The student responses in this packet were selected from the 2019 Reading and have been rescored using the new rubrics for 2020. Commentaries for each sample are provided in a separate document.

Student responses have been transcribed verbatim; any errors in spelling or grammar appear as they do in the original handwritten response.

#### Sample LL

[1] As wind farms continue to proliferate all across the United States, the individuals and agencies establishing and supporting them ought to carefully ponder wind farms' effects on local national economies and human comfort/quality of life as their most important considerations.

[2] An old Chinese proverb goes, "when the winds of change blow, some build walls, while others build windmills." The winds of change are blowing across the American economy as the country commences its painstaking-but-necessary switch to clean energy – and that is something investors cannot leave out of consideration as they continue constructing windmills. The depletion of Earth's limited natural resources, coupled with fossil fuel's pernicious effects on Earth's climate, have resulted in a need for the American economy to find new, renewable sources of energy to keep the country's lights on. The Wall Street Journal finds in 2014 that wind energy is not only an option for doing so, but one of the most energy and cost-efficient methods currently in use, with 1,164% of wind energy input retained when connected to electricity at a cost of only \$97/MWH (Source F). Basic economics dictates that any supplier of energy ought to look at prices and cost structures before they decide to invest; wind energy's benefit with regards to this department will be perceived beneficially by those considering whether or not to establish new wind farms. However, the construction of wind farms needs consideration not only in terms of dollar costs, but in terms of human costs as well - for local economies struggling with faltering industry, the arrival of wind energy can revitalize communities and guarantee livelihoods for individuals and their families. Consider the Texas town of McCamey, for example, where the denizens' previous reliance on oil "[took] their toll" through "boom-and-bust" cycles. However, the growth of wind energy "restored McCamey's economy," with "turbines...sprouting by the hundreds" (Source D). Economic insecurity has driven instability and diminished quality of life for centuries and across civilizations. With the construction of wind farms, however, creators of those farms can potentially redress those grievances. For many prospective wind-farm builders, however, the impacts might extend into the deeply personal; by revitalizing their local economy, they can create jobs and opportunities for the people who participate in it, which often end up being their neighbors and friends. With heavy impacts on all levels of the American economy – from national power supply to local industry reural - individuals and agencies cannot ignore the economic effects their construction of a wind farm would have, if they were to choose to construct one.

[3] Another important aspect to factor in not only the construction of wind farms, but in facets of human life, is the potential effect on human happiness and well-being. Wind turbines do serve as an innovative way of providing energy, but they are not without controversy. Nate Seltenrich writes in 2014 that while "reports have concluded turbines harmless" when "direct effects" were examined, "turbine noise...has been associated in some studies with...fatigue, sleeplessness, and irritability" (Source C). Wind Turbine farms, without a doubt, are massive in-your-face landmarks. They occupy huge parcels of land and tower over the ground unapolegetically and flippantly, giant white spires of unsubtle energy production. A 2009 picture of giant turbine farm makes clear how some might consider the farms "ugly" or "an eyesore", which contribute to human antipathy toward the wind farms. For many Americans, wind turbines are nothing more than hideous towers causing sleeplessness and annoyance – and, assuming that agencies / individuals hoping to build such farms care about their reputation and public opinion, must consider the placement and size of their projects if they wish to construct them while

mininizing human annoyance. In the end, what matters most to a majority of everyday citizens is not energy renewability but comfort and joy. Fossil fuels provide people their electricity without them even having to consider where it comes from; this factor, when combined with oil/natural gas's relative affordability, has led to great amounts of resistance to the growth of wind energy. Popular political figures have even adopted this movement, including the President himself, who just earlier this month, made the unfounded claim that windmills cause cancer (after attempting to imitate the disruptive noise they make by saying, "Whee! Whee!" over and over). Trump's claim underscores the dismal perception of wind energy among a large share of the population. As such, for the sake of their own popularity / perception and the well-being of the communities in which they wish to build, those considering whether or not to construct wind farms must take their effects on human happiness and satisfaction into consideration.

