

Corridor EIS Archives

From: corridoreiswebmaster@anl.gov
Sent: Tuesday, July 11, 2006 2:01 AM
To: Corridor EIS Archives
Subject: Preliminary Draft Corridor Map Comment M0147

Attachments: VisualPollution2_M0147.doc



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Thank you for your comment, rick garland.

The comment tracking number that has been assigned to your comment is M0147. Once the comment response document has been published, please refer to the comment tracking number to locate the response.

Comment Date: July 11, 2006 02:00:30AM CDT

Preliminary Draft Corridor Map Comment: M0147

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Questions about submitting comments over the Web? Contact us at:
corridoreiswebmaster@anl.gov or call the Preliminary Draft Corridor Map Webmaster at
(630)252-6182.

Thank you for the opportunity to comment on the proposed energy corridor. We have a large number of matters for your consideration. We will address process issues, which limited our ability to participate, then overall issues, and finally, specific issues relevant to southern California.

Process:

1. We respectfully note that the amount of time provided was absolutely inadequate for meaningful public comment on the proposed 11-state power corridor. The first map was released on June 9, and the first state map was released on June 26, but comments were required to be submitted by July 10. The maps include hundreds of miles of corridor length, with each mile posing specific, distinctive threats to the environment. Some of these threats will be described more fully below, but they include threats of ignition of wildfires, catastrophic wire strikes by helicopters, loss of scenic values, interference with cultural, archaeological, and historic resources, and interference with Native American, Hispanic-American and general American cultural values, threat to travel and tourism, and the potential for massive visual pollution from electrical power transmission towers, which are eyesores that damage or destroy views of valleys, canyons, hills, mountains. Each of these issues should be modeled for each segment of the corridor. The time provided is completely inadequate for modeling these impacts and proposing best practices to mitigate the problems.

2. We requested via a telephone call an extension of the comment period, but this was not granted. We were told that comments could be sent in after July 10, but that they not receive the same weight or degree of analysis as those submitted by July 10. We respectfully comment that an extension of time for comments would have been appropriate, given the numerous issues that exist along thousands of miles of proposed corridor.

3. The maps that were provided on the Internet were difficult to access. We tried repeatedly to download the national maps but could not until 4 days ago. The download process was apparently incompatible with some computers and operating systems. Hard copies of the maps were not available. This technical problem further limited the time available for comment.

4. The maps that were provided were of such massive scale and low resolution for local areas that it was impossible to discern the alignment of

the corridors in specific sectors. For example, the proposed corridors near major highways were drawn as lines adjacent to the highways, but it was impossible to determine the distance from the highway to the corridor. The resolution of the maps made it impossible to determine the extent to which the corridor entered specific valleys, canyons, wetlands, creeks or creek beds, and crossed or followed scenic and historic trails, preventing a meaningful assessment of the potential impact on archaeological, cultural, visual and other environmental values. The appropriate map scale for environmental and cultural assessment is the standard USCG 7.5-minute topographic section (1:24,000) with the proposed corridors and existing power transmission lines plotted or overlaid. We express thanks to the responsive webmaster for trying to help with this problem, but he/she simply did not have access to the maps needed to perform adequate study or assessment of the impacts.

5. No process of feedback to the public comments is described or planned. Feedback to commenters would be very worthwhile, and should consist of comments from the appropriate agencies acknowledging that the comments have been understood, describing research that will be arranged, modeling that will be done, or, if appropriate, even responding that no research, modeling or action will be taken on the comment. This would allow the commenter a modicum of dialog, and an opportunity to ensure that the points made by the commenters were understood by the agencies, and, where appropriate, acted upon.

6. Due to the extremely limited time available for public comments, our comments provided at this point are directed to the issue of overhead power lines, such as the 125 to 150-foot high 500 KV electric power transmission towers. There are numerous unmodeled and poorly understood threats from underground pipelines that could not be characterized in our comments due to the limited time. We do respectfully comment that there is a serious need to perform research on the probable consequences for the environment of pipeline accidents, including explosions, ignition of costly wildfires, potential releases of fuels to the environment, and other issues. While hydrogen pipelines may be desirable from some perspective, the potential hazards of fires and loss of life that they may cause would need serious research and modeling. If the deadline is extended, we request an opportunity to provide comments on issues we could not address at this time concerning the aspects other than the environmental threats from high

voltage transmission lines, as well as more localized, detailed, and in-depth comment on the potentially harmful effects of high voltage transmission lines.

