2019

AP® CollegeBoard

AP® English Language and Composition

Free-Response Questions

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ENGLISH LANGUAGE AND COMPOSITION

SECTION II

Total time—2 hours and 15 minutes

Question 1

Suggested reading and writing time—55 minutes.
It is suggested that you spend 15 minutes reading the question, analyzing and evaluating the sources, and 40 minutes writing your response.
Note: You may begin writing your response before the reading period is over.

(This question counts for one-third of the total essay section score.)

In response to our society's increasing demand for energy, large-scale wind power has drawn attention from governments and consumers as a potential alternative to traditional materials that fuel our power grids, such as coal, oil, natural gas, water, or even newer sources such as nuclear or solar power. Yet the establishment of large-scale, commercial-grade wind farms is often the subject of controversy for a variety of reasons.

Carefully read the following six sources, including the introductory information for each source. Then synthesize material from at least three of the sources and incorporate it into a coherent, well-written essay in which you develop your position on the most important factors that an individual or agency should consider when deciding whether to establish a wind farm.

Your argument should be the focus of your essay. Use the sources to develop your argument and explain the reasoning for it. Avoid merely summarizing the sources. Indicate clearly which sources you are drawing from, whether through direct quotation, paraphrase, or summary. You may cite the sources as Source A, Source B, etc., or by using the descriptions in parentheses.

Source A (photo)
Source B (Layton)
Source C (Seltenrich)
Source D (Brown)
Source E (Rule)
Source F (Molla)

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Source A

Winchell, Joshua. "Wind Turbines." *U. S. Fish and Wildlife Service National Digital Library*, 25 Mar. 2009, digitalmedia.fws.gov/cdm/ref/collection/natdiglib/id/6861.

The photograph below was taken for the United States Fish and Wildlife Service.

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Source B

Layton, Julia. "How Wind Power Works."
HowStuffWorks, 9 Aug. 2006,
science.howstuffworks.com/environmental/
green-science/wind-power.htm.

The following is excerpted from a popular Web site dedicated to explaining various processes.

On a global scale, wind turbines are currently generating about as much electricity as eight large nuclear power plants. That includes not only utility-scale turbines, but also small turbines generating electricity for individual homes or businesses (sometimes used in conjunction with photovoltaic solar energy). A small, 10-kW-capacity turbine can generate up to 16,000 kWh per year, and a typical U.S. household consumes about 10,000 kWh in a year.

A typical large wind turbine can generate up to 1.8 MW* of electricity, or 5.2 million KWh annually, under ideal conditions—enough to power nearly 600 households. Still, nuclear and coal power plants can produce electricity cheaper than wind turbines can. So why use wind energy? The two biggest reasons for using wind to generate electricity are the most obvious ones: Wind power is **clean**, and it's **renewable.** It doesn't release harmful gases like CO_2 and nitrogen oxides into the atmosphere the way coal does . . . and we are in no danger of running out of wind anytime soon. There is also the independence associated with wind energy, as any country can generate it at home with no foreign support. And a wind turbine can bring electricity to remote areas not served by the central power grid.

But there are downsides, too. Wind turbines can't always run at 100 percent power like many other types of power plants, since wind speeds fluctuate. Wind turbines can be noisy if you live close to a wind plant, they can be hazardous to birds and bats, and in hard-packed desert areas there is a risk of land erosion if you dig up the ground to install turbines. Also, since wind is a relatively unreliable source of energy, operators of wind-power plants have to back up the system with a small amount of reliable, non-renewable energy for times when wind speeds die down. Some argue that the use of unclean energy to support the production of clean energy cancels out the benefits, but the wind industry claims that the amount of unclean energy that's necessary to maintain a steady supply of electricity in a wind system is far too small to defeat the benefits of generating wind power.

Potential disadvantages aside, the United States has a good number of wind turbines installed, totaling more than 9,000 MW of generating capacity in 2006. That capacity generates in the area of 25 billion kWh of electricity, which sounds like a lot but is actually less than 1 percent of the power generated in the country each year. As of 2005, U.S. electricity generation breaks down like this:

- **Coal**: 52%
- **Nuclear:** 20%
- **Natural Gas:** 16%
- **Hydropower:** 7%
- **Other** (including wind, biomass, geothermal and solar) 5%

The current total electricity generation in the United States is in the area of 3.6 trillion kWh every year. Wind has the potential to generate far more than 1 percent of that electricity.