#### Sample A

[1] According to a recent report on Climate change published by the United Nations, Earth's global climate temperature is expected to rise by 1.5°C in the coming decades and the effects can potentially be catastrophic unless real intervention is taken. Thus, it is imperative that nations more thoroughly examine clean energy sources without carbon emissions, such as wind energy. Agencies looking to establish wind farms should consider the geographic location of their potential wind farm and its vicinity to resident communities, in order to avoid stirring up more controversy in society's debate on how to settle an increasingly demanding appetite for energy.

[2] Primarily, agencies should consider the geographic location of a potential wind farm before actually establishing it. Wind farms occupy hundreds of acres of space and as Joshua Winchell's photograph illustrates, often require a large-scale, uniform, and isolated terrain (Source A). This is crucial for agencies to consider because building a wind farm in a location that does not meet these demands could inhibit the full capacity of energy output and require even more energy input to sustain, reducing the net benefits that the wind farm can have. Without a proper location, agencies building large-scale wind farms become more open and vulnerable to criticism which can stifle the overall progression of clean energy resources. Furthermore, agencies must take into account how productive their turbines will be. "Since wind speeds fluctuate" they can't "always run at 100 percent power" (Source B). Julia Layton goes on to mention that turbines can be "hazardous to birds and bats, and in hard-packed desert areas there is a risk of land erosion" (Source B). Factors such as average wind speeds and the local fauna must be considered so that potential wind farms are not inflicting harm on their environment. After all, what is the point in trying to save the planet if the process inflicts too much harm? Thus, with proper consideration to the terrain, climate, and local species in the overall geographic location, wind farms can be established in appropriate location without causing much harm or controversy.

[3] Secondly, agencies must consider any potential wind farm's vicinity to resident communities and those effects before establishing any large scale farms. While wind farms may not interfering with the Earth's climate, they certainly interfere with human sleep patterns. Nate Seltenrich of the National Institute for Environmental Health Sciences points out how "sleep interference gets worse the nearer residents are to turbines" which is detrimental because "when we lose a night's sleep, we become dysfunctional" (Seltenrich). If wind farms are built too close to resident communities, sleep within these communities becomes impaired. The more inconvenient this energy source is, the more controversy there is surrounding it, ultimately leaving people less accepting of this clean energy source. However, local resident concerns for wind turbines extends to their style as well. Troy A. Rule emphasized the "territorial views for local residents who may have grown attached to an area's existing natural backdrop" (Source E). This concern also extends to light pollution and "turbine safetly lighting often required under federal aviation laws flashes across an otherwise pristine evening sky" (Source E). These residents concerns are crucial for agencies to address since the expansion of wind energy will be discouraged if it upsets the communities surrounding it. Like the harsh, glaring, white deign of the wind turbines themselves, agencies must find a way to control their image by being selective in the places where farms are established. Overall, the vicinity to and effect of wind turbines on resident communities

must be considered so that agencies can place their beneficial, clean, and safe turbines in places where they will be appreciated.

[4] In the ongoing, controversial debate surrounding wind farms, agencies looking to establish these farms should consider their geographic location and vicinity to and effect on resident communities. While there are many problems associated with wind energy, ultimately it is a legitimate and possible solution to one of the biggest climate catastrophies facing planet Earth.

### Sample TT

[1] The situation has been known for years, and still very little is being done: alternative power is the only way to reliably power the changing world. The draw of power coming from industry and private life is overwhelming current sources of non-renewable power, and with dwindling supplies of fossil fuels, it is merely a matter of time before coal and gas fuel plants are no longer in operation. So one viable alternative is wind power. But as with all things, there are pros and cons. The main factors for power companies to consider when building wind farms are environmental boon, aesthetic, and economic factors.

