

# What is the expected utility bill for a new Community Center?

March 19, 2024

The CCBC has engaged Consulting Engineering Services, LLC, to perform an energy analysis of the conceptual design that the CCBC will present at Town Meeting. We are pleased to share the findings, in context:

- We don't know the exact energy usage of the Hartwell Pods, because they are not metered separately, but we estimate that the annual energy bill for the Pods is \$40,000 - \$60,000.
- The consultants expect the Community Center to use 157,753 kWh annually. At the current rate of \$0.265/kWh\* this equates to an annual utility bill of \$41,805.
- The CCBC plans include a full solar array on the roof of the Community Center. There is a cost for electricity from the solar array – either the Town will be amortizing the capital costs or it will be purchasing the electricity in a PPA – but solar rebates will likely lower the cost, and the potential savings are very likely to increase over time.
- The Community Center will have consistent heating in the winter, full air conditioning in the summer, a very effectively insulated building envelope, and a high level of control over the HVAC systems. The value realized for the utility expenditure in the Community Center will be much higher than the value realized in the Pods.
- The energy model assigns an Energy Use Index of 28 to the conceptual design. This EUI is higher than our target, so the CCBC will be working with its design team to create further efficiencies, which could lower the utility bill.
- A tightly sealed building, with all-electric systems, and a rooftop solar array that generates more electricity than the building uses, would be an important piece of the town's commitment to sustainability.



*\*This is the current cost of electricity if we buy it from Eversource and does not reflect the likelihood of lower electricity costs once we install a solar PV system on the Community Center. If we do this using a third-party Power Purchase Agreement (PPA) like we did with Lincoln School, these lower costs will come simply as a lower rate for electricity. Owning the system ourselves is also now possible thanks to incentives from the federal government now being available as direct payments to the Town. If we decide owning the system ourselves would be even more financially beneficial to the Town, it would be because the financing costs of building and operating the solar PV system, when reduced by the direct incentive payments to the town, would result in an expected net cost which was lower than the expected PPA payments.*