

John Magnuson

English 228

Instructor: Dr Greta Gaard

Essay #3: A generation of power: economic, social and environmental

Environmental justice affirms the sacredness of Mother Earth, ecological unity and the interdependence of all species, and the right to be free from ecological destruction¹. The first principle of environmental justice calls for equal rights among the inhabitants of the earth: humans, animals and the environment. Unfortunately the sociological, ecological and economic interactions between the aforementioned inhabitants result in power struggles. Power in this instance refers the generation of energy by hydroelectric dams, nuclear power plants or oil refineries. The sociological struggle for power results between those requiring power and those that are in the path of power development. The ecological power struggle is one in which the environment must be altered in some way to generate the power. The economic power struggle is generated due to people's need for power and power companies' attempts to generate the greatest revenues for power generation. All three methods of generating power result in changes to the sociologic, ecologic and economic interactions.

Hydroelectric dams have been touted by some individuals as a clean and efficient form of energy production², providing 10% of the United States total energy production³ and generating tens of billions of dollars in revenues for investors and the parent companies. Building of the dams are massive undertakings and provide construction jobs for thousands of workers and infuse money into the economy where dam construction takes place.

Hydroelectric dams may have less of the overt causes of pollution than the hydrocarbon emission from a crude oil distillation tower, or the radioactive waste produced by a nuclear power plant but the environmental and social impact may be greater than either of these⁴. The case of James Bay dam in Quebec 11,500 km² of land was flooded by Hydro-Quebec to produce a reservoir for the dam. There was not only a loss of land to the Cree, Inuit and Innu people but the flooding resulted in inert inorganic methyl-mercury to be released from the soil and transformed into the toxic organic methyl-mercury. The mercury contaminated the fish and eventually the people that fed on the fish resulting in toxic mercury levels rivaling that of Minimata Japan⁵. Unfortunately the land destruction of James Bay is not an isolated incident and is a common result of hydroelectric dam construction and operation.

The 13,000 megawatts produced by the Hydro-Quebec (HQ) consortium provides enough power for seven million people and (HQ) wants to add another dam system to generate power. There are, however, costs due to the fact 12,000 Cree and 5,000 Inuit⁶ are living in the area and must be moved in order for expansion of the dam complex. We must recognize the rights of the Native people in these areas even if there is a benefit to 1,000 times as many people. Once the rights of one group are disregarded in favor of another, then a price on human worth is established thus paving the way for subjugation and tyranny.

In order to ensure hydroelectric projects are economically as well as socially and environmentally justified there are basic power production practices that must be followed such as the site selection must be thoroughly researched and local residents must be consulted and involved in the development of the dam system. Finally, the dams may need to be smaller in order to have less of an environmental impact. Many of these similar practices can be applied to the issues associated with nuclear power.

There are currently 104 nuclear power plants in the United States accounting for 22.5% of the United States energy production⁷. During its inception in the 1960's, nuclear power looked like the solution to the growing power demands due to nuclear reactors' lack of hydrocarbon emissions and ease of maintenance. Unfortunately, breakdown of reaction chambers as well as no method of disposal or effective storage of nuclear waste has resulted in production of only 1/10 of the 2000 proposed reactors⁸.

The economic benefit of nuclear power is the decreased dependence on foreign oil thus increasing the stability of the economy. Ecological benefit is conferred by decreased carbon emissions of the steam reactor. The social benefits of nuclear power are seen by everyone receiving the same quality of power in the form of electricity, as opposed to some people being relegated to the use of natural gas, propane, or heating fuel by oil produced power. Nuclear power production is not all positive.

No person wants to be around a radioactive substance due to cancer and other health risks, so the nuclear reactors are placed in areas where no one is expected to complain. Sites of nuclear reactors are placed in either rural or isolated areas. The deposition of reactors in these areas places many of them next to Native lands or small communities which have less of a voice in dictating the actions of the energy company compared to a large city or affluent community. Environmental racism (and classism) such as this destroys the sovereignty and self-determination of Native peoples as well as takes away the rights of decision-making because the groups are not equal partners with the energy companies.

Current linear-nuclear power production is a self limiting prospect. The current problems of refining waste leave a great risk of losing control of weapons grade plutonium therefore new

methods of reintegration of wastes must be found⁹. Unless a new method of dealing with nuclear waste is established environmental racism is bound to continue.

The problems associated with hydroelectric and nuclear power production may pale in comparison to the number of issues surrounding oil-based power production. The wonderful thing about crude oil is there are hundreds of different hydrocarbons contained in the crude. Three of the hydrocarbons often used for energy production are methane, octane, and diesel fuel.