[2] The environmental benefits of using wind power are well-known and proven. Wind power is, as qualified by Source B, undeniably clean and renewable. From their production requiring very little in the way of dangerous materials to their lack of fuel, besides that which occurs naturally, wind power is by far one of the least environmentally impactful sources of power available. In addition, wind power by way of gearbox and advanced blade materials, has the highest percentage of energy retention. According to Source F, wind power retains 1,164% of the energy put into the system – meaning that it increases the energy converted from fuel (wind) to electricity 10 times! No other method of electricity production is even half that efficient. The efficiency and clean nature of wind power are important to consider, especially because they contribute back to power companies economically.

[3] Economically, wind power is both a boon and a bone to electric companies and other users. For consumers, wind power is very cheap, leading to lower bills than from any other source. Consumers also get an indirect reimbursement by way of taxes (Source D). In one Texan town, McCamey, tax revenue increased 30% from a wind farm being erected in the town. This helps to finance improvements to the town. But, there is no doubt that wind power is also hurting the power companies. Although, as renewable power goes, wind is incredibly cheap, it is still significantly more expensive than fossil fuels. So, while it is helping to cut down on emissions, it costs electric companies more than traditional fossil fuel plants. While the general economic trend is positive, there are some setbacks which must be overcome before wind power can take over as truly more effective than fossil fuels.

[4] Aesthetics may be the greatest setback for power companies. Although there may be significant economic and environmental benefit to wind power, people will always fight to preserve pure, unspoiled land. Unfortunately, not much can be done to improve the visual aesthetics of the turbines. White paint is the most common choice because it "[is] associated with cleanliness." (Source E). But, this can make it stand out like a sore thumb, and make the gargantuan machines seem more out of place. The site can also not be altered because it affects generating capacity. Sound is almost worse of a concern because it interrupts personal productivity by interrupting people's sleep patterns. One thing for power companies to consider is working with turbine manufacturing to make the machines less aesthetically impactful, so as to garner greater public support.

[5] As with most things, wind power has no easy answer. It is the responsibility of the companies building them to weigh the benefits and the consequences. But, by balancing economics, efficiency, and aesthetics, power companies can create a solution which balances human impact with environmental preservation.

#### Sample II

[1] As humanity faces the crisis of global warming, we are beginning to feel the reprucusions of our blatant disregard for the environment during our endless quest for economic and material gain. The sources of energy that drive society have been blamed for most environmental damage and destruction. In the face of this increasingly severe problem, humanity turns to green energy sources such as solar, hydro, and most notably wind power to continue to power society without harming the earth. Although some may argue that wind farms pose a threat to natural landscapes and the wildlife that inhabit them, the economic and environmental benefits of wind energy overwhelmingly outweigh these costs.

[2] Many critics of wind farms argue that the massive turbines disrupt the beauty of the natural landscape as well as the habitat of many local wildlife (Source E). However, wind turbines should be viewed as beacon of human progress and increased harmony with the natural environment. In fact, these same critics concede that "commercial wind energy projects should be perceived as artistic creations" and that then white color may "convey a positive image" (Source E.) From the observations, we can see that wind turbines actually enhance the natural landscape rather than detract from it. In regards to concerns about wildlife losing their habitat or getting caught in the turbines rotating blades, wind energy causes less harm to wildlife that traditional forms of energy. For example, the burning of coal releases noxious fumes into the environment that causes the death of thousands of wild animals per year. Additionally, many have observed that birds such as West Texas foul "have little problem avoiding the slow moving turbine blades." (Source D). By using wind energy, we are actually helping to enhance the natural landscape and protect its wildlife, especially in comparison to traditional forms of energy production.

[3] One of wind energy's plethora of benefits is the financial and economic success communities enjoy as a result of its installation. For example, communities such as the small West Texas town of McCamey have communally declined due to their previous reliance on the oil industry. With the advent of wind power, residents note that the renewable energy form has "restored McCamey's economy," (Source D). The federal tax credits residents enjoy have not only added money to new pockets, but spurred modern development within the community. Additionally, residents no longer have to worry about purchasing land rights for oil rigs and risking the loss of their investments in order to maintain these rights. Furthermore, wind power is the most efficient form of energy, with 1,164% of energy retained from input compared to only 22% of coal. In addition to its efficiency, wind is also one of the least expensive forms of energy, requiring only a moderate amount of money to produce 1 MWH of electricity when compared to other sources. (Source F). Overall, wind energy helps to revitalize stagnant economies with an efficient and reliable source of both energy and income.

