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### Portfolio Planning for Planet Earth

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ENSC 230 – Energy and the Environment: Economics and Policy  
December 9, 2012

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### **Portfolio Planning for Planet Earth**

In Nebraska, there is a certain pride maintained in living “the good life.” This good life is rarely defined as having ample access to electricity, a steady climate pattern, and nature to enjoy. These three things are part of the base of life and inextricably linked to one another though human energy consumption. The United States’ citizens are highly dependent on electricity, per capita consumption reached 12,913.7 kWh in 2009. [1] Undeniably, this high amount of energy use results in a high production of electricity and large amounts of greenhouse gas emissions due to this process. In Nebraska, the main electricity generation source is coal, and coal-fired power produces roughly 20 percent of global greenhouse gas emissions. [2] [3] Coal releases almost 2.1 pounds of carbon dioxide per pound of burned coal. This is an important correlation because carbon dioxide is the worst of the three main greenhouse gas atmospheric pollutants. To protect the good life and ensure its possibility for future generations, then a goal of creating a “greener” electricity generation system in the United States and Nebraska must be implemented. Government regulations and policy creation are the most effective tools to achieve this goal.

Currently, there is no federal regulation enforcing clean energy supply. However, states have the ability to create Renewable Portfolio Standards, RPS. An RPS requires electric utilities within a state to supply a specified minimum amount of electricity from renewable energy sources. [4] Nebraska is unique in its electricity production. First,

Nebraska is one of twelve states that have no renewable or alternative energy portfolio standards. [5] Second, it is the only state that is served entirely by consumer owned electric utilities, commonly referred to in public power. [6] The vast majority of the state's population receives its electricity from Nebraska Public Power District (NPPD) or Omaha Public Power District (OPPD). However, significant statewide changes must be made by the state government.

The mission of the public power districts is to generate and deliver reliable, low cost energy for all citizens of Nebraska. [7] This focus on cheap electricity and production for cost instead of profit has allowed Nebraska to consistently provide low cost electricity in comparison to national standards. It is clear that these public companies have the interest of their citizens at heart, but are they holding their future citizens in their care as well? Management of Nebraska's electricity producers through the increase of non-carbon emitting electricity generation will be the key to maintaining a clean and healthy environment for future generations of Nebraskans. Understanding the impact that electricity production has on our environment should compel Nebraska government officials to increase regulation on these public utilities to expand clean energy sources.

However, the question remains as to how maintain low cost to the consumer while increasing renewable energy production by the utility company. By instating a RPS for Nebraska's public power districts and other electricity producers, Nebraska legislature would increase green electricity production. To maintain low cost electricity, the state would need to internalize the increased public cost. This could occur by increasing tax incentives for renewable energy, similar to the Residential Renewable Energy Tax Credit, for private landowners and allowing excess energy on the grid by creating a net metering

policy in Nebraska. [8] Also, governmental funding of research and development of renewable energy technologies would result in more efficient and cost effective technology. This would reduce the cost of producing electricity through alternative energy sources while increasing the capacity of electrical generation. By slowly and steadily increasing these standards over several years, the government would give time for the energy sector's economics to adjust while giving renewable energy technology time to adjust and develop to a larger base of use.

These regulations and increased standards would decrease electricity's "footprint" on the environment. Nebraska elected officials could collaborate with neighboring states to understand the best practices of implementing a renewable energy standard. States that have these standards and similar environments to Nebraska include Kansas, South Dakota, and Iowa. [5] To encourage federal and state government to pursue these ideas, individuals can write their senators and electricity providers along with supporting lobbyists and action groups that are working on creating these policies.

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