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Final Part 1- EN-ROADS Climate Simulator

In order to mitigate climate change, a number of combined strategies must be completed in order to avoid an environmental disaster. The first approach that I took with this model was in regards to energy use, with a specific focus on coal, which I chose to highly tax. Coal is arguably the most detrimental to the environment, as it releases several contaminants (mercury, lead, sulfur dioxide, nitrogen oxide, particulates, and more), produces a vast amount of ash that often ends up contaminating water supply, and releases a substantial amount of carbon dioxide that contributes to the globally rising temperatures. However, it is important to acknowledge the vast amount of people who are employed in the coal industry who would experience detrimental loss with the extinction of this industry. In order for reduction of coal dependency to succeed, we must raise the price of carbon in order to generate revenue, and then set this money aside for former coal miners who are being exiled from their jobs for a transitional period until they are able to move into a different craft. In the meantime, former coal miners can be employed in the cleaning up of coal mines, which they would likely thrive in due to coal being a highly specialized trade- skills that they already have. I chose to highly tax the oil industry, (not as highly as coal), advocating for a more gradual change due to the increased difficulty in replacing these fuels in comparison to replacing coal. Heavily taxing oil will create a decrease in dependence on it, thus contributing to less methane emissions and creating a cleaner environment for the individuals who live near oil and gas facilities, specifically less groundwater contamination and air pollution. I chose to highly subsidize renewable energy, as it the cleanest form of energy and has already created a vast amount of new jobs.

In regards to taxation in relation to transport, I chose to increase energy efficiency and incentivize electrification. Not only do these two things help the environment, but they also lead to a higher quality of life. An increase in public transport reduces travel time, traffic, and stress while simultaneously providing increased accessibility to further job opportunities. Public transport also reduces the need for foreign oil, helps disabled individuals, and keeps people healthy by helping them achieve exercise goals. I also hope to incentivize commodities such as

electric cars, for they lessen the burden of air pollution from the nitrous oxides and carbon monoxide that cars emit, in addition to reducing noise pollution, as they are much quieter than the typical automobile. Also, from an economic standpoint, electric cars can be less expensive with incentives, and the maintenance cost is much lower than the average car.

Similarly to my choices in relation to transport, I chose to increase energy efficiency and incentivize electrification with buildings and industry. In addition to reducing air pollution and dependence on oil, energy efficiency and electrification benefit human health, like preventing asthma attacks, premature deaths, and saving large sums of healthcare costs. Energy efficiency also saves individuals a great deal of money in the long run, a well-known example being how LED lights take off a great deal of pressure on ones' energy bill.

I also chose to slow economic growth, ideally through increased womens' education and more accessibility to family planning, such as birth control. A smaller population will lead to lower unemployment rates, which in turn contributes to higher wages and salaries among civilians. With an increased availability of jobs, women, who are often marginalized from jobs due to gender discrimination, will have more opportunities to enter the workforce. In addition, immigrants, who today are often rejected from the countries that they seek haven in, will increase in value to work needed jobs, also allowing them to inhabit a place that provides them a higher quality of life.

In order to keep temperatures low, we must highly reduce deforestation and methane emissions. Taxing oil, as previously discussed, will significantly reduce methane emissions. Deforestation, which is currently taking place at an alarming rate, reduces the quality of soil and leads to desertification. This means that soil for crops are not at the standard of quality to thrive, which will quickly lead to food shortages if we continue at the rate that we are operating at. We must encourage afforestation to sequester carbon and counteract the damage that has already been done, in addition to pushing for technological advances in carbon capturing. Technology is advancing at an exponential rate, evident from how different the world looks now in comparison to the world that our grandparents live. Growing technological industries will in turn provide more jobs and lead to economic growth, which refutes the common argument against choosing more environmentally viable means of operation.

If we want to avoid a climate disaster, we must start now. Many people fear change and tend to prioritize the economy over the environment, which is understandable- we all just want to be able to provide for our families. However, at the rate in which our current means of operation is affecting our planet, we are on course for environmental disaster, which will hurt citizens much greater in the long-run rather than acting now.