General Apex	
Where was Apex last windmill project and how many windmills were there?	Apex is currently managing construction of the Neosho Ridge Wind project in Neosho County, Kansas, which we developed. That project comprises 139 turbines. We are also currently managing construction of the Aviator Wind project in Texas and the Isabella Wind project in Michigan, both of which Apex developed.
Why is the meeting scheduled in the middle of normal workday for a good portion of the adults living in the area?	The Jayhawk Wind team is committed to making it as convenient as possible for people in this area to access the information they need to make informed decisions about the project. In this case, we offered two local forums, one in each county, at different times of day to try to make attendance convenient for as many people as possible. That said, we understand that there are probably several people who would have liked to attend, but who could not make either session. To ensure that these individuals also have access to the information that was presented, we are posting videos of both events on the Jayhawk Wind website, as well as the questions and answers from the event.
How do you explain the mechanical liens placed on landowners for nonpayment of services?	In large construction projects of all kinds, it is common for subcontractors to use liens to ensure that they are protected when and if cost disputes emerge. In 2014, Apex initiated managing construction of the Hoopeston Wind project in Illinois, and during construction, there was a cost dispute between the contractor and a subcontractor. As required by their contract with Apex, the contractor posted a bond to cover the disputed costs, as is standard practice. In most places, the placement of the bond would have immediately released the lien, but at that time in Illinois, there was a unique law that allowed the subcontractor to leave the lien in place until the dispute was resolved, even though a bond was posted. Thankfully, the law in Illinois has since been amended. By requiring that our contractors post bonds to cover any outstanding liens, Apex ensures that participating landowners are not affected by subcontractor disputes, if they occur.
How do you explain all the lawsuits against Apex?	On a few Apex projects, there have been individuals who so adamantly hoped to prevent their construction, that they have been willing to try to use litigation to prevent the project from being built. To date, no such lawsuit has resulted in a court ruling for the plaintiff. Because lawsuits can be—and often are—filed without a legal or factual basis to support a claim, the existence of the suits themselves should not be seen as evidence of any wrongdoing.
Can we change the name from Jayhawk to Wildcat?	Great question—actually, the name Wildcat Wind was taken. This project's naming committee did consider Wildcat Wind, but it was already taken.

General Apex	
Is Jayhawk Wind the owner of the turbines?	Jayhawk Wind will own the turbines and all associated facilities once they are built. Apex Clean Energy currently owns Jayhawk Wind.
What are the advantages of wind over solar?	Both wind and solar have advantages and disadvantages, but this makes them highly complementary. From a land use perspective, wind turbines take less land out of production than solar, so that can be a benefit. Wind energy also tends to produce its energy at night, while solar produces power during the day. Both wind and solar are very affordable these days, so they are both beneficial to consumers and in diversifying the energy grid. Neither wind nor solar produces emissions of carbon or other air pollutants, so they are beneficial in that regard as well.
What is Apex's relationship to Evergy?	Evergy is an investor-owned electric utility with headquarters in Topeka, Kansas, and in Kansas City, Missouri. It was created through a merger between Westar and KCP&L. Nearly half of the power Evergy provides to homes and businesses is emissions-free. Jayhawk Wind is anticipated to interconnect into Evergy's Westar transmission line. Like all other energy providers operating in the Southwest Power Pool, Evergy is a potential Jayhawk customer.
Construction	
How much land must be cleared to put up a wind farm? / How much ground do you give up for each wind turbine?	The National Renewable Energy Laboratory conducted a survey that showed that between half an acre and 1.25 acres is required for every megawatt (MW) of capacity. During construction, more land will be temporarily disturbed as crews build roads, turbine foundations, and collection lines. Once construction is complete, all but the approximately 10-foot apron around the turbine and the access road will be restored. You can find the NREL study here.
Are trees that are cleared logged or they're pushed into piles?	When it is necessary to clear trees from a project site, the construction teams will properly log and remove the trees from the site.

