



MEMORANDUM

DATE:

July 17, 1998

TO: FROM:

SUBJECT:

Ken Karas

ROB BRADLEY MEMO

cc: Tom White

XIYIM

Bradley

I really hate to take your time with this issue, but since Rob could not help but take more shots at our technology in his June 22 memo to you, and I feel your confidence in our technology and industry is essential, I hope you will permit me to briefly respond.

- 1. The only area of significant avian concern in the U.S. has been the Altamont Pass, in the Bay area. It is generally agreed the impact of wind there has not been avian population threatening. It is also generally agreed that the ground squirrel population increased as land use changed from grazing to windmills, attracting birds. Accordingly, in concert with the U.S. Fish and Wildlife Service and California Fish and Game, a plan has been developed to reduce the ground squirrel population and hence the birds (which is sort of ironic). Also, a particular turbine type, Kenetech's smaller, high rotor speed and lattice tower based USW-56/100, is the primary culprit. The birds are attracted to perch on the latticework, and the rotor turns so fast they cannot see it, so they get hit. In contrast, the latest machines turn at half the speed, increasing visibility, and use either tubular towers or lattice towers whose latticework provides no perch.
- A preliminary report was published recently by the California Energy Commission (CEC) concluding there is no significant avian impact in the Tehachapi area, and the CEC will soon publish a report stating the same conclusion for the San Gorgonio Pass near Palm Springs.
- 3. The Spanish project (Tarifa) is another Kenetech project, and constitutes but 35-40 MW out of over 4,000 MW in Europe. Remedial action was taken to mitigate the impacts, which appear to be successful. Of 45,000 Griffon vultures (a bird which was killed in some number prior to the remediation) which migrated through the area in 1994-95 after remediation, only one was killed by the wind turbines.
- 4. The avian issue is <u>not</u> of significance with respect to permitting. There was concern 3-5 years ago, but reports, studies, and experience such as that related above has generally allayed those concerns with planners. It simply does not impact our ability to permit projects.

However, and notably, the avian issue is the one of choice for those who wish to defame or otherwise impede our technology. I have been around the block a couple of times, and I am convinced Rob's work vis a vis wind is yellow journalism. I find it amazing that even in a memo to you he cannot help but take either ignorant or misleading shots at us. I have seen nothing from him on wind that is objective, unbiased, or balanced.

Again, I apologize for taking your time with this stuff.

Finally, congratulations on the stock price. I look forward to wind/solar being more of a contributor.