DOCKETED	
Docket Number:	23-OPT-01
Project Title:	Fountain Wind Project
TN #:	253312
Document Title:	Jim Wiegand Comments - Comments Against Fountain Wind #1
Description:	N/A
Filer:	System
Organization:	Jim Wiegand
Submitter Role:	Public
Submission Date:	11/26/2023 2:48:09 PM
Docketed Date:	11/27/2023

Comment Received From: Jim Wiegand Submitted On: 11/26/2023 Docket Number: 23-OPT-01

#### **Comments Against Fountain Wind #1**

Additional submitted attachment is included below.

#### 11/26/2023 Comments about the Fountain Wind Project for the California Energy Commission

On 11/28/2023 a meeting is planned in Anderson, CA regarding the Fountain Wind Project. It appears this meeting is an attempt by the CEC to promote a fraud based project and deceive the people of Shasta County. My comments are being submitted so members of the CEC are fully aware of the some of the research fraud, disclosure fraud and consumer fraud associated with Fountain Wind and other wind projects. In the several comments I will be submitting, I will also include past information sent to Shasta Couty Supervisors regarding Fountain Wind and USFWS eagle comments from last year.

### A Foundation of Fraud

Wind energy's fraudulent research began back in 1976 and continues to this day. America's first fraudulent wind turbine mortality study was conducted by NASA in 1976. In looking over their studies, it's very obvious their methodologies were used to hide impacts and that NASA already knew the negative impacts a wind turbine would have on precipitation, birds, insects and sound. It's the only explanation why trained scientists, would have used such absurd, nonscientific research methodologies studies. Running a wind turbine at ½ speed and for very limited and at highly suspicious periods of time, is not research or science.

The images below illustrate some of this early wind turbine impact research fraud.

NASA knew the impact their turbine would have on precipitation, birds, insects and sound. So they contrived absurd research methodologies to cover it all up. One of those methodologies was to run the turbine it half speed.

DESCRIPTION OF MOD-O WIND TURBINE

The Mod-O wind turbine has been described in several earlier reports (refs. 3 to 8). Figure 1 shows a line drawing of the Mod-O wind turbine and Figure 2 is a photograph of the wind turbine in operation at the NASA Plum Brook site near Sandusky, Ohio. The wind turbine has a 2-bladed constant 40 rpm 125-foot diameter rotor located dowmind of the tower. The rotor drives a 100 kM synchronous alternator through a step-up gear box. The drive train and rotor are located in a nacelle with a center-line 100 feet above ground. The nacelle sits on top of a 4-legged steel truss tower. Wind direction is sensed by a wind vame on top of the nacelle and is used as a signal for the yaw control for keeping the wind turbine aligned in the direction of the wind. Details of the drive train system and the yaw system are shown in figure 3. Figure 4a is a photograph showir the drive train and yaw drive assembled and undergoing testing prior to assembly of the blades and installation at Plum Brook. Figure 4b hows the drive train and yaw system with the nacelle being checked out at Plum Brook prior to assembly of the blades and installation top of the tower. Ne wind turbine including the yaw drive, drive train and rotor blades was lifted to the top of the tower in one operation as shown in figure 5. At 20 RPM blade tips are moving at 89 mph

At 20 RPM blade tips are moving at 89 mph At 40 rpm and nomral operating speed, blade tips are moving at 178 mph

# 30 M (100 FT

#### **Proceedings of the Fourth Biennial Conference and** Workshop on Wind Energy **Conversion Systems**

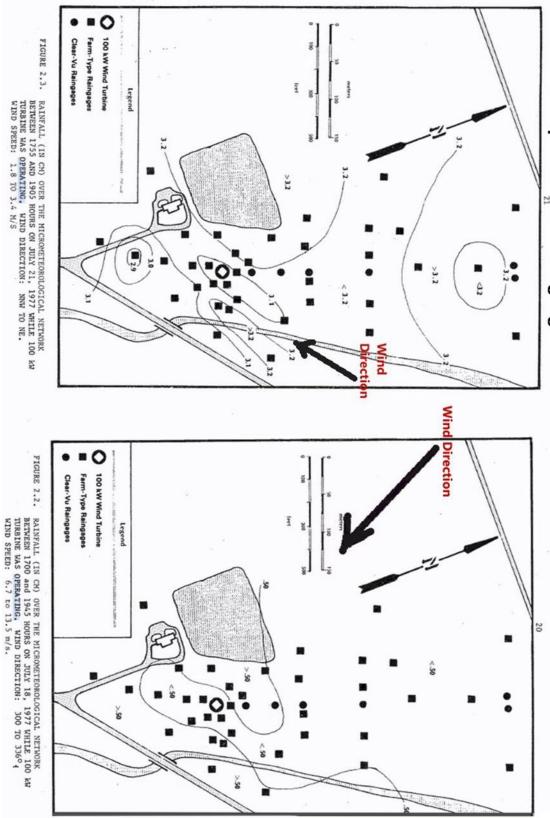
October 29 to 31, 1979 Washington, D.C.