Construction	
What are the turbines made of?	A wind turbine consists of three basic parts: the tower, the nacelle, and the blades. The towers are made of one-inch-thick plate steel, which curves and tapers at the top and is mechanically bolted together. The nacelle is a primarily fiberglass box containing the main drive shaft and the gearbox. Each blade is made of fiberglass wrapped around a wood frame, much like a boat. Several turbine components are manufactured in Kansas, and the Kansas Department of Commerce has identified wind energy as a "key industry" for the state, citing its "location in the heart of the nation's Wind Corridor … and rapidly developing industrial cluster of firms specializing in composites and polymers, offering expertise and resources in the field of advanced materials research and production."
What about the right of ways and fences damaged and crops ruined etc? / What about damage to crops or fences?	We at Jayhawk Wind prize our relationship with local landowners. Our lease terms are designed to financially protect landowners from any crop losses or damages that occur during or following construction. We work with each landowner to ensure that his or her property is returned to its original condition once construction is complete. For example, fences that were removed to accommodate construction are reinstalled or replaced once construction is complete and farmers are compensated for more than the market value of lost or damaged crops.
How deep are the cables buried?	Cables are typically buried between 42 and 48 inches deep.
How will you decide what locations you'll offer to actually place the wind turbine? / have the turbine locations already been determined?	There are a number of factors that go into determining the location of each turbine, including but not limited to landowner preferences; connectivity of the land leased; proximity to waterways and wetlands; presence of wildlife habitats; location of roads and bridges; location of homes; location of train tracks; model of turbine selected; and available capacity and access to transmission lines. These factors and others are integrated with wind modeling data to map a "buildable area" where turbines can be feasibly constructed. Because optimal turbine locations cannot be finalized until a turbine contract has been secured and all land has been leased, we are generally unable to determine final turbine locations until the end of the development process. We have not yet reached that point in the process for Jayhawk Wind, so any turbine layouts discussed at this time should be considered preliminary.

Decommissioning	
What happens when the turbines wear out? Are they replaced, taken down or just abandoned and at whose expense? / Are wind turbines always decommissioned after 25 years or some rebuilt using the same towers? /If a turbine stops working and is unrepairable, is it replaced or abandoned?	Modern turbines are expected to remain productive for at least 30 years. Throughout their lifespans, they will be maintained and repaired as necessary to keep them functioning at peak performance levels. As turbines reach the end of their functional lives, they may either be “repowered” with new technology, replaced with newer turbines, or removed from the site. If turbine removal is deemed the proper course of action at the end of a wind farm’s life, local landowners and governments will be protected from the costs of removing all facilities. At Jayhawk Wind, the project will be required to put a decommissioning bond in place that will fund the complete removal of all wind farm components if/when the time comes to do so. This will ensure that sufficient funds are available when decommissioning is needed to protect local parties from any costs associated with facility removal. When wind facilities are removed, the land can go back to its former agricultural use without any impact. The land will be fully restored for farming and no permanent marks from the wind farm will remain on the surface.
Who pays for the decommissioning or deconstruction? And who would lead the decommissioning/ deconstruction?	As above, Jayhawk Wind will put a decommissioning bond in place to cover all costs associated with decommissioning. The owner of the project at the time of decommissioning will manage the decommissioning project.
What is the cost to the county and the tax payers when a project is decommissioned, and who pays for the removal or replacement?	See above.
Is there actually an escrow account to pay for decommissioning?	Bonds are the most widely used financial vehicles to ensure sufficient funds are available to cover decommissioning when such action is necessary. Jayhawk Wind will put in place a bond to protect local taxpayers from the costs of decommissioning.
What would happen if the company would go into bankruptcy? /Who pays for deconstruction if after 25 years, in the case of a bankruptcy?	The Jayhawk Wind project will secure a decommissioning bond before construction begins. The bond will remain in place even if the facilities are sold and no matter what happens to the company that owns the facility. This bond will ensure that funds are available for decommissioning at the end of the life of the facilities, even in the highly unlikely event that the owner of the facility is absent.

