

**Utilities (Electricity and Natural Gas)**

The utility budget which includes electricity and natural gas for the Lincoln Campus and the Hartwell building are experiencing the same fluctuation in delivery costs that residential households are currently experiencing. The reliability of the FY23 and FY24 budget projections has been severely impacted. While the Town of Lincoln does benefit from a fixed commodity rate, the fluctuation in delivery costs renders staff to have no ability to reliably project the total cost going forward.

**FY24 Utilities – Lincoln Estimates**

Utility	FY20 Actual	FY21 Actual	FY22 Actual	FY23 Estimate	FY24 Estimate
Natural gas	\$122,000	\$80,304	\$27,816	\$29,500	\$61,000
Electricity	\$218,046	\$251,786	\$561,328	\$579,611	\$429,500
	\$340,046	\$332,090	\$589,144	\$609,111	\$490,500

**FY23 & FY24 Lincoln Budget**

Utility				FY23 Budget	FY24 Budget
Natural gas				\$27,300	\$27,300
Electricity				\$451,500	\$496,650
			<b>Total</b>	<b>\$478,800</b>	<b>\$523,950</b>
			Risk Exposure	<b>-\$130,311</b>	<b>\$33,450</b>

**Electricity Rates**

Commodity Electricity Rates	1 Oct 22 Per kWh	25 Nov 22 Per kWh	2 Dec 22 Per kWh	25 Nov 22 to 31 Oct 23 Per kWh	3 Dec 22 to 2 Dec 24 Per kWh
Hartwell & Pods		0.1059		0.1067	
Lincoln School			0.1059		0.1067
Temporary Classrooms	0.0886				

\*Rates do not include delivery cost

The FY23 estimates are over our original budget by approximately \$130,000 due two factors. We are not benefitting from the operation of the solar panels for the portion of the fiscal year originally anticipated in the fall of 2022. The second factor is the fluctuations in the delivery costs for both natural gas and electricity have opened up a variability in our invoices that has not been seen in over a decade.

The projected FY24 budgets for both electricity and natural gas are adjusted anticipating a decrease in the consumption of natural gas and the increase in electricity caused by the completion of the Lincoln School project. Weather, the accuracy of all-electric school operations and the determination of the best settings for both energy efficiency, and health and safety are the primary variables which will determine the exact utility expenses during FY24.

The estimates used to develop the utility portion of the budget are a little conservative, but not increased to hedge against all possibilities. The FY23 budget did not build in a conservative reserve to cover all contingencies of utility provider cost increase, inaccurate projections and/or extreme adverse weather, additional resources may be required. FY24 has a reserve of \$33,450 built in to mitigate any further delays in the operational start date of the solar panels during FY24 and to mitigate against delivery costs continuing to fluctuate or rise over the next 18 months..

**Background:**

Lincoln Campus: The cost of utilities had remained relatively constant over the past several years, through a combination of long-term contracts for commodity gas and electricity, and mild weather in both winter and summer which led to short heating and cooling seasons. This fall, the district is reviewing its energy contracts as the Lincoln School Revitalization Project is essentially complete and all Lincoln School grades PreK-8 occupy the all-electric renovated space, before the anticipated solar project comes on-line..

In June 2018, the district entered into a 3.5 year contract for commodity electricity for supply through the end of November, 2022 at a rate which was 6.42% below the prior contract rates. This rate was extended in September 2021 for the new Lincoln School account through the end of October 2024. Lincoln School is scheduled to utilize solar energy beginning in the summer of 2023 and is completing contracts with SunPower/Total Energy for pre-purchase agreements for electricity generation by the panels on the new school and with Eversource for consumption when panels are not generating electricity.

The current commodity electricity rates are 100% green, through the purchase of Green-e Energy certified renewable energy certificates, sourced from wind renewable resources located within the United States ("RECs").

The long-term contract for commodity natural gas used in heating was also renewed in November 2018 for the period ending October 2023, at prices which are slightly lower than the prior contract. However, commodity natural gas renewal prices for the last 8 months of FY24 are projected to increase by 71%. As with Eversource electricity delivery, the Keyspan/National Grid charges for delivery are subject to change, increased during FY12- FY17, and are likely to increase during FY24.

The gas heating and electricity consumption costs for the Hartwell complex can be accurately estimated, from the fifteen years of utility data in our files. While a portion of the electricity

utility commodity rates are fixed, and the utility distribution rates known less precisely, the actual consumption patterns for FY24 are more uncertain. We have two years worth of electricity consumption data for the all-electric temporary facility, from its use at Hanscom, and data from the past two years of occupied use on the Ballfield Road campus. The mods are all electric, and approximately 36% of the size of Brooks and Reed Gym together, but less energy efficient than the new construction. In addition, we have an estimate of the expected monthly consumption and demand provided by the SMMA Sustainable Design team from their energy model, which forms the basis of a model developed by our solar consultant, Beacon Integrated Solutions. While we do not have a clear picture of the costs for each of these portions of the bill, we can make some estimates based on the figures provided by SMMA, Beacon and our experience with the modular facility.

Further complicating the task of estimating the FY24 utilities consumption is the anticipated but unknown deployment date of the solar panels. While anticipated to be installed and operational in the fall of 2022, they may not be operational until May or June of 2023. This will increase the consumption of Eversource electricity for FY23, but we do not know by what factor. During the FY23 school year we are carrying out commissioning of the HVAC system and transitioning settings to the specifications provided by the project engineers for high efficiency. These specifications also meet or exceed the recommendations for COVID standards.