

DOCKETED	
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	254899
Document Title:	Impacts of Project Related to Wildfire, Firefighting, and Aerial Firefighting Capability
Description:	Report of Conversation with CAL FIRE Unit Chief / Shasta County Fire Chief Sean O'Hara and CAL FIRE Chief Jake Sjolund - Tactical Air Operations
Filer:	Marichka Haws
Organization:	California Energy Commission
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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:** 11/01/2023 **TIME:** 1:00pm to 2:30pm

WITH: CAL FIRE Unit Chief/ Shasta County Fire Chief Sean O’Hara and CAL FIRE Chief Jake Sjolund – Tactical Air Operations

SUBJECT: Impacts of Project related to wildfire, firefighting, and aerial firefighting capability

COMMENTS:

Meeting with Chief O’Hara and Chief Sjolund to discuss the Fountain Wind Project wind turbine towers and Project components as related to CAL FIRE’s ability to fight fires in the vicinity of these towers and any concerns they may have related to the towers, project, and wildfire. The following questions were submitted to CAL FIRE prior to the meeting and were discussed during the meeting. Also attending the meeting were Shasta County Executive Officer/Clerk of the Board David Rickert, and several CEC staff including Brett Fooks, Eric Knight, Jared Babula, Mariah Ponce, and Leonidas Payne.

1. Does CAL FIRE have standard operational and safety guidelines for aerial firefighting activities and equipment?

Answer: Yes. Staff would have to do a public records request to get copies. These are general guidelines.

2. Does the applicant providing CAL FIRE with maps and GIS data for wind turbine tower locations remove all impediments to aerial firefighting at and near the site as suggested by the applicant?

Answer: The wind tower locations would be added to local and national hazard maps. CAL FIRE pointed out that this does not remove the impediment to aerial firefighting, it just identifies them.

3. The applicant has indicated in a data response that CAL FIRE would be able to effectively use their “full suite of aerial firefighting assets, including air tankers and helicopters” along



and within the perimeters of the project site. Is this an accurate statement? Additionally, the current wind turbine locations are in rows with distances between the rows varying from 0.4 to 1.3 miles (Please see attached map). The applicant has indicated that the current footprint of the project would allow access by fixed wing and rotary firefighting equipment. Is this a valid statement?

Answer: CAL FIRE noted that fire conditions, smoke, and tower spacing would determine the ability to use aerial assets at the project site. Smoke and terrain would be a large impediment to using aerial assets near wind turbines. CAL FIRE indicated that based on the project layout there are a few areas within the project boundaries that aerial resources could be used, primarily in the northern part of the site and along the perimeter. Northwest-southeast flight lines between most of the wind turbine's alignments would not be feasible due to the concentration and placement of the wind turbines. The wind turbines are not in long straight parallel alignments but are instead mostly in short straight sub-parallel alignments. Outside of the project boundary the full suite of aerial assets would be available.

4. Would CAL FIRE be able to do any retardant/water dropping over and adjacent to the project site? If yes, what types of aerial equipment would CAL FIRE be able to use at and near the project site?

Answer: CAL FIRE would be able to drop retardant over the site, however the height they would need to fly to avoid the towers would make retardant dropping ineffective. The higher retardant is dropped from, the less effective it is because it spreads and dissipates as it drops. CAL FIRE prefers retardant to water dropping in large fires as water dissipates and evaporates more easily when dropped. Helicopters could use local water sources to drop water in the area due to a wildfire.

In the event of a wildfire, the Incident Command would work with the Air Tactical Group as related to aerial firefighting for the wildfire incident. The Air Tactical Group supervisor would be in control of aerial assets during a wildfire and would determine the safety and ability to use aerial assets in the area, including terrain and fire conditions. Further, CAL FIRE is concerned about the shut-off of the turbines during a wildfire and how and who would verify that the turbines have been shut off during a wildfire; they would not want to send aerial assets into the area unless there is positive confirmation that the towers have been shut off.

5. Would CAL FIRE firefighters be able to use/have access to ground-based fire-retardant spraying equipment? If so, what type of equipment does this include and how effective is it compared to aerial firefighting?

Answer: CAL FIRE does not usually use ground-based fire-retardant systems. They do not keep any ground-based fire-retardant systems in the area and therefore use of them would not be timely as it would take days to retrieve and set up the equipment.

6. Based on a previous CEC conversation with CAL FIRE Chief Jake Sjolund, Staff Chief Tactical Air Operations, staff understood that CAL FIRE would not fly any aerial equipment closer



than 500 feet from a structure due to potential wind issues, firefighting planes would have to stay 2000 feet away from wind turbine structures, and firefighting planes would be limited to parallel runs outside of a buffer zone from the project. Please verify required/needed setback distances for aerial firefighting equipment from project structures. Would these set back distances vary by type of aerial equipment (i.e., large tankers, smaller tankers, helicopters, other types of water dropping planes, etc.)?

Answer: A 2000-foot setback does not exist. Setback distances for CAL FIRE aerial assets are a minimum of 500 feet horizontally or vertically from a structure, i.e., an aerial asset must be at least 500 feet horizontally from a tower and/or 500 feet above a tower. However, depending on fire conditions these setback distances could be increased.

7. The applicant would clear all vegetation along access roads, at the O&M facility, switching station and substation, and for a 15-foot diameter ring around the turbine towers; only taller, typically woody vegetation would be trimmed or mowed from the overhead transmission and collector line corridors, and buried utility corridors. Would the cleared access roads and tower perimeter act as sufficient fire breaks to slow down fires or aid in firefighting despite the continued presence of flashy fuels and woody vegetation near to and between structures?

Answer: The roads would be helpful as fire breaks if maintained with brush removed from both sides. CAL FIRE also mentioned that the roads need to meet County Emergency Access requirements. It is CAL FIRE's opinion that the greater clearance the better and that structures would need at least a 100-foot clearance. CAL FIRE mentioned a rule of 1.5 fuel length clearance and noted that would likely be approximately 200 feet clearcut around the towers for fire safety.

8. In the unlikely event that a fire was to occur due to a lightning strike or equipment failure in a wind turbine nacelle, which is ~500 feet high, and it was not fully extinguished by the nacelle's fire suppression system, how would CAL FIRE put out the fire to prevent it from spreading to the nearby forest?

Answer: CAL FIRE noted that they would likely let the fire burn out and have personnel onsite to monitor it and put out any incidental fires triggered by embers. CAL FIRE noted that the planned onsite water tanks would not be very useful in firefighting as they would need to be refilled for continuous use, that there is no water supply in the area, and that a hydrant system would be more useful.

9. In the CAL FIRE testimony by Chief Gouvea during the County Appeal Hearing on October 26, 2021, he noted that CAL FIRE had little experience in aerial firefighting near wind farms in forested areas. Is this still true and do you feel that this would affect aerial firefighting activities and efficiency at and near the project site?



Answer: The local CAL FIRE does not have any experience with aerial firefighting near wind farms in forested areas. CAL FIRE noted that effective firefighting is a combination of all firefighting assets and removing assets (aerial firefighting, adequate water sources) hampers the effectiveness of firefighters. CAL FIRE discussed the importance of fuel breaks and noted that they would prefer to see a fuel break around the entire perimeter of the Project site to prevent the spread of fire from the project site or into the project site.

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