*1 MW (megawatt) = 1,000 kWh (kilowatts)

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Source C

Seltenrich, Nate. "Wind Turbines: A Different Breed of Noise?" *Environmental Health Perspectives*, vol. 122, no. 1, Jan. 2014. National Institute for Environmental Health Sciences, ehp.niehs.nih.gov/wp-content/uploads/122/1/ehp.122-A20.pdf.

The following is excerpted from an article in a peer-reviewed journal published by a federally funded research institute. The numbered notes refer to source information that has been omitted from this excerpt for length.

Large-scale wind turbines are a relatively recent innovation, so the body of peer-reviewed research addressing the potential impacts of their unique brand of sound is sparse and particularly unsettled. 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.[24]

The polarizing issue of wind-turbine noise is often framed one of two ways: Turbines are either harmless,[25] or they tend to have powerful adverse effects, especially for sensitive individuals.[26] According to Jim Cummings, executive director of the nonprofit Acoustic Ecology Institute in Santa Fe, New Mexico, most of the reports to date that have concluded turbines are harmless examined "direct" effects of sound on people and tended to discount "indirect" effects moderated by annoyance, sleep disruption, and associated stress. But research that considered indirect pathways has yielded evidence strongly suggesting the potential for harm.

Multiple recent studies, including one coauthored by Daniel Shepherd, senior lecturer at New Zealand's Auckland University of Technology, have demonstrated that sleep interference gets worse the nearer residents are to turbines.[20,27] "Sleep is absolutely vital for an organism," he says. "When we lose a night's sleep, we become dysfunctional. The brain is an important organ, and if noise is disturbing its functioning, then that is a direct health effect."

In another recent study, Shepherd made a case for approaching the debate from a social or humanistic standpoint, taking perceived effects seriously even if the potential mechanisms through which they occur remain unclear. Many reasons exist for taking this approach with wind-turbine noise, he wrote.[28]

First is that turbine noise (that is, the aerodynamic noise produced by air moving around the spinning blades as opposed to any mechanical noise from the motor itself) is often deemed more annoying than the hum or roar of transportation noise because of its repetitive nature and high variability in both level and quality—from "swoosh" to "thump" to silence, all modulated by wind speed and direction. This pulsing, uneven quality enables the noise to repeatedly capture the attention and become more difficult to ignore.[29,30]

In addition, unlike vehicle traffic, which tends to get quieter after dark, turbines can sound louder overnight. As Cummings explains, "Often at night, wind shear sets in. This creates conditions with moderate winds at hub height and a sharp boundary layer below which winds are much lower, or even near still." The absolute noise level of the wind farm may be no more than during the day, but it can be 10–20 decibels louder than the quieter nighttime ambient sound levels. This detail has important implications for sleep disruption.

Third, wind turbines generate lower frequencies of sound than traffic. These lower frequencies tend to be judged as more annoying than higher frequencies and are more likely to travel through walls and windows.[31] Infrasound, or sound frequency lower than 20 Hz—inaudible to the human ear—has been associated in some studies with symptoms including fatigue, sleeplessness, and irritability,[32] as well as with changes to the physiology of the inner ear that have poorly understood implications.[33]

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Source D

Brown, Hal. "Blowin' in the Wind: Texas Ranchers Turn to Turbines." *E: The Environmental Magazine*, vol. 19, no. 1, 2008. *Academic Search Premier*, search.ebscohost.com/login.aspx?direct=true&db=aph&AN=28052795&site=ehost-live&scope=site.

The following is excerpted from an article in a magazine that features articles on environmental issues.

In sun-seared West Texas, oil and gas producers have driven the regional economy since the mid-1920s. Now there's a new player in town—electricity-generating wind turbines. The turbines are sprouting by the hundreds on the low mesas that dot the desert landscape.

Wind turbines came to the small West Texas town of McCamey with the millennium. Construction began in 2000, and the first machines came on line in 2001. Florida Power and Light (FPL) now runs 688 area turbines.

"There are three things you're going to have to find," says Neil James, production manager for the FPL wind operations around McCamey. "That's the wind, the transmission lines and the land. The McCamey area is very abundant in those three things."

