

9 Freese Road

Conformance with Tompkins County Energy Recommendations for New Construction

1. Energy Star.
 - The project will include water fixtures that meet EPA's Water Sense requirements.
 - All permanent appliances will be Energy Star rated.
2. Heat Pumps.
 - Air sourced heat pumps will be used throughout the building.
 - Electric water heaters will be used
3. Renewables.
 - Roof surfaces are capable of accommodating PV solar panels to the extent possible, however, we are not providing solar panels as part of this project due to cost constraints.
4. Energy-efficient building design.
 - The building has been designed with a window-to-wall ratio of less than 25%.
 - The overall building shape is simple, optimizing the efficiency of the building envelope.
 - The applicant is proposing to use the following assemblies which meet or exceed the County's and/or NYS Stretch Code recommendations for thermal envelope.
 - i. Walls - R30 in 2x8 wall cavity w/ Roxul batts or dense-packed cellulose
 - ii. Ceilings/Roofs – R60+ loose cellulose (NYS Stretch Code requires R49)
 - iii. Slabs - R12-16 (3"-4" of high-density EPS under the slab)
 - iv. Windows - U 0.27 (meets NYS Stretch Code combined with low window to wall ratio)
 - Best practices will be used for air sealing to minimize infiltration and stack effects.

For buildings over 20 units:

5. Lighting controls and high-efficient lighting technology.
 - LED lighting will be used throughout the project
 - Occupancy sensors will be used in common areas and photo sensors will be used for exterior lighting.
6. High-efficiency heating and cooling systems.
 - All electric air source heat pumps which are at least 15% higher than required by the NYS Energy Conservation Construction Code and allow for zoning on a space by space basis.
 - Standard electric hot water heater tanks will be insulated to save about 25%-45% on stand-by energy losses (according to the United States Department of Energy Energy.gov).

- Heating and cooling distribution systems will not be located in unheated spaces, such as attics, basements, etc.
7. Whole-building energy modeling will be included as needed to demonstrate Energy Star compliance if necessary but is not anticipated because all measures noted above meet prescriptive requirements of the NYS Stretch Code and/or Tompkins County energy recommendations