DOCKETED	
Docket Stamp Updated:	3/6/2024 11:53:05 AM
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	254875
Document Title:	Questions on Information Pertinent to CalFire Contained in Applicant Wildfire Technical Report
Description:	Report of Conversation
Filer:	Marichka Haws
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/6/2024 11:27:02 AM
Docketed Date:	3/6/2024

DOCKETED	
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	254875
Document Title:	NAFEM Comments on RFI and ITSP for Commercial Food Service Equipment
Description:	Report of Conversation
Filer:	Marichka Haws
Organization:	California Energy Commission
Submitter Role:	Commission Staff
Submission Date:	3/6/2024 11:11:22 AM
Docketed Date:	3/6/2024

Siting, Transmission and Environmental Protection Division	**FILE:** n/a	
	PROJECT TITLE: Fountain Wind Project	**Docket:** 23-OPT-01

TECHNICAL AREA(s): Hazards, Hazardous Materials, and Wildfire			
☒ **Telephone**	☐ **Email**	☐ **Meeting Location:**	
NAME(s): Aurie C. Patterson, P.G.		**DATE:** 02/20/2024	**TIME:** 2:15pm to 2:50pm
WITH: CAL FIRE Unit Chief/ Shasta County Fire Chief Sean O'Hara			
SUBJECT: Questions on Information pertinent to CalFire contained in Applicant Wildfire Technical Report			

COMMENTS:

Meeting with Chief O'Hara to discuss the information provided in the Fountain Wind Project Applicant's wildfire technical report and get California Department of Forestry and Fire Protection's (CAL FIRE) input on information pertinent to CAL FIRE procedures and operations presented in the report (TN 253505). The following questions were submitted to CAL FIRE prior to the meeting and were discussed during the meeting.

1. Water sources for aerial firefighting are identified in the technical report as several nearby air attack bases, two dip tanks, and local water features such as rivers, lakes, and reservoirs (shown in Figure 10 in the technical report). The report identifies a 10,000-gallon dip tank at the site, however current information form the Applicant indicates three 5000-gallon water tanks will be located throughout the site and most likely filled by trucked in non-potable water. These tanks are not identified as dip tanks. Water for operation of the wind farm will likely be provided by a bedrock well (estimated with a maximum pumping rate of 10 gallons per minute [gpm]) and/or trucked-in; refilling of the water tanks will not be a timely/quick operation. The Applicant states the site will meet Shasta County's fire standards for buildings on the site which include minimum water storage to meet the fire flow requirements.

   Question: Does CAL FIRE feel that there are adequate water resources for aerial and ground-based firefighting activities at and near the wind farm? If not, what additional resources would be useful for aerial or ground-based firefighting?

   Answer: No. The 5000-gallon tanks would only provide a few fill ups of the average fire engine tank which holds 500-1000 gallons. If no other sources of water are available onsite it would need to be trucked in by water tender trucks with average volumes of 3500 gallons or drafted from a local water

source/feature. The Chief indicated that if the tanks are gravity fed then they are not adequate for firefighting use. He would prefer to see a hydrant system installed on the project site and has discussed and requested this during a meeting with the Applicant. The required adequate fire flow for the buildings would be calculated by Shasta County Fire for final building design and permitting.

2. The report provides the following information about local Air Attack Bases, "Redding Air Attack Base, shared by CAL FIRE and the U.S. Forest Service, is the airbase nearest to the Fountain Wind Project. Flight time from the base to the wind farm is approximately 10 minutes. Various firefighting aircraft are stationed at the base, including CAL FIRE's OV-10 Bronco Air Attack plane and two S-2T air tankers. A fire-retardant refilling plant is located at the base, providing immediate retardant reloading for air tankers assigned to area fires. Bieber Helitack, with a helicopter and firefighting crew, is based approximately 18 minutes northeast of the project site."

   Question: Is this information accurate?

   Answer: Yes. This equipment is based at the site fulltime for at least 9 months out of the year when not in use.

