

9.0 Effects on the Use and Conservation of Energy

9.1 PROPOSED ENERGY SOURCES AND ALTERNATIVES

Energy usage in conjunction with the proposed Project will be related to short-term and long-term development activities. Short-term energy usage is a function of construction activity and will coincide with general site development. Since full build-out of the Project is expected to take approximately 5-years, the short-term energy uses shall exist on a variable basis during that 5-year period. Essentially, energy use shall require fossil fuels (i.e., gasoline and diesel) for the operation of all types of construction equipment, including generators for temporary on-site power during construction.

Long-term energy use is a function of the operations of Orchard Village as well as the individual residences, including building support functions (lighting, power, mechanical systems). Support functions will generally require low voltage (120 volts) for office, safety lighting, power outlets and mechanical equipment. Additional power requirements will vary between Orchard Hill, and the different sized residences that are proposed.

Natural gas is the main anticipated heating source for both Orchard Village and the residences, which is anticipated to be supplied by Niagara Mohawk. Additional fossil fuels such as propane may be desired for cooking and operating other appliances. Local companies will supply required fuels.

When the topography and vegetation allows, Orchard Village and the residences will take full advantage of southern exposure, to assist in heating and lighting needs. Furthermore, each homeowner will have the ability to incorporate the use of solar technology for electricity needs.

9.2 ANTICIPATED LEVELS OF ENERGY CONSUMPTION

Niagara Mohawk has stated that capacity exists to supply electric and natural gas to the site, and access to the Site will not be an issue.

9.3 INDIRECT EFFECTS OF ENERGY CONSUMPTION

Market costs for energy constitute the greatest potential effect on energy consumption patterns. It is difficult to estimate how energy costs will change in relation to each other. Typically, as prices shift, industry in general studies the feasibility of incorporating dual fuel systems, cogeneration capabilities and use of off-peak power capacities. In the future, industries should continue to assess energy costs and changes in fuel types. Pollution regulations and future changes will affect the types and amounts of energy used as it relates to emissions.