[4] In addition to the economic benefits, wind energy amongst the most environmentally friendly energy sources. Unlike coal, natural gas, nuclear, and petroleum brand energy sources, "we are in no danger of running out of wind anytime soon." (Source B). Moreover, wind energy releases zero harmful emissions such as CO2 and nitrogen oxides that contribute to global warming and the adverse effects on Earth's ecosystems. Additionally, some fumes emitted by traditional energy sources are even harmful to human health, making wind energy a better choice for not only the environment, but also the human race (Source B).

[5] The economic and environmental benefits of wind power greatly outweigh the alleged damages to the natural landscape and wildlife. By continuing to develop wind energy, we can benefit our economies and environment at the same time. In fact, wind energy has the potential to generate far more than the 1% of electricity in the U.S. it does now (Source B.). By embracing wind energy, we can be sure that humanity will be blown towards a brighter future and better tomorrow.

#### Sample L

[1] The increasing demand for energy is leading consumers to explore new energy options. Among these options are the controversial large-scale, commercial-grade wind farms. The most important factors that an individual or agency should consider when deciding whether to establish a wind farm are the noise impacts, the alteration of landscapes, and the cost of the wind farms.

[2] Noise impacts of large wind farms are a concern for communities near these farms. "Anecdotal evidence strongly suggests a connection between turbines and...symptoms including nausea, vertigo, blurred vision, unsteady movement, and difficulty reading, remembering, and thinking." (Source C). Evidence also suggests that turbines have sleep interference and that turbines can sound louder at night (Source C). These concerns that effect the health of members of communities should be taken into account. The counter-argument however is that wind turbines are harmless (Source C). Before a company decides to build a wind farm they should do research into studies that prove both points of view and consider conducting research themselves.

[3] Another impact that should be considered before creating a wind-farm is that turbines can alter the landscape. Turbines cannot be camouflaged or or made smaller, because this would effect the efficiency of the turbines. (Source E) It would also be very difficult to paint them colors that match the surroundings due to changes in seasons and colors (Source E). "turbines can impose significant costs by disrupting territorial views for local residents." (Source E). The counter-argument to this is that wind turbines / farms can be depicted as work of art. (Source E). Windmills play a role in art and literature, such as in seventeeth-century Dutch paintings and Spanish literature, such as Don Quiote. Before installing a wind farm, agencies should look into the views of the communities that they are looking at and make decisions based on the opinions of the community.

[4] The last factor that an individual or agency should consider when deciding whether to establish a wind farm is cost and efficiency. Wind power is more costly than coal or natural gas. It is important for an agency or individual to understand the investment that they are making. (Source F) Although it costs more, wind is one of the most efficient forms of energy (Source F). If an individual or agency is willing to invest upfront to accomplish a long term gain, than wind power is an option to consider.

[5] When deciding whether to establish a wind farm, agencies or individuals should consider the health impacts from the noise, the impact the turbines will have on the landscape's appearance, and the cost and efficiency of wind turbines.

### Sample D

[1] The establishment of wind turbines and wind farms is a newly risen controversial topic in society. Wind turbines are a modern energy source, that are clean and reusable, but come with a price. Many argue that prices and few drawbacks out-way the benefits. There are many factors to consider when establishing a wind farm; including environment advantages, economics, and potential health issues.

[2] The first factor that should be considered is the environmental advantage. Wind farms produce an immense amount of electricity. Not to mention, wind farms are the most efficient source by over 500% when compared to fuel sources (Source F, Molla). In a world where our environment is no question deteriorating, wind farms efficiency could play an important factor in helping our conditions. In society today, consumers fall to coal, oil and natural gas for energy sources. These three sources combined account for 98% efficiency, compared to wired turbines 1.164%, out-weighing all other sources by a lot. Not to mention, wind energy is completely clean. It doesn't release any harmful gases into the air unlike coal (Source B, Layton). Wind turbines combine efficiency with cleanliness for the environment, producing mass amounts of electricity.