Overall issues:

7. Overhead power lines ignite wildfires. The problem is likely to increase if the number of power lines is increased, as by enhanced ease of building overhead power lines through areas where fires are likely to be ignited. For example, in California the CDF estimates that 150-180 wildfires per year are started that result in state expenditures for fire-fighting. They estimate that an additional 300-320 fires per year are ignited by power lines in California in territory owned by the Federal government or non-state, non-Federal lands. While many of these fires are due to contact of power lines with vegetation, some are ignited by short circuiting of high voltage between conductors, or to transmission towers, due to wind-driven debris, kites, mylar balloons, and other objects that can cross the conductors, and cause shorts, arcing, and projection of molten conductor metal to ground, where fires are ignited by the burning metal. According to CDF, recovery of costs from power utilities is often difficult and expensive. Currently there are 20-30 cases of alleged ignition of wildfires by overhead power lines pending litigation between the state and power utilities in California at this time. The incidence of wildfires and their consequences for spreading over large areas needs to be modeled before corridors are designated.

8. Overhead power lines will interact with fire fuel availability associated with global warming trends to increase the risk of igniting wildfires. A study published in a July 2006 issue of *Science* showed that an overall warming trend in climate is increasing the availability of dry and highly flammable fuel for wildfires, and increasing their incidence, difficulty to control, and destructiveness. During the past century, Northern Hemisphere temperatures have risen more than at any time in the last 1,000 years, adding to the problem. Researchers from UC San Diego and Arizona used the files of the U.S. Forest Service and National Park Service to analyze 1,166 wildfires of more than about 1,000 acres. The findings were published on Thursday, July 6, 2006 in the online edition of *Science*. Analysis, modeling a panel of experts is needed to help assess the interaction between fire ignition threats of overhead power lines and the consequences of vegetation desiccation from dramatic recent warming trends.

9. Overhead power lines make helicopter and other low-level navigation in their vicinity very dangerous. Even momentary contact or clipping of high voltage power transmission lines by the rotor or body of helicopter almost always results in a catastrophic accident with loss of life of all aboard the helicopter, ignition of fires, and interruption of the supply of electrical power. Regions in southern California that the power corridor crosses are areas with considerable helicopter traffic that is important to public safety, including ambulance-medevac helicopters, fire and rescue helicopters, law enforcement helicopters, and border patrol helicopters and low-flying aircraft. Helicopters are key components of the emergency medical system in many areas, since they allow trauma patients to reach trauma centers during the “golden hour” when the lives of severely injured persons can be saved by excellent trauma care. Cases delayed longer than an hour are far more likely to die or suffer permanent disability. This capability is provided in rural and remote areas by helicopters, such as Mercy Air helicopters in San Diego County, California, and similar airborne EMS systems elsewhere. These aircraft need to be able to maneuver, hover and land near accident scenes on interstate and rural highways. The presence of overhead power lines is one of the greatest threats to flight safety of these aircraft. This is compounded under windy conditions, when it is often difficult to control helicopters and a wide margin of cleared terrain without power lines is needed for safe landing and takeoff.

10. Overhead power lines in the proposed corridors will diminish the effectiveness of fire helicopter response to wildfires. A CDF staff member revealed that fire-fighting helicopters are ordered not to fly near power lines or release fire retardant in their vicinity. This is because of the risk of spectacular accidents due to wire strikes by the helicopters, and because water or fire retardant chemicals may provide increased arcing and raise the possibility of fires induced by the power lines. A wire strike by a helicopter is likely to cause explosion of the helicopter, and ignition of a wildfire is a potential result. Helicopters offer great potential for fighting wildfires, but this would be harmed by erection of new power lines in the areas where wildfires occur and must be fought.

11. Overhead power lines in the proposed would interfere with aerial firefighting operations. Spraying of water and retardant to suppress wildfires must be conducted close to the ground to minimize wind-driven

and evaporative losses. Wire strike accidents and fires may result from operations near power lines, where the risk of wire strikes is highest.

12. Overhead power lines in the proposed corridor would prevent any realistic possibility of initiating safe night-time aerial firefighting operations. Spraying of water and flame retardant to suppress wildfires must be conducted close to the ground to minimize wind-driven and evaporative losses. Overhead power lines are especially hazardous to helicopters and low-altitude fixed-wing aircraft at night and during conditions of limited visibility. Wire strike accidents and fires may result from operations near power lines, with their high risk of wire strikes. Plans to do some degree of aerial fire suppression at night would have to be abandoned in the vicinity of 500 Kv power lines, due to the potential for a catastrophic wire strike crash. Not fighting fires at night is being re-evaluated, since it may have been possible to suppress the Cedar Fire in San Diego county in 2003 while it was small. This fire, which happened to be started by a hunter cost 15 lives, including that of a fire fighter, and caused billions of dollars in dislocation and economic losses. It destroyed thousands of homes, and burned 275,000 acres of wildlands. The Cedar fire was the largest in California history, and changing climate conditions now suggest that another will occur as vegetation fuel is dried by less water from early melting snow packs and lower humidities.

