

5/25/79

In the Matter of
 HOUSTON LIGHTING & POWER COMPANY
 (Allens Creek Nuclear Generating Station)
 Docket No. 50-466



NEW CONTENTIONS SUBMITTED

BY F. H. POTTROFF III

As an intervenor in the Allens Creek matter, I submit the following contentions in accordance with ALAB-535 and the Board's April 12 Order:

I. In the Houston-Galveston area, numerous tornados have occurred over the years (the latest being reported in North Houston on May 22, 1979. See Houston Post may 23 1979 page 4A.) The Preliminary Safety Evaluation Report states " All category I civil structures will be designed to resist perforation, penetration, and spalling by tornado-driven missiles." I contend this can be done successfully only if the plant is buried underground, or covered by an earth mound of at least twentyfive feet at its smallest radius.

II. On Aug. 25, 1972, at the Millstone Reactor in Connecticut, a small ^{plane} crashed into an onsite transformer, rendering the plant's ECCS totally useless, due to the fact this system was operated by electricity. From this incident it isn't too hard to imagine a tornado, or tornado generated missiles, destroying ACNGS transformers and thus rendering the ECCS inoperable. To offset this, I contend the Applicant should use, as a primary or backup system, a system operated by air pressure or mechanical means.

III. In the FES, the Staff concluded that "wind cannot be considered a viable alternative source of energy . . ." to

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ACNGS. This is not true. Large wind-powered generators have been technically feasible in this country since the early 1940s, when the Central Vermont Public Service Company operated the 1.25 Mw Smith-Putnam wind machine. In the publication Wind Machines (Government Printing Office, 1976, NSF-RA-75-051) wind-powered generators are estimated to be viable when the price of oil rises FROM \$11 to \$15 a barrel. The Federal Energy Administration report Project Independence states wind energy is a "Source that can be developed and initially implemented on a relatively short time scale." Using a NASA summary of costs appearing in Wind Machines (\$1490/ Kw for production units), I have calculated a wind system built for HL&P would cost \$1.8 billion, as compared to \$2.3 billion for ACNGS (summary of figures given in FES, S.10.4.2.) Such a wind system would be more environmentally sound than ACNGS since "(1) it would be an electrical supply that does not require water, making water available for other uses, . . . (2) it would have small or no environmental effects. ." (Project Independence.) Under the authority of the National Environmental Protection Act, the Board should deny the ACNGS permit.

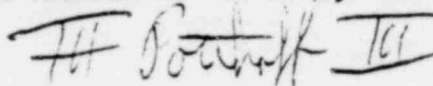
IV. In the FES, the Staff states that since photovoltaic cells now cost about \$20,000 per kilowatt, they are not currently economically feasible. However, in a science publication last year, ("New Alloy Brightens Solar Cell Prospects", Science News, Vol. 114, No. 24, page 406) Stanford R. Ovinsky announced his invention of a new solar cell made from an amorphous materials alloy. He stated in the article solar cells using his invention could be marketed in 3 years at 50¢ a peak watt—that is, \$500/ Kw. The report Project Independence estimates that photovoltaic cells costing at least \$700/kwe would be competitive with oil-powered

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generators burning oil at \$14 per barrel. If a system using
Ovinsky's solar cells were built instead of ACNGS, I estimate
it would cost \$60 million. As for environmental concerns,
Project Independence estimates large land areas would be needed
for centralized power plants, but could be avoided if solar cells
were mounted on rooftops. No water would be needed, and there
would be no pollution from solar cell operation. Such a system
is environmentally preferable to ACNGS, and so I ask the Board
to deny the permit.

An American citizen,



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