[3] Another factor that should be considered is economics. Wind turbines have saved industries financially in generous ways. A small town in Texas has relied on oil and gas producers to run their economy for years. However, a recent drop in production has been saved by wind turbines. As the country's supply of oil and other natural gases continues to decline, citizens are going to be forced to find other ways to get the energy needed. Wind farms are a simple solution to this problem, "bringing an economic incentive that oil and gas do not" (Source D, Brown). Without wind power, the town of McCamey and towns alike would struggle financially for years to come. In addition, wind farm prices are not that far off from coal and natural gas to produce electricity. The cost to produce 1 MWH of electricity costs \$66 for natural gas and \$95 for coal. Wind power is only \$2 more than that, coming in at \$97 per 1 MWH (Source F, Molla). Not to mention, wind is a much cleaner and even simpler source of energy. Wind farms are an economic advantage in more ways than one.

[4] A third factor to consider when establishing a wind farm are the overall drawbacks. Many cases of health issues have been reported along with complaints of landscape appearance. Cases of sleeping problems have been studied in a recent investigation, relating sleep interference becoming worse for those who live closer to the wind turbines (Source C, Seltenrich). This could become a serious problem if it continues to grow. Wind turbines may have been placed a great distance away from residents, losing their effectiveness. The turbines generates a lower frequency sound, which is more capable of travelling through walls and windows (Source C, Seltenrich) making sleep much more difficult with the constant disturbance to the ears. In addition, many residents are unhappy with the size of the turbines, interfering with their views. Many residents have grown a strong liking to their views and are unhappy about the 400 feel tall turbines, "disrupting territorial views for local residents who may have grown attached to an areas existing natural backdrop" (Source E, Rule). In this instance, residents are more concerned with their property and greatly loved views then the use of wind turbines. Agencies cannot leave out the drawbacks when considering to establish a wind farm, especially if it affects people directly.

### Sample E

[1] In todays society, electricity is everything. After a long day at work you go home, sit down and turn on the TV. Did you ever think where your electricity is coming from? Many states and people across the US are converting to use windmills as their energy source. Some factors you should consider before converting to that source of energy is, wind power is clean and renewable, their appearance, and the cost it will be. These factors can determine whether you establish a wind farm.

[2] First of all, the source to power the wind farms are wind. These "big fans" are powered by the flow of the wind in our atmosphere. "Wind power is clean, and it's renewable" (Layton). There is always wind in our atmosphere, especially the higher you are, and the wind is clean. The wind isn't manufactured in a factory then released into the air, it is natural. "It doesn't release harmful gases like CO2 and nitrogen oxides into the atmosphere the way coal does (Layton). Energy sources such as nuclear power plants use harmful gases which are released into the atmosphere. The usage of these turbines can be good for the environment and use natural resources as well.

[3] Secondly, the size and appearance of the wind farms can be a factor as well. "Modern utilityscale wind turbines commonly exceed 400 feet in height" (Rule). These turbines will most likely be larger than the buildings around them. This can factor in because residents may have grown attached to the views... "it is often impossible to successfully camouflage turbines with paint such that they blend in with their surrounding" (Rule). It is difficult to disguise the turbines with their landscapes because the world is always changing. Many suggest to make them colorful and vibrant, but they would still be as distracting and not blend with the landscape. The appearance of the windfarms may alter the landscape and its appearance.

[4] Lastly, the cost of the turbines can be good and bad. "A typical large wind turbine can generate enough power to generate 600 households" (Layton). One wind turbine could create enough power to generate 600 houses. Imagine the money that would be saved from building hundreds, in a wind farm. In 2014, Rani Molia, has a blog which showed that the most efficient energy inputed retained when converting fuel to electricity was wind. It also shows that wind is the fourth lowest, at \$97, to produce 1 MWH of electricity. Using these facts a wind farm is one of the best ways to produce energy based on cost.