14. Overhead power lines in the proposed corridors would be major eyesores. 500 Kv lines are typically run on 150 foot towers. These can be seen from a radius of several miles in desert areas due to low amounts of vegetation. Their impact is hundreds of times greater than existing 67 Kv lines, due to the much larger distance from which the 500 Kv transmission towers can be seen. The area of intrusive visibility of 500 Kv lines appears to be approximately 50-100 times greater than for standard 67-Kv lines. Running the transmission towers along elevated features such as hills and ridges increases the area from which they can be seen. The visual impacts have not been modeled, and need to be modeled before routing decisions are made. The scenic value of a landscape is to some degree a subjective matter, but it can be quantitated for modeling purpose. We propose modeling scenic impacts by assigning a scenic value to each one-mile or shorter sector of the power corridor. Scenic value could be assigned along a 1 to 10 point range, where 0 would be assigned to the scenic value of a typical industrialized zone such as the City of Industry, CA, 10 would be assigned to essentially all lands in National Parks, Forests and Monuments, National Park Service

Scenic trails, all state parks, scenic tracts of land administered by the Bureau of Land Management and Native American tribal governments. A value of 9 would be assigned to county- and city owned parks and reserves, deserts having typical desert vegetation, including ocotillos, oak trees, *Yucca whipplei*, *Agave americana*, Palo verde trees, barrel cactus, numerous species of cholla, and creosote bushes. Oak trees conferring scenic value with a value of perhaps 9 would include black oak, Coast live oak, and Engelmann's oak, among others. Values of 5-7 might be assigned to other scenic areas, with values of 1-4 being assigned to urban landscapes. This should be researched and modelled using focus groups and public opinion methodology to establish a reasonable scale for use in decision-making. The model should take into account the number of people exposed to the eyesores, preferably by multiplying the scenic value by the number of people per year transiting the area on the ground. Since interstate highways carry large volumes of cars, including vacationing families, their vicinity would be a poor location for overhead power lines, since the product of scenic value times number of people passing through the areas would be extremely high. This approach indicates that power corridors should be distant from Interstate highways (such as the highly scenic Interstate 8 in California, and other highly scenic highways throughout the southwest and the 11 Western states). Scenic highways are important for stimulating travel and tourism, clean and beneficial economic activities. Magazines such as *Arizona Highways* illustrate the beauty and value of scenic highways. This type of modeling is likely to reveal that almost all overhead high voltage power lines transiting near roads is more destructive to the visual heritage of more people than power lines located far away from roads. In desert areas, 500 Kv lines should never be located less than 5-7 miles from highways and scenic roads, or along ridges, mountains or hilltops, as their visual pollution impact is greatest in areas where no vegetation is available to screen people from seeing the eyesores when seeking views of natural landscapes. On the other hand, 500 Kv lines may be sited closer to roads in heavily forested areas when screening by vegetation is available (although the fire ignition hazard would argue for placing the transmission system underground).

15. Overhead power lines that would pass through power corridors are a threat to birds, including the endangered California Condor, and protected species such as the bald and golden eagles who are current nesting and trying to re-establish ranges in the vicinity of power corridors. There are only 275 California condors living. The species is on the brink of extinction.

A juvenile condor collided with and was electrocuted by an overhead power line on July 4, 200. Male Condor No. 376 was hatched on May 3, 2005, at the San Diego Wild Animal Park and was released on June 3 by Ventana Wildlife Society in Big Sur, according to Kelly Sorenson, executive director of the society. The condor collided with power lines. At least a dozen of these barely surviving species have died due to collisions with overhead high voltage power lines or from electrocution. The impact of overhead power lines on the hope for survival of California condors, and the reintroduction of Bald and Golden eagles through our Californian and other affected areas should be modeled and assessed by an expert panel, with an appropriate report before an energy corridor is designated. Overhead power lines would pose more far more of a threat of bird strikes and electrocutions than underground power lines. References in "Avian Collision and Electrocution: An Annotated Bibliography" from the California Energy Commission, MS #40, 1516, could assist in development of models for predicting mortality of California condors and other birds.

16. Overhead power lines in the proposed corridors have noise impacts that could harm the environment for humans and animals. This needs research and modeling.

17. There is potential that electromagnetic fields generated by overhead power lines could interfere with avian navigation. This area should be researched and modeled before corridors are designated.

18. The proposed corridor is excessively wide. Power line corridors are 120-150 feet wide. The proposed power corridor width of 3,500 feet could accommodate 25-30 parallel overhead power lines. This would be highly destructive to visual values.

Reference: Heat adding fuel to fires, study suggests. San Diego Union Tribune - July 7, 2006; Warming climate plays large role in Western US wildfires -- Forest NewsWatch.com, Canada - July 6, 2006.