An opinion based upon NASA's research fraud

Sponsored by **U.S. Department of Energy** Assistant Secretary for Conservation and Solar Energy Office of Solar Power Application

Public acceptance is also a key issue (Figure 9). To date, no serious evironmental issues have been identified. Wind turbines can be designed to be safe, and they are quiet and clean. TV interference is a siting consideration. Land usage may be a consideration as well as the visual aspects of large machines as you start to put up many machines.

direction and placement of rain guages. they contrived absurd research methodologies to cover it all up. Notice the wind NASA knew the impacts turbines would have on precipitation, birds, insects and sound. So





#### NASA knew the impacts their turbine would have on precipitation, birds, insects and sound. So they contrived absurd research methodologies to hide impacts. Rogers, S.E., M.A. Duffy, J.G. Jefferis, P.R. Sticksel, and D.A. Tolle. 1976. Evaluation of the potential environmental effects of wind energy system developments. Prepared for National Science Foundation/ERDA.

& at half speed

#### Effects on Birds

One of the principal environmental concerns about large wind turbine installations has been the danger they might present to birds, particularly nocturnal migrants. The most thorough investigation of the environmental impacts of wind turbines was conducted by Rogers et al. (6). The study was conducted at the DOE/NASA MOD-0 wind turbine installation at Plum Brook, Ohio, and covered a total of 28 nights during the peak fall and spring migration dates of 1976 and 1977.

In spite of the limited nature of the study (the turbine was rotating only 10% of the time), Rogers and her colleagues believe that there was sufficient evidence to conclude: "....it appears that the WTG at NASA-Plum Brook is not consistently lethal to a significant number of low-level, night-migrating birds, even on nights favoring high migration traffic rates combined with low cloud ceiling and fog" (p. 101). Rogers also states that the danger wind turbines would present to birds was small compared to the hazard presented by tall radio or television transmission towers with their myriad of guy wires. However, Rogers et al. include several qualifications to their conclusions. First of all, they emphasize that their conclusions only apply to wind turbines of the same physical size as the MOD-O and to sites similar to Plum

Brook. A taller wind turbine or a wind turbine located in a place where nightmigrating birds fly closer to the ground could pose a larger danger. Another point is that the hazard a large structure poses to night-flying birds is greatly affected by the way the structure is lighted. Strobe lights are thought to be less attracting or disorienting to birds than the traditional red beacons.

In summary, it appears that large wind turbines pose no greater danger to birds than other similar-sized structures. Even so, it would be wise to avoid siting wind turbines in places where large numbers of night-migrating birds might pass close to the ground. It would also be wise to avoid sites that are near places where birds congregate Early conclusions based upon fraudulent research.

The only probable impact to animal populations considered significant enough to warrant detailed studies was nighttime kills of birds at WIG towers. The number of nocturnal migrants during the peak migration periods for songbirds in the Sandusky area wa's found to vary from essentially no migration on rainy nights to 17,000 birds per mile of

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Nothing is driving species to extinction faster than wind energy. In a 15-year period, turbine mortality turned CA's golden eagles into an endangered species. This annihilation is a green energy secret. But

instead of conducting ethical golden eagle studies, the CEC has turned this species destruction into a deceptive and demented wind energy success (see image). Golden eagle mortality has been reduced in California because wind energy has been killing off their populations and this includes migratory populations from as far away as Alaska.



# Frequently Asked Questions About California Guidelines for Reducing Bird and Bat Impacts from Wind Development

The California Guidelines or Reducing Impacts to Birds and Bats from Wind Energy Development Guidelines was approved by the California Energy Commission in September 2007. To address the many questions that Energy Commission and California Department of Fish and Wildlife (CDFW) staff have received since that time we have compiled these answers to the more frequently asked questions.

# 6. Why are bird and bat studies necessary for projects that use the new generation turbines, which are much taller and have slower rotor speeds? Don't these new turbines have much lower impacts to birds?

During California's early wind energy development turbines were relatively small, spaced closely together, with the rotors spinning at high speeds. Wind turbines installed at the Altamont Pass Wind Resource Area, San Gorgonio, and Tehachapi during the 1980s generally had an installed capacity of around 100 kilowatts, reached heights of approximately 50 feet from the ground to the tip of the extended rotor, with blades spinning around 30 revolutions per minute (rpm). The new generation turbines (installed capacity around 1.5 megawatts) can be as tall as 450 feet from ground to rotor tip, with lower rotational speeds ranging from 15-27 rpm and tip speeds of approximately 200 feet/second.

A number of researchers hypothesized that these new-generation, taller turbines would reduce wildlife impacts, in part because birds would be better able to see and avoid the slower-spinning blades. As studies have been conducted on "repowered" sites, where old turbines were replaced with the new, large turbines, it appears that impacts to some species such as golden eagle are reduced. However, impacts to raptors such as red-tailed hawks and American kestrels do not seem to have declined. Other researchers have analyzed bat fatality data as a function of turbine height and found that as turbine height increases, more bats are killed possibly because the taller turbines reach into the airspace used by migratory bats. America's wildlife is in desperate need of protection from green energy, sellout conservation groups, America's corrupt Interior Department and Justice Department. In my professional opinion, a real Justice Department would be filling prisons with green researchers for their easy to prove scientific fraud.

Jim Wiegand - Wildlife Biologist



California Energy Commission 🗧 Data and Reports 🗧 Reports 🗧 Reducing Impacts to Birds, Bats from Wind Energy 🎽 Frequently Asked Que

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