Economic Impact	
How does this project affect property taxes?	Jayhawk Wind will produce tax benefits for the local government and school district and is expected to provide additional local funds through an Economic Benefit Agreement with each county in which it is located. It will be up to the boards of these local governments and school districts to determine how they will allocate the new revenues they receive from the Jayhawk Wind project. Other communities hosting wind farms have used these funds to support capital projects such as school buildings or new athletic facilities, plugging budget holes, or lowering local tax rates for everyone. For landowners participating in the project, the project lease guarantees that if their property taxes increase due to the presence of facilities on their land, the owner of the wind facilities will pay the difference.
What is the annual tax revenue on similar wind projects.	There are many variables that go into determining the annual tax revenue produced by a wind farm, significant among them being the prevailing state tax laws and county and school tax rates. In its article "U.S. Wind Energy Generates More Than $1 Billion in Tax Revenue, Payments," the Center for Rural Affairs estimates that wind projects generate a total of about $761 million in tax revenue each year across the U.S., a number that is growing. If built, Jayhawk Wind is expected to generate an average of $1 million per year in new revenue for the Bourbon County and Crawford County governments. Over its 25-to-30-year life, Jayhawk Wind is expected to bring Bourbon County at least $11.4 million in property taxes and contribution fees, and to Crawford County, which will host a smaller number of wind facilities, the project is expected to bring $3.9 million in county property taxes and contribution fees. In addition, local school districts in the footprint of Jayhawk Wind are expected to receive $9.4 million.
What happens to those 318 employees for Bourbon County and the hired employees for Crawford County after construction is completed?	The majority of the construction workers hired to build Jayhawk Wind will go on to other construction projects once the project is built. Though many of these jobs will only be in Bourbon and Crawford Counties temporarily, they will provide a significant boost to the local economy while they are in the area. The Jayhawk Wind construction crew will shop in local stores, frequent local restaurants, and stay in area hotels throughout the construction period. Many communities with wind facilities recognize the infusion of funds that comes during construction as significant for their local economies. Jayhawk Wind is also expected to create about 7 to 10 permanent jobs in the area.

Electric Markets	
Southeast Kansas is not a wind source area for the Department of Energy. Why are you ignoring the fact that this area is not conducive to wind energy development?	Electric generation is a competitive business, and wind projects cannot be financed or built unless they can produce cost-effective and needed power to the grid. Apex has confidence in the wind profile of the Jayhawk Wind project area due to the two years of data we have collected with the meteorological towers ("met towers") we have built to measure local wind speeds over time. In addition, our study of wind profiles in neighboring Neosho County has confirmed that wind characteristics in this area will produce competitively priced electricity. The site-specific data we collect with our local met towers is considered to be more accurate than the national wind evaluations, which are conducted on a macro level and consider much larger areas.
Does the electricity help the people around this area, or does it help someone else?	The electricity produced by the Jayhawk Wind project will be fed into the electric grid that serves the region, including Crawford and Bourbon Counties. While it is impossible to say where each electron produced by the facility will ultimately be used, the addition of Jayhawk's clean, low-cost, predictable electricity to the local grid is strengthening the system as a whole. Furthermore, as the price of energy generated by wind farms has plummeted in recent years (as documented by the Department of Energy in its 2018 Wind Technologies Market Report), the addition of new wind energy to the system is helping create downward price pressure on all sources of electric power generation. In addition to decreasing electricity costs overall, creating a more diverse energy portfolio helps insulate consumers from price shocks when prices for other energy sources go up.
I have heard that the energy required to construct turbines exceeds the amount of energy it can produce in its lifetime. Is that correct?	While this statement is frequently repeated, it has been proven to be untrue. When U.S. researchers carried out an environmental lifecycle assessment of 2 MW wind turbines, they concluded that "in terms of cumulative energy payback, or the time to produce the amount of energy required of production and installation, a wind turbine with a working life of 20 years will offer a net benefit within five to eight months of being brought online."
How much energy does a single turbine produce?	There are a number of variables that impact the production of an individual wind turbine, including wind conditions, turbine size, and turbine model efficiency. An average onshore wind turbine with a capacity of 2.5 to 3 MW can produce more than 6 million kWh in a year.
What is the cost of a single turbine and then at what point will it pay for itself?	Renewable energy projects have to compete with other types of energy generation sources on power price and with other types of possible investments for financing. Though the specific payback period for an investor depends on the specifics of each particular project, the fact that investors are choosing to invest in projects indicates that they think the investment is worth it.

