

ENERGY DAY WEBSITES

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Geography Awareness Week 2008

Canadian Association of Geographers

Energy Day is welcomed this year as a new theme day for Geography Awareness Week, and should be of interest to every person, business, institution, government, and other entity in Canada. Many of the reasons for a national interest in energy are provided by the websites selected for Energy Day, and they combine to provide lots of graphics, facts, and a variety of perspectives.

My task in this commentary is to outline the rationale behind selecting energy as a Geography Awareness Week theme topic, and to provide a context for viewing, analysing, and synthesizing the contents of the Canadian energy websites.

First, the availability of energy by type and quantity affects all aspects of the Canadian space-economy, including the agriculture, mining, forestry/pulp and paper, transportation, manufacturing, government services, health/medical, retailing, recreation, and residential sectors. Given its importance to Canadian society, energy warrants our attention on a day-to-day basis. However, and despite its importance, is it an appropriate topic for Geography Awareness Week? As demonstrated below, the answer to that question is a resounding “Yes”.

The second point of rationale in selecting energy as a theme topic for GAW 2008 involves the matter of different energy types, and where they are located. At this point in time there are at least eight different types of renewable and non-renewable energy in Canada. These energy types are, in alphabetical order: bio-fuel; fossil fuel (coal, gas, and oil); geothermal; hydro-electric; nuclear; solar; tidal; and wind. However, and this is where geography kicks in, the places where these types of energy originate or is produced are not evenly spread across the country.

By way of illustration, some parts of Canada are rich in oil and gas deposits and other parts are not; some parts generate electricity via dams on rivers and reservoirs and others do not; some parts receive lots of sunshine and can obtain significant amounts of energy via solar panels, whereas other parts do not receive enough sunshine to take advantage of this energy source; and, those parts of Canada with coastlines on the ocean can generate tidal power, but other parts of the country do not have that capability.

Understanding which types of energy are available where is an important step in understanding how the geography of energy accounts for some of the political,

economic, financial, social, and environmental differences among the regions of Canada.

As for the third point of rationale for including energy day in GAW 2008, there are a host of where questions associated with shipping, hauling, piping, transmitting, or otherwise moving energy from where it is produced to where is consumed. And, once again the nuances of geography kick in, because just as the locations of energy production are not evenly distributed across the country, neither are the locations and patterns of energy consumption.

Where, for example are pipelines, truck routes, railroad lines, shipping lanes, storage tanks, relay stations, service stations, power grids, and transmission wires located in order to efficiently, safely, and reliably transport and transmit the different types of energy from a relatively small number of sources to a relatively huge number of locations where energy is consumed? The websites selected for Energy Day 2008 provide answers and directions to answers to parts of that important but complex question.

The fourth reason for adding Energy Day to GAW 2008 is because the geographic pattern of energy consumption closely corresponds to the geographic pattern of life in Canada. That is, because so much of what we do requires energy, there is a high degree of correspondence between maps of the locations or places where energy is consumed and the maps of where people reside, work, shop, go to school, grow food, manufacture goods, build infrastructure, obtain drinking water, treat wastewater, dispose of solid wastes, drive motor vehicles, ride in transit vehicles, and so on.

For those reasons, and others that will present themselves when visiting the websites, Energy Day is an excellent addition to Geography Awareness Week. Two premises support that assessment. First, I expect that by looking at geography through the lens of energy, and looking at energy through the lens of geography, Canadians will gain an enhanced appreciation of the importance of both energy and geography to Canada.

And, second, it is my greater expectation that by looking through both lenses at the same time, Canadians will become much more knowledgeable about the connection between geography and energy, and will use that new knowledge to make more informed decisions about the amounts of energy they use on a daily basis.

In closing this commentary on Energy Day, I thank Shannon Christie, PhD candidate at the University of Saskatchewan for her assistance as Energy Day Coordinator, Geography Awareness Week, 2008. Shannon scanned the Internet for candidate Canadian websites, and selected the ones that she regarded as doing the best job of demonstrating the geography-energy connection. On behalf of the Canadian

Association of Geographers, and visitors to Energy Day, GAW 2008, “Thank you, Shannon”.

1. The Atlas of Canada

<http://atlas.gc.ca>

The Atlas of Canada is deservedly the lead-off website on the topic of geography and energy, and the sections on Energy and Economy, Renewable Energy, Transportation, and Climate Change interrelate with a number of the websites listed below, as well as with websites selected for the 2008 Transportation, Weather and Climate, Water, and Food and Health theme days.

2. SaskPower: Power and Our Environment

<http://www.saskpower.com/powerandenvironment/powerandenvironment.shtml>

This public utility website lays out many aspects of the geography of energy, from where it is sourced to where it is consumed, and how it is transmitted from sources to consumers. The magnitude of the operation is illustrated by the number of kilometres of power lines, 153,000, and the site also reminds us that in order for increased demands to be met increased supplies need to be found, or alternatives need to be discovered and adopted, and all the while having regard for the environment. The website materials also explain regional energy initiatives in the Canadian prairies with potentially national importance and implications, such as the development of clean coal and carbon capture technology, as well as wind power developments. Overall, SaskPower is a well-organized website in terms of informing viewers about the nuts-and-bolts of producing and distributing electricity. The section on “What Citizens Can Do” in terms of reducing energy consumption is very informative, and has general applicability.