[5] In conclusion, windfarms are a good device used to produce energy. There are good factors such as, wind is clean and renewable, as well as the cost. There are also bad factors such as the appearance and size that they are. These turbines are useful and can be used all over the world.

### Sample G

[1] Throughout the years society has always been developing new ways to obtain energy effectively and also efficiently. As for the development of the windmill there are many important factors that an individual or agency should consider when deciding whether to establish a wind farm. These most important factors include, wind fluctuation, effects the environment.

[2] To start off, when dealing with energy resources for example like coal, it is a very controled resorce that can be maintaed effectively. But as for wind, it is not the same case, in most cases wind can become very unpredictible and making it a very unrelible resource to utilize. One example in Source B states, "wind turbines can't always run at 100 percent power like many of the types of power plants, since wind speeds fluctuate." And Because of this factor that which developes and unreliable resource wind power is the lowest electricity generation in the United States.

[3] One other important factor that an individual or agency should consider when deciding whether to establish a wind farm are the many effects that occur to the environment. Wind farms can alter landscapes appearance "...turbines can impose significant costs by disrupting territorial views for residents who may have grown attached to an area's existing natural back drop." (Source E). This is factor that an individual or agency should consider when establishing wind farms. Another effect that occur to envroment is the disruption and the harm that it causes to the envroment. (Source B) states, "wind turbines can be noisy if you live close to a wind plant, they can be hazardous to birds and bats, and in a hard-packed desert there is a risk of land erosion."

[4] In conclusion, the most important factors that an individual or agency should consider when deciding whether to establish a wind farm are wind fluctuation, effects on the environment and the negitive impact on wildlife.

### Sample HH

[1] The first wind turbine was put in place in 2001. Today, there are over 800 wind turbines in America. But, is this source of energy a good way to go? Wind turbines tend to have many harmful affects, and do more harm than good.

[2] These turbines use wind as a source of energy. Although this is a "clean" and "renewable" way to generate electrisity, as stated in Source B, it also has a risk of land erosion and takes away possible wildlife habitats. In areas where the dirt or sand is packed tight, digging it up to install these turbines can loosen the surface and cause the land to erode. As far as habitats go, as seen in Source A (photo) there are miles and miles of wind turbines taking up land that could be used by our wildlife creatures.

[3] Exceeding "400 feet in height", as stated in source E, these turbines can get in the way of our atmospheric animals. Because they are so tall, "they can be hazardous to birds and bats," as explained in Source B because they could fly right into the blades which can cause severe injuries or even death.

[4] Not only can the wind turbines cause harm to the animals, but it can also cause harm to humans. Source C outlines that "anecdotal evidence strongly suggests a connection between turbines and a constellation of symptoms including nausea, vertigo, blurred vision, unsteady movement, and difficulty reading, remembering, and thinking." As you can see, these turbines cause health problems to the people around them. The aerodrynamic noise produced by air moving around the spinning blades" causes a frequency which causes these symptoms as well as the "physiology of the inner ear." If these wind turbines can affect a humans health so much, is it really worth keeping?

[5] To conclude, wind turbines may sound great at first, but if you take a closer look at what is ahead, you will see the different negative outcomes.

### Sample H

[1] The use of wind turbines for power has many benefits and also many potential disadvantages. All of these things should be considered when establishing a wind farm.

[2] Source F shows two graphs. One graph shows different ways energy is produced and which is most efficient. The other graph shows the cost efficiency of each type of energy. The first graph shows wind energy as being the most efficient by being more than double of the other types. The second graph shows that wind energy is also in the top 4 least expensive types of energy to produce as well.

[3] Source B talks about how wind energy is clean and renewable. It doesn't release harmful gases, and we can't run out of wind. This source also talks about some of the drawbacks of wind energy. Since wind speeds aren't constant, they don't always run. Wind turbines can also be a danger to birds and bats.

[4] Source C mainly talks about noise being a big drawback people hear wind turbines may have trouble sleeping. The noise doesn't just affect people right next to the turbines. Since the turbines are so tall, the noise affect people anywhere near them.