

ARIZONA CORPORATION COMMISSION

UTILITY COMPLAINT FORM

community from their task as outlined by Chair Mayes.

Regarding the second reason - unanswered questions - I have prepared an attachment to this letter that outlines some of these questions. The first group of questions is related to the impacts of the proposed line on the environment. The second group contains general questions associated with the feasibility study or the project itself. If public forums had been held in the affected areas using the format suggested by community members, perhaps these questions would have been answered. However, the format used by SSVEC was not supportive of multiple questions from one person nor was discussion allowed. The most important and relevant slides presented by SSVEC - those of proposed alternatives - were illegible and glossed over by SSVEC presenters. In addition, no one from Navigant or from the firm that conducted the biological survey was at either the meeting in Patagonia or the meeting at the Elgin School.

Thirdly, members of the affected area are working diligently on their alternatives to the 69kV line proposal, despite the distraction of this frivolous filing by SSVEC. The additional four months will clearly aid in development of an appropriate alternative for our community.

I will also take this opportunity to make a correction and some clarification of my oral testimony. My testimony was also referred to during the testimony of Ms White (approximately page 541 + of the transcript). There are two issues - preparation of graphs depicting phases on the V7 line and the impact of the power line on the Research Ranch. Regarding the graphs, Ms White states, "These graphs average an average. That is not a practical method for determining any type of analysis, but especially for power analysis." As I clearly stated in my testimony, I am not qualified to interpret the graphs and made no attempt to do so. However, I have a B.S., M.S., and Ph.D., in biological sciences, and have studied, prepared and used statistics for many years. The average of an average (or mean of means) is a well known, robust mechanism to describe trends, and is described more fully within the Central Limit Theorem (see any statistical text).

During cross-examination, I indicated that I could not remember having taken any steps to acquaint SSVEC with the negative impacts of the proposed power line over and above oral comments in early public meetings. That was a lapse in my memory. In addition to oral comments, my files indicate I wrote a letter to the SSVEC Board of Directors dated August 18, 2008 that was e-mailed to Joe Furno (our local representative to the SSVEC Board) with a hard copy mailed to the Board of SSVEC in Willcox. The following is a direct quotation from that letter:

"As an example, let me briefly outline a major impact the proposed project will have on the Research Ranch, a nationally recognized ecological preserve and research facility. One of our primary research objectives is to elucidate the effects of domestic livestock on southwestern grasslands with the goal of sustaining ecosystems and wildlife habitats in the Southwest. Cross fence comparisons between the ungrazed lands of the Research Ranch and our ranching neighbors such as the Babacomari Ranch have been conducted for over four decades, resulting in numerous scientific publications and providing valuable guidance to private entities and to federal and state entities charged with land management (i.e. Bureau of Land Management, U.S. Forest Service, Arizona State Parks, Arizona Game & Fish). Topics addressed through our research program include the spread of invasive non-native species, water infiltration and run-off, listed and common species, effects of fire on grasslands and savanna habitat and many more. By placing this power line immediately adjacent to our north boundary you will effectively halt future meaningful cross-fence comparisons for decades. You will negate the value of archived data accumulated over the past 40 years."

I received no reply from Mr. Furno, from the Board, or from upper-level management. I did, however, receive communications from several legislators who had been cc'd on this letter. As I said in my testimony, one of the SSVEC linemen asked if there was anything they could do to mitigate the impacts. I appreciated his concern, but as I told him - there's just nothing that could be done if that line went in. Perhaps a bit of clarification would help. One of the real challenges in conducting ecological research is to find paired sites so that the only difference between them is the treatment, not the soil type, precipitation, temperature, wind, slope, aspect or other factor. Transects such as those established by the Bocks back in the 70s and 80s were carefully chosen to be as uniform on either side of the fence as possible, with the only difference the presence or absence of

ARIZONA CORPORATION COMMISSION

UTILITY COMPLAINT FORM

domestic livestock. The introduction of a suite of variables associated with the power line, including actual construction impacts, the effects of continued access provided by the maintenance road, and the physical structures of the poles and lines themselves would make it virtually impossible for a scientist using transects in this area to produce a paper that would be accepted by any reputable journal.

Ms White testified that analysis of my statements regarding the negative impact had not been forthcoming. I suggest that she read not only my letters to SSVEC and ACC, but also those of Drs. Carl and Jane Bock; Dr. Zach Jones, Dr. Waite Osterkamp, Dr. Paul Green and others who understand the negative impacts that would result from this power line.

Commissioners, there is no emergency that would warrant making a premature and possibly incorrect decision that will affect our communities, other SSVEC members, and the environment for many, many years. Allowing the process to proceed as per your ruling last August will allow time to investigate the issues raised or ignored, by the feasibility study and for the community to complete their development of an alternative to the line.
Respectfully,

Linda Kennedy, Ph.D., Director

Attachment

ATTACHMENT:

Unresolved questions related to environmental impacts of the proposed 69kV line:

1) According to two staff members of the Arizona Game and Fish Department (AZGF) and the manager of the Babacomari Ranch, the consulting firm hired to develop the biological assessment reported the presence of Chiricahua Leopard Frog (a federally endangered species). When a team from AZGF investigated, they found 1) the site where the frogs were reported was not within the right-of-way and 2) the frogs were not Chiricahua Leopard Frogs. So it would appear that the group developing the biological assessment did not know where they were and did not know what they were seeing. What criteria were used to select the firm contracted to conduct the biological assessment and how reliable is their study?