Wildlife and Environment	
How will the conduction of electricity affect groundwater such as underground aquifers, wells, creeks, streams and ponds?	The presence of underground electric collection lines will have no effect on groundwater, underground aquifers, wells, creek, streams, or ponds. They are grounded systems and the electric fields produced by underground conductors are minimal. Wind turbines themselves are three-phase systems that will immediately shut down before any voltage can be “leaked.”
What is the impact on wild life?	Apex has wildlife biologists on staff who evaluate every one of our proposed projects to ensure that we are siting each project responsibly for wildlife. We work closely with local, state, and federal wildlife agencies to design projects that will have minimal impact on local wildlife populations, and we obey all local, state, and federal environmental laws. Each project undergoes rigorous study during its design to minimize or mitigate any potential risk to local wildlife, and projects are built and operated to be safe for local species. In general, wind energy offers important benefits to wildlife. The displacement of fossil fuel generators by wind energy generators helps contribute to a reduction in dangerous air pollution, water pollution, and carbon emissions, which pose some of the greatest threats to birds and other wildlife.
Health	
Is there any proof that being exposed to sound levels consistent with wind turbines over 24 hours, 7 days, that it does not negatively affect your health? Is there any proof that it does not negatively affect your health, whether it be audible or inaudible? / What are the health impacts, like issues with shadow flicker, et cetera, migraines, seizures?	Health Canada completed a detailed study in 2014 to “investigate the prevalence of health effects or health indicators among a sample of Canadians exposed to WTN (wind turbine noise) using both self-reported and objectively measured health outcomes.” They looked at people from two different provinces of Canada and found that people living near wind energy facilities DO NOT experience health impacts from being close to wind turbines. While turbines were audible at times, the sound they produce, whether inaudible or audible, was found to have no direct impact on the health of nearby individuals. According to Health Canada: The following were not found to be associated with WTN exposure: • self-reported sleep (e.g., general disturbance, use of sleep medication, diagnosed sleep disorders);

	• self-reported illnesses (e.g., dizziness, tinnitus, prevalence of frequent migraines and headaches) and chronic health conditions (e.g., heart disease, high blood pressure and diabetes); and • self-reported perceived stress and quality of life. Furthermore, there is no evidence linking wind turbine shadows with seizures. The Epilepsy Foundation states that to cause epileptic seizures, "The turbine blades would need to rotate at speeds faster than 3 hertz (flashes per second). Turbines on commercial wind farms rotate at speeds under 2 hertz. Smaller, private turbines can rotate faster as they are not subject to the same regulations on rotation speed."
With all the independent studies that have been produced on the negative effects on infrasound, why or how can you continue to state there are no negative impacts to humans or animals?	Peer-reviewed literature has clearly concluded that there are no health impacts from living in proximity to wind turbines, and these investigations often include consideration of infrasound. We share the conclusions of the Health Canada Study above; those findings are also supported by scientifically rigorous studies conducted by numerous American state agencies.
Are there any health issues or behavioral issues on people or animals that are linked to low frequency sound levels?	We are not aware of any peer-reviewed literature documenting health impacts on people or animals by wind turbines. If you visit a wind farm during the hot summer months, you will see that livestock actively seek out the shade of the turbines. We rely on peer-reviewed studies, because "Peer review is designed to assess the validity, quality and often the originality of articles for publication. Its ultimate purpose is to maintain the integrity of science by filtering out invalid or poor-quality articles." You can learn more about peer review and why it is important for determining the quality and credibility of scientific studies here.
Will equipment or conduction of energy have an impact on medical equipment in homes that are near the turbine sites? Such as if somebody has an implanted medical device or some sort of external medical device.	There is no evidence that wind turbines or wind farms will affect medical equipment or devices. There are more than 57,000 turbines spinning around the country today, and to our knowledge, there have been no publicized reports of any impacts to medical devices in nearby homes or elsewhere.