3. The report states that, "When fire danger is high, CAL FIRE will dispatch the following resources to a fire in Shasta County: 1 battalion chief, 6 Type 3 engines, 2 hand crews, 2 bulldozers, 1 water tender, 1 air attack plane, 2 air tankers, and 2 helicopters."

   Questions: a) Is this an accurate statement about CAL FIRE activities and staffing for a fire during high fire danger periods? b) How does CalFire determine when to dispatch additional resources to a fire during high fire danger? c) How does CAL FIRE determine high fire danger periods?

   Answers: a) Yes. b) When and how much additional resources for a fire depends on the incident and what the incident commander and the air attack commander feel they need. c) CAL FIRE uses a modeling program (Indices of the Day) that uses input such as weather and fuel moisture to determine low, medium, or high fire danger. Low fire danger doesn't really occur in the area, and medium fire danger is limited to certain conditions and times of day; due to prevalent high heat and low humidity during fire season conditions are almost always high fire danger in the area. For fires during medium fire danger periods CAL FIRE would dispatch 1 less engine, tanker, and helicopter than what is listed above.

4. The technical report indicates that a 2.5-acre circle will be cleared of vegetation from around the wind turbines. This equals an approximately 186 ft. cleared radius around the wind turbine.

Question: Do you feel this is adequate clearance around a tower that stands to a height of up to 610 feet from the base to the tip of the 250+ foot blade?

Answer: Generally, CAL FIRE's preferred clearance around objects is 1.5 the height of the fuel. The Chief noted that in discussion with the Applicant about clearance around the tower he had mentioned 2-3 acres. Chief O'Hara feels that the current 2.5-acre circle/buffer cleared area is better than the previous smaller area around the wind towers. CAL FIRE would prefer an annually maintained fuel break around the perimeter of the entire project site; a full fuel break is preferred but a shaded fuel break would be better than nothing.

5. The report makes the following statement, "Based on the size of the Fountain Wind turbines, which will stand to a height of up to 610 feet from the base to the tip of the 250+ foot blade, they will be less hazardous to aerial operations than the electric transmission towers and powerlines that are ubiquitous across California's forest lands." The document also contends that the wind turbines are more visible than transmission lines and thus easier to "work" around.

   Question: Do you feel that these statements are accurate representations of the hazard related to these subparallel arrays of tall wind turbines as related to linear transmission lines?

   Answer: The Chief noted that a hazard is a hazard and that yes, the wind turbine towers are easier to see but they are still as much, if not more, of a hazard as there are more of them in a single area and not in a straight line as opposed to several transmission towers and lines in a straight linear alignment.

6. The report indicates that in the event of a wildfire at the wind farm, that before using aerial assets at a wind farm the air attack supervisor would order the turbines to be turned off and locked. Fountain Wind turbines may be shut down by personnel at the Remote Operations Control Center, which is staffed 24 hours a day, 365 days per year.

   Questions: a) Do you feel that the turbines should be automatically turned off and locked in the event of a wildfire at or near the wind farm? b) For wildfires in the vicinity of the wind farm, how close to the wind farm would a wildfire have to be for you to feel the turbines should be turned off and locked? c) Do you feel that the remote shutdown and locking of the turbines is adequate and verification of this by Supervisory Control and Data Acquisition (SCADA) is adequate, or as you previously indicated would visual confirmation of shutdown be required prior to any aerial firefighting at the site?

Answers: a & c) Yes, the turbines need to be turned off and locked in the event of a fire at the wind farm. Chief O'Hara would like to have onsite confirmation that turbines are off and wants the Applicant to take responsibility to provide confirmation to CAL FIRE that turbines are off. b) With wildfires of varying sizes and numbers in the area, CalFire doesn't want to burden the Applicant with having to shut down turbines and then have to restart them if not necessary; i.e., if a fire in the general area is quickly put down or not a threat to the immediate wind farm area. CAL FIRE prefers that they (CAL FIRE) notify the Applicant when turbines need to be shut off due to area fires and have the Applicant shut down the wind turbines quickly when needed.

cc:	Leonidas Payne, Project Manager	**Signed:** ACP **Name**: Aurie C. Patterson, P.G. - Hazards, Hazardous Materials, and Wildfire Staff