McCamey, population 1,600, has always been blessed with petroleum resources, but the oil business boom-and-bust cycles have taken their toll. Oil production in Upton County dropped almost 25 percent from 1972 (when it was 12.5 million barrels) to 1999 (9.4 million barrels).

Wind power has restored McCamey's economy. It now bills itself as the "Wind Energy Capital of Texas." "It was dying there for a little bit," admits Alicia Sanchez, who heads McCamey's economic development office. "Now taxes have increased 30 percent from 2004 to 2007. All we can see is positive." Texans apparently agree. An FPL-commissioned study released earlier this year said 93 percent support further development of wind energy in the state.

Federal tax credits, coupled with a Texas mandate requiring that a percentage of electricity come from green power producers, have spurred development. Rick Doehn manages rights of way and surface lands leasing for the state's Permanent University Fund, which supports the University of Texas and other Texas institutions, and also owns 2.1 million acres, chiefly in West Texas. Doehn says wind turbine leases and oil and gas leases often involve the same land. "The electric companies didn't see any problems with oil rigs," he says. "They're towers, but they're only up for a month or two, unless it's a very deep well."

Texas' other historic industry, ranching, loves the turbines. Rancher Ernest Woodward said he can't imagine any harm coming to his livestock from nearby turbines. "Windmills are very clean," Woodward said. "There's nothing that's harmful to the environment that I know of." Bird kills, he says, are not a problem because West Texas fowl have little problem avoiding the slow-moving (20 revolutions per minute) turbine blades.

For some ranchers, wind turbines bring with them an economic incentive that oil and gas do not. "Wind power is a surface activity," Doehn says. "With oil and gas the minerals are underneath, and a lot of ranchers don't own the mineral rights. Many of them sold off the minerals in order to get enough money to retain the surface rights when times were tough."

Woodward, who has both wind leases and oil leases on his ranch between McCamey and Fort Stockton, says there's room enough for both. There are 243 of the big wind turbines turning on Woodward Mesa. He gets a six to eight percent royalty payment on the power the turbines make. "We're just living off the land and whatever else we can do. We're glad to have them," he says.

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Source E

Rule, Troy A. *Solar, Wind and Land: Conflicts in Renewable Energy Development.* Routledge, 2014.

The following is excerpted from a recent scholarly book.

Without question, the gargantuan wind turbines installed in today's commercial wind farms can materially alter a landscape's appearance. Modern utility-scale wind turbines commonly exceed 400 feet in height, towering well above any other buildings or structures in their vicinities and tall enough to be seen from several miles away. Even in rural areas where population densities are relatively low, turbines can impose significant costs by disrupting territorial views for local residents who may have grown attached to an area's existing natural backdrop. The presence of turbines continues into the night, when turbine safety lighting often required under federal aviation laws flashes across an otherwise pristine evening sky.

Unfortunately, only so much can be done to disguise commercial wind turbines from view. Because the colors naturally occurring in the sky and on land tend to change with the seasons and time of day, it is often impossible to successfully camouflage turbines with paint such that they blend in with their surroundings. Painting designs on turbines or painting them multiple colors tends to only make them more distracting, and painting them gray can make them seem "dirty" or "associated with an industrial, urban, or military character." Consequently, most commercial wind turbines are painted white—a color choice based partly on a belief that bright white turbines "convey a positive image" and are "associated with cleanliness."

Installing smaller, shorter turbines to make them less conspicuous to neighbors is also rarely a viable option. The energy productivity of natural wind tends to increase significantly with altitude, so turbines are purposely designed to stand high above the ground to capture those more productive wind currents. By towering well above the earth's surface, modern commercial wind turbines also avoid turbulence from nearby buildings and trees that might otherwise diminish their productivity. And the sheer size of a commercial wind turbine's rotor, which directly affects its generating capacity, requires that the turbine be mounted upon a tall tower.