Leasing	
Do the payments continue to the next generation upon the death of the property owner?/ What happens if a person wants to sell the property that the turbine is on? What happens if a person wants to sell the property?	Wind facility leases travel with the property. If ownership of a hosting parcel is transferred from one person or entity to another, the lease will transfer to the new owner with the land. Whether the landowner passes the land on to the next generation or sells the property, the lease and its associated payments will go with it.
[Is a participating landowner] paid by the production or a flat rate? / What kind of payment is made for everything, and are you paid monthly?	Lease terms and structures vary from project to project in accordance with local market conditions. Generally speaking, landowners who sign a lease are paid a given amount each year during the project development period, and a different amount once the project is built and turbines are operating. Payment terms may depend on what types of facilities a landowner is hosting and whether their land remains in the project boundary once the project is built. If you are interested in leasing your property for the project, or if you already have a lease with the project, it is best to speak to the developer directly about any questions you may have on payment terms.
What kind of payment is made when [the turbines] are not turning?	The specific terms for landowners participating in the Jayhawk Wind project are defined in the lease. Please contact us at info@jayhawkwind.com with any specific questions.
How much can a landowner hope to make per turbine?	We would be glad to speak with any landowner within the footprint of the Jayhawk Wind project about the terms of a lease. You can reach us at info@jayhawkwind.com or by phone at (620) 213-4307.
What are the setbacks for non-participating homes and what are the setbacks for non-participating properties?	Setbacks vary across projects, across localities, and across states. Fundamentally, Apex designs its projects to protect the safety of facility neighbors, facility workers, and the public at large. Though we have not yet finalized a layout for Jayhawk Wind, we anticipate that no turbine will be closer than 1,425 feet from a nonparticipating home or closer than 1,225 feet from a participating home in the project. Turbines will also be set back from nonparticipating property lines. The setback from nonparticipating property lines is being modeled at 110% turbine height.

Leasing	
When one land owner gives you the right to put a turbine on their land, but the next land owner doesn't give the okay. How do you handle that on paying them for their land? Do you push them into giving you their rights?	Apex only constructs facilities on properties whose owners have voluntarily leased their land to the project for this purpose. We believe private property owners should be able to use their land in the manner they see fit.
How fixed are the project boundaries for this project? /Can other acreage outside the current designated area be added?	The Jayhawk Wind team expects that the project boundary will continue to change throughout the development of the project. If you are a landowner with property close to the proposed Jayhawk Wind footprint, please do come talk with us. You can reach the Jayhawk Wind team at info@jayhawkwind.com or by phone at (620) 213-4307.
How many permanent local employees will work in the maintenance building or the office?	Once Jayhawk Wind is operational, we anticipate there will be about seven permanent, full-time employees working at the Jayhawk Wind facility. These employees will report to the operations and maintenance office, and they will live in and contribute to the local community.
Local Business Opportunities	
Do you hire local?	Jayhawk Wind's first priority when making hiring decisions is to find the most qualified individuals who can ensure the project is built and operated safely at all times. Depending on project ownership at the time of hiring, Apex may or may not be involved in the hiring decisions for a project. When possible, we strive to hire locally. During construction, the project's lead contractor will be responsible for making hiring decisions. We encourage these contractors to consider hiring locally wherever possible, and our Local Vendor Program is designed to help the contractor find qualified local vendors. (For more information about our Local Vendor Program, visit http://www.jayhawkwind.com/local_vendor_program.) There are many types of vendors that are often contracted locally, including those who work on roads, source concrete, or do electrical work. In addition, local restaurant owners, banks, hotels, stores, pharmacies, landscapers, fueling stations, mechanics, and others will see increased business from the workers present on the site. At the peak of construction, a project like Jayhawk Wind may have over 200 people on-site at once.

