

Biofuels – An Answer to Our Energy Needs

President Bush, in his last two State of the Union Addresses, has called for an increase push for the use of alternative fuels to power our homes, offices and cars. In this year's speech he stated that we "need to press on with battery research for plug-in and hybrid vehicles, and expand the use of clean diesel vehicles and biodiesel vehicles. We must continue investing in new methods of producing ethanol – using everything from wood chips, to grasses, to agricultural wastes." By doing this, he feels that the United States would be able to decrease its dependence on foreign oil reserves by 20 percent in the next 10 years.

To reach this goal, last year the President announced an Advanced Energy Initiative which increased spending on clean energy research by 22%. This year the President called for a mandatory production of 35 billion gallons of renewable and alternative fuels by the year 2017. Presently, there are only 5 billion gallons being produced each year, primarily from ethanol with limited biodiesel production. Since this plan is based overwhelmingly on the President's desire to reduce the United States imports from the middle east, given the fact that we are funding much of the opposition we face in that region through the purchase of oil, anything that is not imported from middle east petroleum, including biofuels from South America or synthetic, coal and gas based fuels, which are not renewable, meet his policy objectives. This plan has been met with mixed reviews which are based on the various stakeholders affected by his plan.

The President's plan calls for alternative fuels that would include both renewable and non-renewable fuels. The **environmental community** argues that a 35 billion gallon usage level must be only renewable otherwise there would be no positive impact on global warming due to CO2 emissions. However, they suspect that ethanol from corn, even though corn is renewable, requires far too many energy inputs in its production. Even if the entire 35 billion gallons were required to be renewable, they do not want it from corn. Instead, they argue that new technologies that produce biofuels from biomass and cellulosic material have a much more positive impact. Furthermore, they would only support the program if it demonstrated a positive life cycle for energy balance and emissions as compared to gasoline.

Ethanol, a renewable fuel, is readily available and is likely to be one of the primary fuels in the President's plan. **Ethanol supporters** point to the previous mandate as evidence of a successful initiative that has resulted in its growth over the past several years. Further, they view it as proof that "mandates" are necessary, given that ethanol is sold to the petroleum industry and without required usage, the petroleum industry will either not purchase these products or do so at low values. Consequently, their argument is that alternative fuels that are not renewable, such as coal, only meet one of the criteria for non petroleum fuels and should not be included in this program. They do not want to be in a situation where a refiner has the choice of buying their product or a different non renewable to meet the requirement, thus leaving them out.

Since ethanol is primarily produced from corn, **consumer groups and other people** have been affected by the increase of ethanol production as it has led to an increase in corn prices. Although raising the price of corn was in fact one of the original policy objectives, i.e. helping raise farm income, many groups like cattle feeders that have been enjoying flat corn prices for years object to seeing their cost go up. Therefore, this group wants to either not have an increase in the use of renewable resources or limit the amount of corn that is used.

The **non renewable alternative fuel providers** argue that limiting the requirement to renewable resources is risky due to the aforementioned increase in corn prices and the possibility that drought or external events could make it impossible to reach the 35 billion gallon goal. With just 5-6 Billion gallons being produced today, assuming corn can supply 30 Billion more gallons without any of the adverse impacts noted by the other groups is unrealistic. Therefore, they are asking for the program to be opened up to non renewable resources also.

How can the President's plan address all these stakeholders? What kind of plan can be designed to reach the overarching goal of reducing petroleum and still meet the specific objectives of these interest groups? Your team is part of the President's advisory panel on energy usage. You are being asked to design a plan that will meet the goal of reducing petroleum use and considers the needs of these specific interest groups. Your plan should address the impacts on the forestry, soils, wildlife, and aquatic resources as well as balance the social, economical, environmental and political issues of the different groups affected by the switch to alternative fuels.