Unable to camouflage or shrink the size of utility-scale wind turbines, wind energy developers must often find ways to assuage locals' concerns about the potential visual impacts of these enormous devices. Developers' ability to do so depends in part on local residents' subjective views about the attractiveness of the turbines themselves. Indeed, wind turbines are no different from any other structure in that their beauty or ugliness ultimately rests in the eye of their beholder. Some scholars have suggested that wind farms could and should be more commonly viewed as works of art. Citing the widespread depiction of windmills in notable seventeenth-century Dutch paintings and the large-scale environmental art projects of famous artists such as Christo Javacheff, they argue that commercial wind energy projects should be perceived as artistic creations rather than industrial blight.

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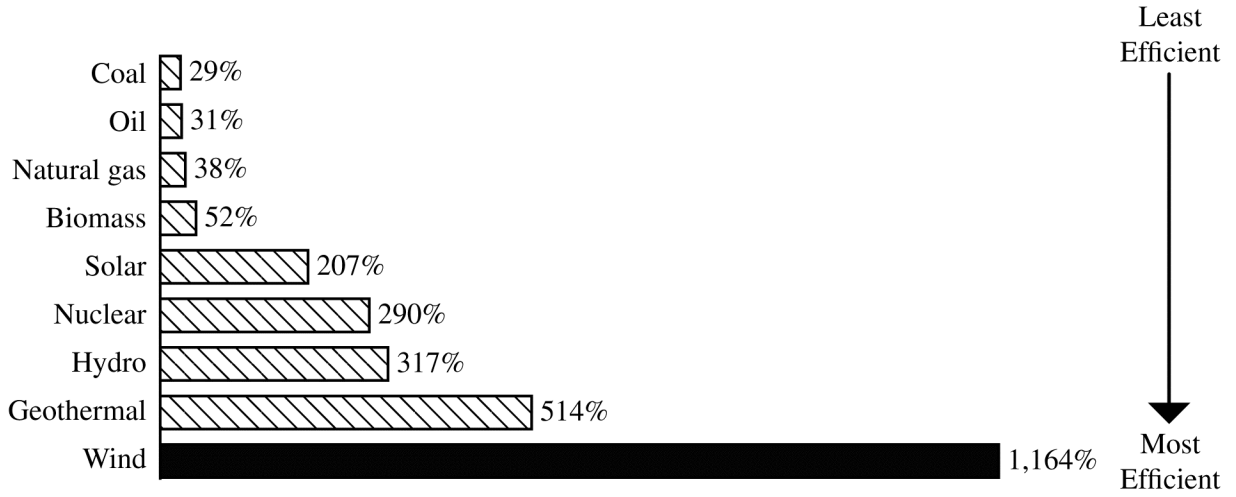
Source F

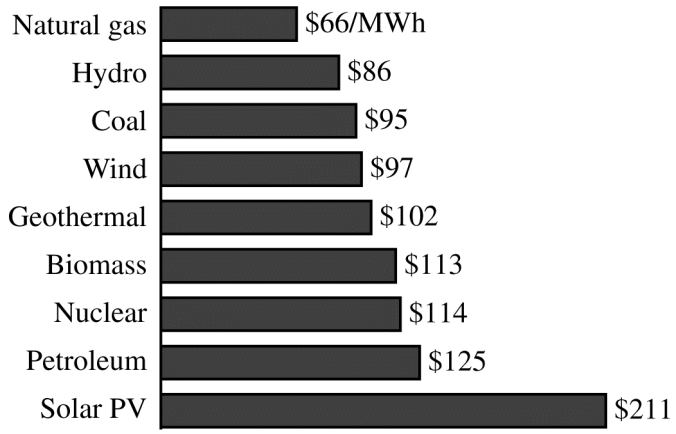
Molla, Rani. "What Is the Most Efficient Source of Electricity?" *Wall Street Journal*, 15 Sept. 2014, blogs.wsj.com/numbers/what-is-the-most-efficient-source-of-electricity-1754/.

The following is excerpted from a blog on a news site that examines the mathematics behind common events.

PERCENTAGE OF ENERGY INPUT RETAINED WHEN CONVERTING FUEL TO ELECTRICITY



COST TO PRODUCE 1 MWh OF ELECTRICITY IN 2009
(United States Dollars)



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Question 2

Suggested time—40 minutes.

(This question counts for one-third of the total essay section score.)

