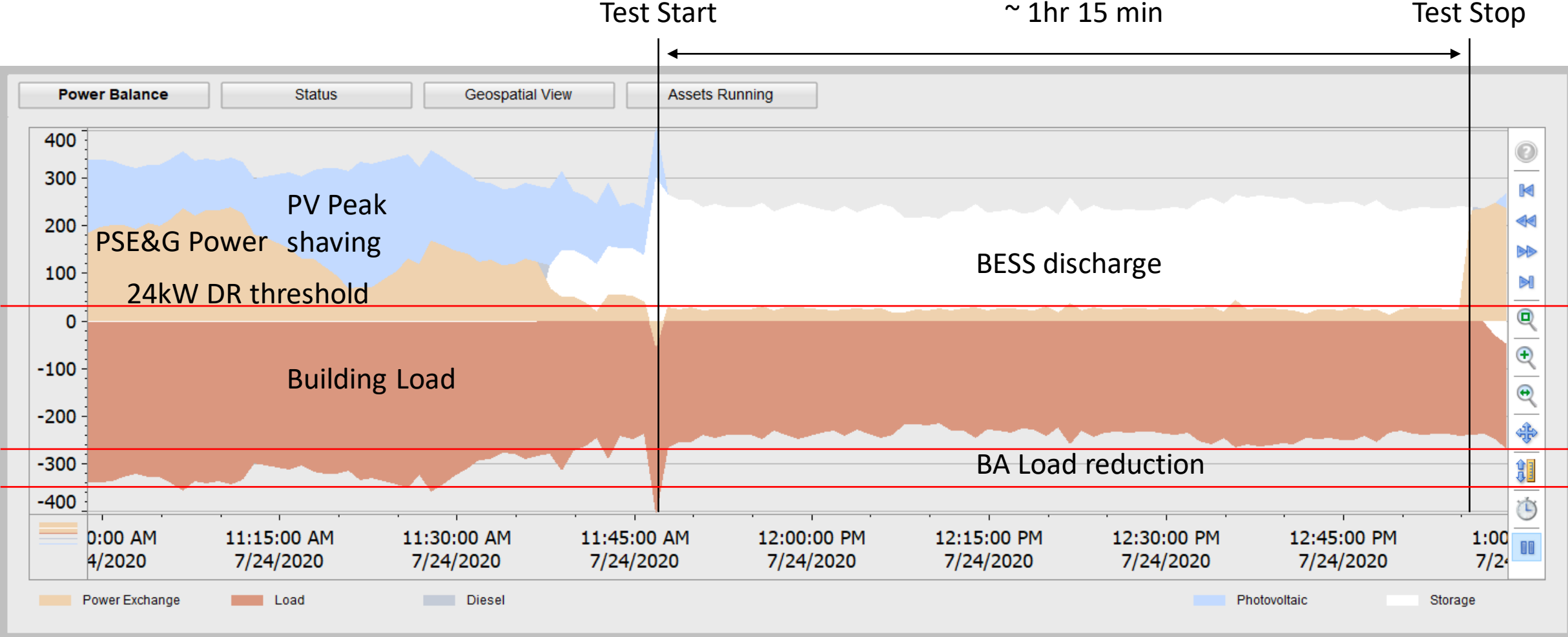
Achieve 50% CO₂ reduction by 2020; become completely CO₂ neutral by 2030!

SRE Princeton NJ – Microgrid Project

PV+BESS+MGC+EV Simplified Project Single Line Diagram



Princeton Demand Response Test



Princeton Microgrid Dashboard



\$ 26597.76
Money Savings
\$ 176.03 savings in next 24 hr

95390.96 lb
Carbon Savings
631.33 lb savings in next 24 hr

0 kw
Generator

265.63 kw
Consumption
58.00 kw
Solar Energy

206.63 kw
From Power Grid

1.00 kw
Battery