2) Scientific studies have shown that some species of ground nesting birds have a negative response to power lines, including 69kV lines, for up to 500 meters on either side of the line. For some species, just the presence of tall structures (such as power poles) is enough to trigger an avoidance response so no mitigation, such as raptor deterrents, will be effective. Given the length of the proposed line and the fact that grassland birds are among the most threatened of all birds in North America, why did the feasibility study (FS) not report this potential negative impact?

3) "... all species on these tables meet the combined score criteria for vulnerability either continentally or regionally and are worthy of conservation attention" is a direct quote from the comprehensive assessment of avian species in the Mexican Highlands developed by the U.S. Fish and Wildlife Service and available on the Sonoran Joint Venture website <http://www.sonoranjv.org> The FS did not mention this report or many of the species listed that are found in the habitats that will be disrupted if a power line is installed in the Babacomari Ranch. Why not?

4) What of other species of concern that were noted in the FS? For example, two species on the lists included in the FS, *Asclepias uncialis* (Greene's Milkweed) and *Sigmodon ochrognathus* (Yellow-nosed Cotton Rat) have both been reported at or within a few hundred meters of the proposed site of the 69kV line. What are the potential effects on these species if construction of the power line is approved?

5) Successful re-establishment of native, upland vegetation is not simply a case of re - seeding, and damage to sacaton grasslands (of which there is less than 5% surviving in the United States) is likely to be permanent.

ARIZONA CORPORATION COMMISSION

UTILITY COMPLAINT FORM

What specific mitigation efforts will be undertaken?

General, unresolved questions with respect to the proposed project

6) Why did Navigant short-change storage of energy generated by renewables? A quick search of the internet shows many examples of storage - and Chevron is currently implementing a project in northern California that includes electric energy storage using a Sodium-Sulfur battery.

7) It appeared that Navigant did not seek out any "new" data or information - but relied solely on information supplied by SSVEC. Why? Doesn't that counter the definition of "independent"?

8) Studies have shown that nationwide per capita usage of electricity has decreased over the past several years. How did Navigant determine future load needs?

9) What data set did Navigant use to forecast population growth in the Sonoita/Elgin/Patagonia/Canelo area?

10) How did Navigant incorporate the downturn in new construction (meters, usages) in their projections?

11) How can construction of a power line estimated to take 12-18 months be considered an appropriate "immediate" solution when other alternatives are eliminated from consideration because there is a waiting list of up to a year for some products?

12) Given the tremendous strides in technology, it would appear that spending this amount of money on outdated technology is unwise. Why not develop a step-wise program that would build on energy efficiency, renewable energy and peaker facilities that could grow when and if the communities needed more energy?

13) How is a diesel generator considered a "Renewable" alternative?

14) Wood is locally available, renewable, and considered carbon neutral. Why was there no consideration of conversion to wood offered as a means to shift some residential load? It's likely that many residents would opt to install a wood stove if financial assistance in the form of a rebate was available.

15) How did Navigant weight the visual aspects among the alternatives - strictly by the number of people who might see them per day? It's not intuitively obvious how two lines (the existing line and the new line) would have less visual impact than one line in the existing route.

16) How long will it take to repair a fault on the proposed line through the Babacomari? There is no established road - and, if a fault is caused by weather (as many outages are according to the FS), travel on the right-of-way will be difficult, if not impossible. In late December 2009, a customer reported the exact position of a fault (caused by wind) that caused a major blackout in our area. It took SSVEC over four hours to arrive at this fault, although the location of the fault was known precisely and the line was near a well maintained road. If a weather induced fault occurs on the 69kV line, the area may be without power for days as SSVEC waits for the washes to become passable.

17) The poll sponsored by SSVEC that purportedly showed strong support for construction of the 69kV line was conducted immediately following a barrage of letters, newspaper articles and phone calls to members. These communications used statements that indicated the V7 area suffered 270 hrs of outage per year. Why was this number (270) used, rather than the number of hours shown by the feasibility study (3)? Would the results of the survey been different?

18) Why did the poll not query interest in fuel conversion?

19) Has SSVEC contacted the Bureau of Land Management regarding the possible use of the retired landfill near Sonoita as a site for a solar array? If so, what was the outcome of that meeting? If not, why?

ARIZONA CORPORATION COMMISSION
UTILITY COMPLAINT FORM

20) How much will the entire project cost? So far, we're up to almost \$14,000,000. Does that include the cost of the five distribution lines from the substation? If not, how much will those lines add to the cost of the project?

21) How much will our (SSVEC members) electric bills increase to pay for this project, and when will that increase occur?

End of Complaint

Utilities' Response:

Investigator's Comments and Disposition:

Customer comments entered for the record and filed with Docket Control.

End of Comments

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