How to Fuel the Future: The Case for E15 Fuel in the Trogdor B35

The Homestar Rider Auto Company is acutely aware of how the decisions it makes from its headquarters in Iowa City affect various stakeholders around the world. With this awareness in mind, the decision regarding which fuel will power its newest vehicle, the Trogdor B35, which it anticipates will be one of the best-selling vehicles of the year, is of critical importance. This decision is not being made lightly, as Homestar understands lives and communities will be directly affected by its decision on which fuel should power its flagship car. With extensive internal research performed by our team and input from various lobbyists and industry groups, Homestar must make a balanced decision that considers the potential impacts on numerous stakeholders including customers, other industries, and the planet. As the chief design engineer of Homestar Rider Auto Company, I recommend Homestar designs the Trogdor B35 to run on 15% ethanol blend fuel because this fuel will provide the greatest net benefit to the greatest number of people, will not infringe on individual’s rights to clean air and water, and shows the company is committed to taking steps to shrink the carbon footprint of its vehicles.

To come to this decision, I used three of Badaracco’s four decision-making frameworks. Badaracco’s first framework is the “best net-net consequences” framework, which states that one should pick the plan of action that does the most good and the least harm. Badaracco’s second framework states that decision-making also needs to be based on which people and which groups have rights that cannot be violated. The third framework asks decision-makers what messages they want to send about their ideals and rights. Finally, his fourth framework affirms that decisions should be made with consideration of what will work in the world today. To justify the recommendation of using 15% ethanol fuel in the Trogdor B35, I used frameworks one, two, and three.
Choosing a 15% ethanol blend fuel for the Trogdor B35 will ensure farmers, consumers, and the ethanol industry have positive net consequences. According to Badaracco’s first framework, “best net-net consequences,” the decision that creates the greatest good for the greatest number of people must be the chosen course of action. In this situation, choosing the 15% blend will result in benefits for many stakeholders with only one minor negative, thus resulting in a net-positive consequence from the decision. The 15% ethanol blend, which contains 50% more ethanol than the 10% blend sold at most gas stations across the country, will increase the demand for corn used in ethanol production, thus benefiting farmers (Runge, 2016). The increase in demand for ethanol will also benefit ethanol processing facilities and the rural communities these facilities are in as they hire new staff or expand operations to meet increased demand (U.S. Department of Energy, n.d.). As demand for ethanol’s ingredients increases along with the demand for ethanol, there is potential for an increase in the cost of ethanol’s ingredients, but the increase in demand is unlikely to be high enough to greatly impact the prices consumers pay at the grocery store. Individuals who purchase the Trogdor B35 will fuel their new car at a lower price compared to traditional gasoline-powered vehicles and they will decrease their carbon footprint as well. While the 15% ethanol blend fuel has many economic benefits like creating new jobs and lowering the price consumers pay to fill up their cars, this fuel also ensures people’s rights are not infringed upon.

Keeping the ethanol content low in the Trogdor B35’s fuel ensures people’s rights to clean air and water are not violated. Badaracco’s second framework addresses the importance of human rights to any ethical dilemma. Badaracco explains that people have certain human, political, and economic rights that must be considered every time a decision is made. In the decision facing Homestar, choosing a higher ethanol content fuel like E85 will greatly increase
the demand for crops like corn and sugar cane. The cultivation of crops for ethanol production negatively impacts the environment and the burning of high-ethanol fuels contributes heavily to ozone emissions and smog (U.S. Energy Information Administration, 2019). Increased cultivation of these crops will also cause more pesticide and fertilizer runoff into rivers and lakes. As these chemicals seep into the groundwater many rely on for drinking, municipalities will be forced to find new water sources or risk the health of their citizens by allowing them to drink the contaminated water, thus violating that community’s right to clean water. Choosing a higher ethanol content fuel also affects air quality when the fuel is combusted. The combustion of higher ethanol content fuels has been linked to higher instances of ozone-related asthma, hospitalizations, and mortality compared to gasoline-only vehicles (Runge, 2016). While the additional cultivation of crops required to produce E85 has the benefit of pulling carbon dioxide from the air, burning the fuel puts the carbon dioxide back into the air along with many other harmful chemicals (U.S. Department of Energy, n.d.). Because the 15% ethanol blend fuel is only slightly higher in ethanol content than the current 10% standard, the negative effects of additional cultivation and pollution are far less pronounced than E85. The 15% blend is also far better for the environment than pure gasoline.

Deciding against using a pure-gasoline fuel signals Homestar Rider Auto Company’s commitment to reduce the carbon footprint associated with its products. As human-caused climate change continues to negatively affect the planet, opting for a fuel that is gentler on the environment while still prioritizing fuel efficiency shows our awareness of the issue and commitment to taking action to mitigate the effect automobiles have on the environment. According to Badaracco’s third framework, “what messages do you want to send about your ideals and principles,” decision-makers should be aware of how their decision will be interpreted
by others and how that decision will reflect on the company. Choosing to have a 15% ethanol blend fuel power the Trogdor B35 exemplifies Homestar’s awareness of how fuel choices impact a variety of stakeholders, including the planet. The decision to use a higher ethanol content fuel than the 10% industry-standard also signals to other auto manufacturers the feasibility and practicality that comes with more environmentally friendly fuels. An electric car would be the most environmentally friendly option for Homestar, but electric vehicles also have lower ranges and higher initial costs than their ethanol-fuel counterparts. The higher cost of electric vehicles would not allow our target market to afford the Trogdor B35, thus making the 15% blend fuel the most practical option for the company, as it saves consumers money at the gas station compared to traditional gasoline vehicles and saves consumers money when they purchase the car compared to fully-electric or hybrid alternatives.

Homestar Rider Auto Company should manufacture the Trogdor B35 to run on a 15% ethanol blend fuel because this fuel delivers net positive consequences to a variety of stakeholders, upholds people’s rights to clean air and water, and sets the company on the path to a more sustainable future. The 15% blend fuel will increase the demand for corn, which will benefit farmers, and ethanol, which will benefit ethanol refineries and their workers. This fuel will also come at a lower cost to the consumer than pure gasoline, which will offset any increase in grocery prices that may result from the increase in demand for corn. Additionally, the 15% ethanol fuel releases less harmful ozone when combusted than fuels made with higher concentrations of ethanol and will require only a slight increase in corn and ethanol production, thus limiting agricultural runoff. By emitting less ozone and limiting increases in agricultural runoff, this fuel ensures people’s rights to clean air and clean water are not infringed upon. Finally, the 15% blend fuel signals to consumers and other auto manufacturers that Homestar is
taking climate change seriously by using a fuel that decreases reliance on fossil fuels, while still providing fuel efficiency and practicality to its customers. As Homestar continues to build on this commitment to prioritizing climate action, and with the presumed success of the Trogdor B35, hopefully, we will begin to look into the possibility of creating an electric version of the vehicle that will fulfill Badaracco’s frameworks and lay the groundwork for the eco-friendly cars of the future.
Bibliography


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