

Section 14.0 Project Lighting

The guidelines for lighting a wind energy project's wind turbines and other structures over 61 meter (200 feet) in height are set by the Federal Aviation Administration (FAA) as documented in FAA Advisory Circular 70/7460-K-"Obstruction Marking and Lighting (FAA 2007. Mud Springs LLC will follow lighting requirements as specified and allowed by the FAA. Lighting at all phases of the Mud Springs Wind Ranch Project will include the following measures:

- Project will comply with FAA regulations, including lighting requirements.
- Red obstruction lighting will be installed as documented in the FAA notice of Determination of "No Hazard to Air Navigation".
- During construction activities, cranes and other construction equipment that exceed 61 meter (200 feet) in heights will comply with FAA regulations for lighting.
- Site design and locked gates and access doors will be accomplished to make security lights nonessential. Such lights tend to increase the contrast between a wind energy project and the night sky, especially in a rural area.
- Substation and turbine door lights will be hooded downward and on a motion detector or auto-off switch set on a timer. Substation lights will be kept to a minimum necessary for safety and night-time work.
- In order to reduce the attraction of migratory birds, the use of sodium vapor lights at site facilities will be minimized or avoided. All unnecessary lighting will be turned off at night to limit impacts to night sky and to avoid attracting migratory birds.

The FAA will determine the final pattern and placement of the obstruction lights. These lights are anticipated to be flashing red (Type L-864) that operate at night and in accordance with FAA guidelines. The minimum amount and lowest intensity lighting specific by the FAA will be used and all lights within in the Project will illuminate synchronously. The final lighting plans will be determined by FAA.

The majority of the construction activities such as building project roads, digging foundations, massive foundation concrete pour, trenching of electrical systems and installation of wind turbine generators will be conducted during the daylight hours and will not require additional outdoor lighting. Scheduling and possible heat constraints during the summer months may require that some construction activities be performed at nighttime. These activities may include massive foundation concrete pours and installation of wind turbine generators. For construction activities that will require nighttime work, the following lighting minimization measures will be taken:

- Lighting will be directed downwards, shielded to the greatest extent feasible and limited to the amount absolutely necessary to perform the required work when crews are working in an area in order to perform work in a safe manner.
- Portable light towers when used in conjunction with nighttime construction will be angled to shine away from the local ranch houses whenever safe to do so.
- Construction lighting will be directed to not cause excessive reflected glare whenever possible.
- Construction office trailers will be located near Railroad Bed and Pryor Mountain Roads. Limited lighting will be set up around the trailers as most office staff will only utilize the office trailers during the daytime hours. Security lights will have motion sensors.