Oil as a power source is economically effective because the fuels used to produce power are extracted prior to distillation of the desired petrochemicals. The ecological benefits of oil as a power source is seen in smaller wells where a single well-head can tap into an oil deposit and pump out oil without any use of electricity, due to the built up pressure of the oil. The social benefits of oil-power are that much of the oil is found in undeveloped areas which bring great wealth to the area.

Intermingled with the positive aspects of oil power are the negative ecological, economic and sociological aspects. Pollution of air by hydrocarbon emissions is well known but the pollution of land and water by oil, which is often forgotten, is also a common theme around the globe. Transportation of oil is one of the main precipitators of environmental pollution resulting in oil tanker spills and oil pipe line breaks. The Russian Siberian oil pipeline has had 103 major failures between 1991-1993¹⁰ resulting in destruction of fragile permafrost soils, vegetation and migratory routes. In the Ogoni province of Nigeria Africa, Shell oil company's disregard for environmental pollution laws has resulted in over 3000 separate oil spills¹¹ contaminating the once fertile Niger delta¹². Like many native people in undeveloped areas where oil has been discovered the Ogoni people are not receiving compensation for the oil extracted from their land

or reparations for damages due to oil spills. Shell's oil drill practices on the 650 km² piece of land have left the Ogoni people economically destitute.

The negative social impact of oil power is due to greed. The billions of dollars in revenues from crude oil derivatives are not seen by the Ogoni people or the many other native people in oil rich areas which are exploited for their resources. The 500,000 Ogoni people were farmers and fisherman before the 1958 discovery of oil. British colonization had established a western system of government in Nigeria which the Ogoni people were excluded from taking part¹³.

In the United States the idea of "out of sight is out of mind" allows many of the environmental injustices to take place. The problems associated with power production highlight some of the darker aspects of our society. No person wants to be around a radioactive substance, have their lands flooded or water filled with noxious chemicals. Since no person wants to be around the dams, reactors or refineries, they are placed in areas where no one of consequence is expected to care. Persons "of consequence" references people without a voice to decide upon issues or even be heard if calling for help. Places without environmental consequence may be deserts, swamps or rainforests. Places without economic consequence are the poor and indigent communities. There are even areas without social consequence such as Indian reservations, inner city projects and rural communities.

What is the solution to preventing power related environmental injustices? We must redesign the corporate business model. Corporate business leaves no person accountable for the injustices incurred by the corporation. Transnational corporations, that place little value on human life and the environment, will continue to violate the principles of environmental justice until a multinational body able regulate the actions of corporations or ensure the principles of

environmental justice are adhered to is formed. I do not seek to limit the amount of revenues a corporation can make or to give money blindly to the so called “have nots”, what I propose is a change to the business model.

Reference:

¹ First Principle of Environmental Justice. Per Greta Gaard. From the 17 principles of environmental justice developed in Washington DC October 1997.

² Hydroelectric Power. <http://ga.water.usgs.gov/edu/hyhowworks.html>. Retrieved from the World Wide Web on 20 November 2008.

³ Hydroelectric power production. <http://ga.water.usgs.gov/edu/wuhy.html>. Retrieved from the World Wide Web on 20 November 2008.

⁴ Hydroelectric power pollution. [http://www1.agric.gov.ab.ca/\\$department/deptdocs.nsf/all/eng4431](http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/eng4431). Retrieved from the World Wide Web on 20 November 2008.

⁵ LaDuke, Winona. All our relations: native struggles for land and life. 1999. South End Press, 7 Brookline St #1, Cambridge, MA 02139. p 62

⁶ James Bay Damn. <http://american.edu/TED/james.htm>. Retrieved from the World Wide Web on 20 November 2008.

⁷ ⁸ LaDuke, Winona. All our relations: native struggles for land and life. 1999. South End Press, 7 Brookline St #1, Cambridge, MA 02139. p 97

⁹ Nuclear power production. <http://web.mit.edu/nuclearpower/>. Retrieved from the World Wide Web on 20 November 2008.

¹⁰ Oil and Gas Exploration. www.allthingsarctic.com/environment/oilandgas.aspx. Retrieved from the World Wide Web on 24 November 2008.

¹¹ Factsheet on the Ogoni Struggle. <http://www.ratical.org/corporations/OgoniFactS.htm>. Retrieved from the World Wide Web on 24 November 2008.

¹² ¹³ Saro-Wiwa, Ken. A Month and a Day: Detention Diary. (1996). Penguin Publishing Co. p 68