



March, 2014 Volume I

My Home My Community



Introduction

Recently, Canadians have become more aware of where their electrical energy comes from and the cost-economic, environmental, and social-associated with generating that energy.

The Issue A subdivision of new homes is being built in your neighborhood. Your municipal government has proposed building either a new thermonuclear reactor (Figure 1.), thermoelectric plant, solar farm, wind farm, or hydro plant to meet the increasing demands of the neighborhood. Municipal government representatives have called on members of the community to make recommendations on the type of generating station that will be built.

Goal: Overall Objective To make a recommendation for the types of generating station that should be developed in your neighborhood. You must present your recommendation to representatives of your municipal government. As a concerned member of the community group, you will compare the advantages and disadvantages associated with three of the proposed types of generating stations while making a final recommendation for your selection as best fit.

Specific Expectations:

- *formulate scientific questions about observed relationships, ideas, problem/issues, to focus inquiry
- *identify and locate print, electronic, and human sources that are relevant to research questions.
- *draw conclusions based on inquiry results and research findings, and justify their conclusions
- *select, organize, and record relevant information on research topics from various sources, including electronic,

print, and/or human sources, using recommended formats and an accepted form of academic documentation

- *analyze the information gathered from research sources for reliability and bias
- *draw conclusions based on inquiry results and research findings, and justify their conclusions
- *communicate ideas, plans, results, and conclusions orally, in writing and in electronic presentations, using appropriate language and a variety of formats
- *analyze, on the basis of research, various safety and environmental issues
- *associated with chemical reactions and their reactants and/or product(s)

Figure 1. Ontario's Darlington Nuclear Station is one of the most efficient nuclear stations in the world as is capable of powering 17% of the entire province.



Gather Information

Work in small groups to learn about the issues associated with types of electricity generation. Consider these questions as you gather your information.



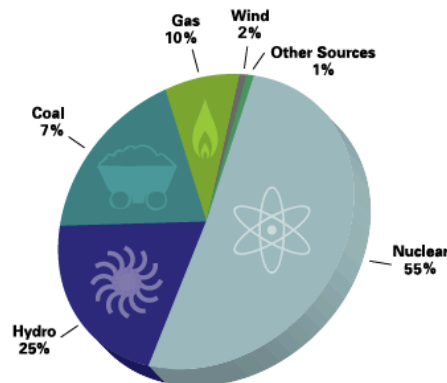
Assemble information on:

- ☐ What are the benefits and limitations to each types of generating station?
- ☐ How will the type of generating station selected affect the land and local ecosystems?
- ☐ What hazardous substances are used to manufacture the parts that run in each types of generating station?

- ☐ What types of emissions if any, are produced by each type of generating station? Do these emissions affect human health?
- ☐ What are the long-term financial costs associated with maintaining each type of generating station?
- ☐ What are the physical geographical characteristics of your community? Does your physical geographic environment support the electricity generating station you are recommending.
- ☐ Select community within Canada and identify 2 electricity generating systems to compare/contrast

As you research, keep these points in mind:

- ☐ Keep detailed notes and sketches
- ☐ Record your sources of information
- ☐ Analyze your information for reliability and bias
- ☐ Remember that your goal is to recommend the best fit electricity generating system for your community.



Identify Solutions.

- Create a graphic organizer to help you organize your thoughts.
- Compare and contrast the electrical generating stations carefully.
- Using the comparison, identify which of the electricity generating stations is the better choice for your community.

Make a Decision

- * Make a clear recommendation to your municipal government representatives about which type of electrical generating station you believe should be built in your local community.
- * Clearly state the criteria that you used to arrive at your recommendation.

Communicate

- Use www.wix.com to prepare a campaign to encourage your community to choose the better option for a new generating station.
- ☒ Your campaign must identify all of the concerns and issues related to each type of generating station and should indicate the factors that you used to analyze the issue
 - ☒ Summarize all of the issues you came across in your research, but focus on what criteria you used to make your recommendation
 - ☒ Your campaign could be presented in the form of a report, newspaper article, dramatization, blog.
 - ☒ Your campaign should end with a clear recommendation and how you arrived at this decision.