Wind power

Literature, Russian Literature

Wind Power Wind power is arguably one of the most ecofriendly, and cheap sources of energy. Surprisingly, it is one of the least harnessed forms of energy. This makes it imperative to do studies that are more rigorous, research and development on wind power in order to reap the full benefits of wind power. However, just like any other source of energy, wind power has its pros and cons. This is a brief research on wind power considering its pros, cons, feasibility, and economic viability. Due to the increasing fuel crisis in both supply and cost, alternative forms of energy such as wind power have gained priority. This has also been fueled by the dire need to reduce carbon emissions. Wind power is used virtually all over the world but in different scales. Many countries such as Portugal, Canada, U. S, and U. K are using wind power in large scale. Although many of the countries are not very dependent on wind power, they have integrated it within other sources of energy. One of the primary advantages of wind power is its eco friendliness. The system uses the naturally available wind force to turn the turbines, which in turn moves generators to produce electricity. There are no any emissions or by products that could harm the environment in any way. The cost of startup of any power generation system determines the economic viability of the system. Wind power has arguably the lowest startup costs. When compared with other sources of energy such as nuclear power stations and hydroelectric stations, the startup costs are much lower. This makes wind power generation possible even in poor countries that may not afford costly power generation methods such as nuclear power station. Additionally, the cost of maintenance of wind power systems is much lower than any other power generation method. It is also worth noting that wind

power utilizes the force of wind, which is a naturally available source of energy, which does not require prior preparation for use as is in the case of fossil fuels (Brower, 2010). Although wind power generation has its pros, there are possible disadvantages. One of the most prevalent issues of concern is the amount of land required for wind turbines. Wind power requires relatively flat lands with little or no wind distractors such as tall buildings and trees. Whereas this is true, it should be considered that wind turbines themselves occupy just a small proportion of the total area allocation and the rest can be used for other economic activities such as farming. Wind power solely depends on speed of wind. This variable is subject to change with change in climatic conditions. Therefore, the future sustainability of wind power generation cannot be predicted with utmost certainty. However, there is optimism since wind variations are expected to be below 5% (Breslow & Sailor 2008). Issues have been raised over effects of wind power turbines on wildlife. It has been reported that the rotating wind turbines have killed a number of birds including bats in several parts of the world (GAO 2005). Technically, wind power is intermittent and therefore requires integrated backup systems to stabilize the power output. Wind power generation is gaining heightened attention and development amidst the persisting fuel crisis. Wind power is feasible since, the benefits far outweigh the disadvantages and related costs. Wald claims, “ heavy reliance on wind energy is “ technically feasible” but will require significant expansion of the power grid” (Wald, 2010, p. 1). Initial startup phases may be demanding but the system is feasible in the long-run. Wind power is also economically viable. This is because wind is a naturally available source of

energy. When the wind power stations are located in places with high-speed winds and close proximity to the national grid, cost per kilowatt generated is lower compared to other means of power generation especially diesel generation. It is also economic and safe to maintain wind turbines than in nuclear power stations, hydro, and diesel generation hence making wind power economically viable. It was worthwhile researching on wind power as source of energy. I have come to learn that wind power can be one of the best sources of clean energy. Although the setting up of a viable system may be costly and technically challenging, the benefits far outweigh these costs. The disadvantages associated with wind power are minimal and can be mitigated with little efforts. It is therefore recommended that all countries embrace wind power and improve on research and development to make it one of the primary sources of energy. References GAO. (2005). Impacts on Wildlife and Government Responsibilities for Regulating Development and Protecting Wildlife. Retrieved from http://www. gao. gov/new. items/d05906. pdf Wald, M. (2010). Expanding Use of Wind Power Feasible, but May Be Costly. Retrieved from http://www. nytimes. com/2010/01/21/business/energy-environment/21wind. html Breslow, P & Sailor, D. (2008). Vulnerability of wind power resources to climate change in the continental United States. Retrieved from http://www. sciencedirect. com/science/article/pii/S0960148101001100 Brower, M. (2010). Environmental Impacts of Renewable Energy Technologies. Retrieved from http://www. ucsusa. org/clean_energy/technology_and_impacts/impacts/environmental-impacts-of. html Morris, N. (2007). Wind Power. New York: Black Rabbit Books.