

The logo for CADMUS, featuring the word "CADMUS" in white, uppercase, sans-serif font centered on a solid blue rectangular background.

CADMUS

A yellow horizontal bar with a white arrow pointing to the right, serving as a graphic element.

Lincoln/Sudbury High School Solar

Presentation to the School Committee

February 26, 2014



PowerOptions and SunEdison

- PowerOptions: Energy buying consortium for MA non-profits, state agencies, & municipal facilities
- PowerOptions Solar Program: allows PowerOptions members to contract with SunEdison for solar Energy Management Services
- SunEdison is national solar energy services firm with 1.2 gigawatts installed internationally



PowerOptions and SunEdison

- 20-year contract for
 - PV system design, installation, O&M, and removal
 - PV electricity
 - Lease of public space
 - PV system performance guarantee
- Benefits
 - No upfront cost
 - Low-cost solar electricity w/o risks of ownership
 - Hedge against electricity price volatility
 - Benefit from available tax incentives via private developer



SunEdison Proposal #1: Summary

- High school parking lot PV array
- Size: 1,000 kW (AC)
- Year 1 Output: 1,543,00 kWh
- Cost: 13.5 cents per kWh
- Behind-the-meter interconnection
- Est. year 1 cost savings (SunEdison): \$90,000
 - Total savings: \$510,000



SunEdison Proposal #1: Cadmus Comments

- Cadmus estimates year 1 savings will be - **\$16,000**
 - Even using SunEdison's aggressive peak demand savings, HS will likely lose money starting in year 1
- Under a different design approach (100% net metering), Cadmus estimates year 1 savings = \$55,000
- In mid Dec 2013, NSTAR notifies SunEdison that its proposed behind-the-meter approach is not feasible
 - 100% net metering approach is only remaining option



SunEdison Proposal #2: Summary

- High school parking lot PV array
- Size: 1,000 kW (AC)
- Year 1 Output: 1,564,00 kWh
- Cost (years 1-20): 11.5 cents per kWh
- 100% net metering
- Year 1 est. cost savings (SunEdison): \$65,000
 - Later revised to \$119,000
- 20-year savings: \$3.1 million



SunEdison Proposal #2: Potential Benefits and Risks

- Benefits
 - Cadmus estimates year 1 savings = \$100,000
 - Cadmus estimates 20 year NPV* = \$2 million
 - Electricity price stability
 - Competitive pricing
 - Solar Program vetted by PowerOptions
- Risks
 - Net metering regulatory risk
 - Construction-related concerns
 - Parking lot security

* 4% discount rate