In 1930 Mohandas "Mahatma" Gandhi led a nonviolent march in India protesting Britain's colonial monopoly on and taxation of an essential resource: salt. The Salt March, as it came to be known, was a triggering moment for the larger civil disobedience movement that eventually won India independence from Britain in 1947. Shortly before the Salt March, Gandhi had written to Viceroy Lord Irwin, the representative of the British crown in India. The passage below is the conclusion of that letter. Read the passage carefully. Then, in a well-written essay, analyze the rhetorical choices Gandhi makes to present his case to Lord Irwin.

I know that in embarking on non-violence, I shall be running what might fairly be termed a mad risk. But the victories of truth have never been won without risks, often of the gravest character. Conversion of a nation that has consciously or unconsciously preyed upon another, far more numerous, far more ancient, and no less cultured than itself, is worth any amount of risk.

I have deliberately used the word conversion. For my ambition is no less than to convert the British people through non-violence, and thus to make them see the wrong they have done to India. I do not seek to harm your people. I want to serve them even as I want to serve my own. I believe that I have always served them.

I served them up to 1919, blindly. But when my eyes were opened and I conceived non-co-operation, the object still was to serve them. I employed the same weapon that I have, in all humility, successfully used against the dearest members of my family. If I have equal love for your people with mine, it will not long remain hidden. It will be acknowledged by them, even as the members of my family acknowledged, after they had tried me for several years. If the people join me, as I expect they will, the sufferings they will undergo, unless the British nation sooner retraces its steps, will be enough to melt the stoniest hearts.

The plan through civil disobedience will be to combat such evils as I have sampled out. If we want to sever the British connection it is because of such evils. When they are removed, the path becomes easy. Then the way to friendly negotiation will be open. If the British commerce with India is purified of greed, you will have no difficulty in recognizing our independence. I invite you then to pave the way for immediate removal of those evils, and thus open a way for a real conference between equals, interested only in promoting the common good of mankind through voluntary fellowship and in arranging terms of mutual help and commerce equally suited to both. You have unnecessarily laid stress upon communal problems that unhappily affect this land. Important though they undoubtedly are for the consideration of any scheme of Government they have little bearing on the greater problems which are above communities and which affect them all equally. But if you cannot see your way to deal with these evils and my letter makes no appeal to your heart, on the eleventh day of this month, I shall proceed with such co-workers of the Ashram[1] as I can take, to disregard the provisions of the salt laws. I regard this tax to be the most iniquitous of all from the poor man's standpoint. As the independence movement is essentially for the poorest in the land, the beginning will be made with this evil. The wonder is that we have submitted to the cruel monopoly for so long. It is, I know, open to you to frustrate my design by arresting me. I hope that there will be tens of thousands ready, in a disciplined manner, to take up the work after me, and, in the act of disobeying the Salt Act[2], to lay themselves open to the penalties of a law that should never have disfigured the statute book.

I have no desire to cause you unnecessary embarrassment, or any at all, so far as I can help. If you think that there is any substance in my letter, and if you will care to discuss matters with me, and if to that end you would like me to postpone publication of this letter, I shall gladly refrain on receipt of a telegram to that effect soon after this reaches you. You will, however, do me the favour not to deflect me from my course, unless you can see your way to conform to the substance of this letter.

This letter is not in any way intended as a threat, but is a simple and sacred duty, peremptory on a civil resister. Therefore, I am having it specially delivered by a young English friend who believes in the Indian cause and is a full believer in non-violence and whom Providence seems to have sent to me, as it were, for the very purpose.

[1] A spiritual retreat or monastery for a community of Hindus

[2] The India Salt Act (1882) enforced the British colonial government's monopoly on the collection, manufacture, and sale of salt in India.

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Question 3

Suggested time—40 minutes.

(This question counts for one-third of the total essay section score.)

The term "overrated" is often used to diminish concepts, places, roles, etc. that the speaker believes do not deserve the prestige they commonly enjoy; for example, many writers have argued that success is overrated, a character in a novel by Anthony Burgess famously describes Rome as a "vastly overrated city," and Queen Rania of Jordan herself has asserted that "[b]eing queen is overrated."

Select a concept, place, role, etc. to which you believe that the term "overrated" should be applied. Then, write a well-developed essay in which you explain your judgment. Use appropriate evidence from your reading, experience, or observations to support your argument.

STOP

END OF EXAM

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