Local Business Opportunities	
How do you submit interest in subcontracting some of the work that's going to be needed?	Businesses and contractors interested in working on the Jayhawk Wind project during construction are invited to register for our Local Vendor Program. Once a lead contractor is selected for the project, we will provide them with information on all participating vendors, businesses, and contractors.
What will happen to coal and nuclear?	As market and regulatory conditions shift around the world, the makeup of the world's energy generation portfolio is changing. In the U.S. alone, in 2018, wind energy generated 6.5% of the nation's electricity, enough to power about 26 million homes. (That's about as many homes in California, Texas, and Washington states combined!) And this number is only growing. While we cannot speak to the future of other generation sources, we can say that low-cost renewable energy is changing the market for electricity and benefiting America's rural consumers and communities in the process.
Operations	
Explain about the roads to the turbine - who maintains them?	Jayhawk Wind is responsible for maintaining all access roads constructed for the project.
How tall are the towers and how long are the three blades?	Jayhawk Wind has not yet selected a turbine model, so we do not yet know with certainty exactly how tall the project's turbines will be. However, as turbine technology improves, turbines are getting taller. The most modern turbine models reach about 600 feet tall and feature blades as long as approximately 200 feet. As turbines get more efficient and productive, fewer turbines are needed to produce the same amount of electricity for a project, so though the turbines may be taller, the number of turbines comprising each project is getting smaller over time.
Have you ever had any of these blades actually drop off the hub and if so, and there's cattle killed or machinery damaged, is the company liable for that?	We are not aware of any incident where the blades of a modern turbine have simply fallen off. To date, there are no recorded cases of any injury or fatality of a member of the public due to a failure of an operating wind turbine. If such an unlikely event were to occur at Jayhawk Wind, the cost of any damage, injury, or harm to livestock would fall under the liability of Jayhawk Wind.

Operations	
Are there gates for livestock?	Jayhawk Wind may install new livestock gates around the project depending on project layout and the expectation that some of the project's participating properties will be fenced. Temporary gates are installed through the construction period for collection and road construction. New gates will be installed in an existing fence line where a road is required. Temporary gates will be installed in an existing fence line for collection installation and will be removed when the work is complete; the fence will be reinstalled. If an existing gate is removed, damaged, or moved during the construction period, the project will replace or reinstall it as needed to protect the landowner's livestock. All contractors are required to close all gates that are opened during the course of development or construction activities.
What is the long-term plan, meaning such as how long can the equipment last for years to come?	Modern wind energy facilities are designed to last for 25 to 30 years. As the project approaches the end of its lifetime, it may be evaluated for repowering. Repowering involves using existing infrastructure to upgrade the generation facilities to take advantage of modern technology at the time. If Jayhawk Wind is repowered, it will extend not only the life of the wind farm, but also the generation of tax revenue for local governments, lease payments to local landowners, and family-sustaining jobs for the community.
Property Values	
You state there are no negative impacts on homes within the footprint. How then do you explain the 25% to 40% loss in property values that the people have experienced when trying to sell their homes?	The research that has been done around the country on property sales around wind energy facilities has demonstrated that property values are not adversely affected by the presence of a wind energy facility nearby. The largest nationwide study on this topic was conducted by researchers at Lawrence Berkeley National Laboratory in 2013. The study analyzed more than 50,000 home sales near 67 wind projects across nine U.S. states and did not uncover any impacts to nearby home property values. A project-specific property values study was conducted in Neosho County for the Neosho Ridge Wind project, which also found no evidence that property values impacts should be anticipated.

