

Manitoba Envirothon
2007 Orals Scenario

Incorporating alternative energy into the development of a new subdivision

As members of the Alternative Energy Institute, an independent think tank on energy issues, Brandon City Council has approached you for ideas about alternative energy solutions. They have come to you because of your reputation for innovative approaches and originality. Specifically, they would like you to provide them with an alternative energy strategy for a completely new residential subdivision for Brandon. They want the new subdivision to showcase innovations in alternative energy, the use of sustainable sources of energy and innovative approaches to designing residential areas that ensure as little energy as possible is wasted through transportation, home heating, etc.

Council has identified a parcel of approximately 75 hectares (180 acres) of vacant land located on the banks of the Assiniboine River. They envision the subdivision being home to at least 3500 people. The parcel of land is located in the river valley, just off of the floodplain, is gently sloping to a hill that backs the property. It also has areas that are treed as well as wetland areas along the river. The site is much like the one that you spent your time on for the field test, only it is further upstream and completely undeveloped.

The subdivision itself would include the mixed uses that are characteristic of healthy neighbourhoods. In addition to space for residential living, this would include other needed components like a school, community center, recreation complex (including playing fields), space for commercial activities such as convenience stores and other small commercial outlets, a grocery store, two restaurants and a small amount of office space.

You will have 10 minutes to present your strategy to Brandon City council members. Your alternative energy strategy must address at minimum the following four issues:

1. The options/innovations you would recommend for the buildings that will be constructed in the subdivision.
2. The sources of energy that you would recommend be used throughout the subdivision
3. The ways you would ensure that traditional services such as roads, public transit, walking paths, electricity, etc. are incorporated to ensure energy efficiency.
4. How you would include local soil/landuse, water, wildlife and forests in your strategy to ensure energy efficiency (e.g. trees provide critical shade in the summer).

Note: The judges do **not** expect a detailed subdivision plan that includes a map locating buildings, street layout, etc., rather they expect that the visuals should complement the alternative energy strategy as written.