3. Pembina Institute: Renewable Energy Work

<http://re.pembina.org/home>

As noted on the *Our Work* page, “The Pembina Institute advances sustainable energy solutions through innovative research, education, consulting and advocacy. We are working to support renewable energy through the following activities and program areas.” Major elements of the Institute’s mission include Advancing Federal and Provincial RE (renewable Energy] Policy, and Working with First Nations, Municipalities and Developing Countries to Identify and Implement RE Solutions. The latter component may be especially appealing to geographers, given its regard for “... activities such as community energy planning and integrated community sustainability planning, as well as advocating for smart growth. Pembina assists communities in Canada — and internationally — to identify and implement renewable energy and energy efficiency solutions to meet local energy needs more sustainably.”

4. The Canadian Nuclear Association

<http://www.cna.ca/>

Nuclear energy has been the subject of some controversy in Canada and abroad, and that aspect is shown in the entries dealing with public opinion polls. However, the emphasis in our work is on the geography-energy connection, and a number of publications and other materials available at this site deal with that connection. An illustrative item is a Canadian Energy Research Institute (CERI) publication titled *World Energy: The Past and Possible Future*. "This study includes information on energy issues affecting the world and Canada. It provides a broad overview of the world's energy resources and addresses critical supply issues, the environment..." Of particular interest to geographers is the regard shown for the spatial aspects of energy supply and consumption, and the very good use of maps to illustrate the geography of energy.

5. The North American Electric Reliability Corporation

<http://www.nerc.com/>

Canadians may have a general awareness about their sources of electricity, and a general awareness about how electricity moves within and between grids by seasons of the year, time of day, as a result of incidents (e.g., breakdowns, shutdowns, etc.) This site describes and explains the bulk power system in North America, and shows maps of the regional bulk power sharing entities. Information of this nature is especially pertinent for anyone wanting to understand the 2003 "Blackout" in the Northeast, or has questions about electrical energy dependence, independence, and interdependence.

6. Energy Council of Canada

www.energy.ca

This website should be of interest to anyone wanting to know more about the players in Canada's energy picture. We are informed that "The Energy Council of Canada is the Canadian Member Committee of the [World Energy Council](#). With over 75 members from Canada's energy sector, we are a non-profit organization dedicated to enhancing the effectiveness of our national energy strategy". As part of its agenda, the Council seeks to forge a better understanding of energy issues, and shape Canada's energy policy. Visitors to this website who want to know more about whether and how geographic factors are taken into account by the Council are advised to click on the Energy Forum and Archives bars, and then click on the presentations bars.

7. The Council of the Federation

<http://www.councilofthefederation.ca/>

There invariably seems to be a bit to a lot of politics behind the geography-energy connection in Canada, and this website has lots of politics. The Council of the Federation is composed of Canadian Premiers and is intended to promote inter - provincial and territorial cooperation. The key energy related component of the website is the development of the

National Energy Strategy: “A Shared Vision for Energy in Canada” (August 2007). The website also contains information pertaining to Climate Change Action and Climate Change Initiatives taken by the provincial and territorial governments of Canada.

8. TransCanada

<http://www.transcanada.com/>

The Transportation Day theme page contains two pipeline websites, and this one makes a very neat complement, or vice versa as the case may be. This company develops and manages North American energy infrastructure of over 59,000km of pipelines tapping into virtually all major gas supply basins in North America, and it is also responsible for gas storage and power generation. I hasten to add that this is a good site for maps, some of which can be found by clicking on Operations Maps, and other keys.

9. Canadian Association of Petroleum Producers

www.capp.ca

It is quite possible that more Canadians have heard of OPEC (Organization of Petroleum Exporting Countries) than have heard of CAPP (Canadian Association of Petroleum Producers), so it is very fortuitous that we can change things through Energy Day, GAW 2008. The CAPP website represents the major interests in the Canadian petroleum industry, and should be familiar to every Canadian who uses fossil fuel in any way, shape, or form, since there is a high likelihood that the source of at least a portion of that fossil fuel is affiliated with CAPP. In addition to providing a number of important links to follow (Oil Sands; the Canadian Petroleum Industry; Environmental Stewardship (Environment, Health and Safety, Communities), the website lists Issues and Initiatives by topic at the Canada-wide level and by region (link for each province and territory). Also, the Regional Initiatives and Issues bar includes links to the different provincial/territorial government agencies with energy-related responsibilities, and provides an information section on petroleum production/consumption in that province/territory.

10. Canadian Wind Energy Association

http://www.canwea.ca/index_e.php

Renewable energy is the name of the game here, which is demonstrated by this part of the mission statement: “So how much wind do we have in Canada? We have more than we could ever use, and it’s free. Our vast landscape, our three windy coastlines, the plains and mountains all contribute to this endless resource. Canada has still only scratched the surface of its massive wind energy potential, ...A click on the Wind Farms bar and then Map of Installations leads us to the visual aspect of the wind farms story which is at the very stages of development in Canada, and which represents an important applied research domain for geographers.