Property Values	
The Neosho County appraiser said there would be up to 40% property value loss. How can he be wrong?	A project-specific property values study was conducted in Neosho County for the Neosho Ridge Wind project, which also found no evidence that property values impacts should be anticipated. Unfortunately, in making his original assessment, the Neosho County appraiser relied on inaccurate information produced by anti-wind activists, and as a result, he drew inaccurate conclusions. A certified Kansas appraiser was asked to review the Neosho County appraiser's conclusions, and he determined that the appraiser's position was unfounded. We would be happy to provide a copy of the Kansas appraiser's response letter to the Neosho County appraiser upon request.
The Kansas State Supreme Court has stated that there is as much as a 40% decline in property value when a turbine is placed too close to a home. How can you dispute that?	We are not aware of an instance in which the Kansas Supreme Court made such a statement. If you would like to discuss this concern in more detail, please contact us at info@jayhawkwind.com or by phone at (620) 213-4307.
Safety	
What about a windstorm or tornado?	Modern wind turbines are designed to sustain very high winds. Every turbine is equipped with a variety of sensors, including an anemometer to read wind speeds. Typically, if a turbine detects gusts of over 65 mph, the turbine with automatically shut down and enter a "safety mode" to keep the turbine from spinning too quickly. Additionally, all wind farms are also monitored by 24/7/365 remote operations facilities that watch weather conditions very closely. If a major storm or tornado is observed in the area of a wind facility, the remote team can shut the turbines down immediately. If the projects already operating across the country are any indication, wind farms are well-designed to handle major storms and tornadoes. Tornadoes have traveled through operating projects in the U.S. and these projects have emerged with only minor, if any, damage.

Safety	
Is the land owner responsible for any accidents or deaths of Apex workers?	The landowner is not responsible for any accidents or deaths of wind farm workers that occur as a result of the construction or operation of the facility. The owner of the wind farm is fully responsible for the safety of its workforce. Above all, Apex Clean Energy promotes a culture of safety. From our corporate offices and the wind farms we are building or operating to the dozens of projects under development across North America, safety is a core value that drives our business. In both 2018 and 2019, Apex was selected by a panel of peers to be awarded the industry's highest level of safety recognition, the Safety and Health Gold Achievement Award from the American Wind Energy Association. Our team is constantly assessing opportunities to improve the safety of our employees, our contractors, and the residents of the communities in which we work.
Do they sling ice?	Turbine operators monitor facilities for a variety of weather-related conditions, including icing. If turbines are becoming unevenly weighted due to ice buildup on the blades, the turbines will automatically shut down. Furthermore, if conditions in the project area are found to be ripe for icing or thawing, the operations team will adjust the facility's operation accordingly so that any ice will be safely shed without causing damage or injury to people or property nearby. As a result of these and other similar measures, the risk of ice being thrown from an operating turbine is extremely minimal. A full icing report is being prepared for the Jayhawk Wind project and will be made available shortly. To see a similar report on icing for Neosho Ridge Wind, please visit: https://www.neoshoridgewind.com/ice.
Does energy conduction increase the risk to lightning strikes to turbines or to surrounding environment?	It is not uncommon for turbines to be struck by lightning. However, this has not been found to increase the risk of a lightning strike to anything but the turbine itself. Damage from a lightning strike is usually limited to a turbine's blades, as they are designed to allow the electricity to pass through them without damage to the turbine's electrical components. If a turbine is damaged due to lightning strike, it will be placed out of commission until all repairs are made and the turbine can return to safe operation. All wind turbines have a Lightning Protection System (LPS) installed in all the blades to protect them from damage when struck by lightning.

Sound	
Is there much sound or vibrations emitted from the turbines? / What are the boundaries for sound in this project area?	Turbines do emit some sound, though the level of sound produced by a properly functioning turbine is generally quite low. The majority of the sound produced by a modern wind turbine comes from the aerodynamic effects of its blades passing through the air. In the case of Jayhawk Wind, the project will be limited to a sound level of 50 dBA— quieter than a refrigerator—as measured at the nearest house. Wind turbines create no perceptible vibration.
How far from homes do these turbines have to be so that the sound levels don't adversely impact?	Jayhawk Wind will not exceed 50 dBA—quieter than a refrigerator—as measured at the nearest house. Health Canada completed a detailed study in 2014 to answer the question of whether sound from turbines can cause adverse impacts on human health. They looked at residents of two different provinces of Canada and found living near wind energy facilities DO NOT experience health impacts from being close to wind turbines. According to Health Canada: The following were not found to be associated with wind turbine noise exposure: • Self-reported sleep (e.g., general disturbance, use of sleep medication, diagnosed sleep disorders); • Self-reported illnesses (e.g., dizziness, tinnitus, prevalence of frequent migraines and headaches) and chronic health conditions (e.g., heart disease, high blood pressure and diabetes); and • Self-reported perceived stress and quality of life