TATE OF IOWA

DEPARTMENT OF COMMERCE

UTILITIES BOARD

IN RE: CEDAR FALLS UTILITIES	DOCKET NO. E-21647

ORDER AFFIRMING PROPOSED ORDER, ADDRESSING MOTIONS, AND GRANTING PERMISSION TO APPEAR

(Issued September 21, 2005)

On May 27, 2004, Cedar Falls Utilities (CFU) filed a petition requesting that the Utilities Board (Board) issue a franchise to erect, maintain, and operate a 161 kV (kilovolt) electric transmission line, a portion of which would be located outside the city limits of Cedar Falls, Iowa, and within the jurisdiction of the Board pursuant to Iowa Code chapter 478. On December 23, 2004, the Board assigned the docket to an administrative law judge (ALJ) to establish a procedural schedule, set a hearing date, and conduct proceedings.

On January 11, 2005, the ALJ issued an order establishing a procedural schedule and setting a hearing. The hearing was held on April 15, 2005, and on July 6, 2005, the ALJ issued a proposed decision and order granting the petition and franchise to CFU. A timely appeal was filed by Bert and Diane Schou. The Schous requested oral argument and a briefing schedule on the issues they raised.

On August 2, 2005, the Board issued an order establishing the issues to be addressed on appeal, a briefing schedule, and denying the request for oral argument.

In the order, the Board indicated it had decided to issue the order without responses to the appeal because of scheduling conflicts.

On July 29, 2005, CFU filed a response and a motion to strike the appearance of counsel, Carol A. Overland, who signed the Schous' notice of appeal. On August 18, 2005, CFU filed a motion to strike the substitution of the book Black on White for Exhibit DS-216. On August 19, 2005, Carol A. Overland filed a notice of appearance as counsel for the Schous. On September 1, 2005, the Schous filed a response to the motion to strike the book Black on White. On September 8, 2005, the Schous filed a reply to the motion to strike appearance.

On August 19, 2005, initial briefs were filed by CFU, the Schous, and the Consumer Advocate Division of the Department of Justice (Consumer Advocate). On September 2, 2005, CFU and Consumer Advocate filed reply briefs. Also on September 2, 2005, CFU filed a motion to strike the exhibits attached to the Schous' initial brief and a motion to strike the appearance of Ms. Overland and the initial brief. On September 6, 2005, the Schous filed a reply brief.

Iowa Code § 17A.14(3) states that on appeal from or review of a proposed decision, the Board has all the power which it would have in initially making the final decision except as it may limit the issues to be considered on appeal on notice to the parties or by rule. The Board has limited the issues to those it described in the August 2, 2005, order. The Board indicated it would address any other issue raised that it deems necessary to render a decision.

The statute provides that the Board may reverse or modify any finding of fact in the proposed order if a preponderance of the evidence will support a determination to reverse or modify such a finding, or may reverse or modify any conclusion of law that the agency finds to be in error. The ALJ structured the proposed order with a recitation of the evidence with evidentiary findings, formal Findings of Fact in numbered paragraphs, and Conclusions of Law. The Board reviewed the evidentiary findings and formal Findings of Fact in the numbered paragraphs as well as the Conclusions of Law as they relate to the issues on appeal.

The Board will address the issues established for consideration in the August 2, 2005, order and the four motions filed by CFU below. There are issues raised by the Schous in their briefs that the Board does not address. The Board has determined that consideration of those issues is not necessary to render a decision on the appeal. The evidentiary standard for modifying or reversing a finding of fact, either an evidentiary finding or a formal Finding of Fact, is whether there is a preponderance of evidence to support a reversal or modification. The Board considers the Conclusions of Law based upon its own understanding of the law.

ISSUES FOR CONSIDERATION ON APPEAL

The proposed route for the electric transmission line begins at the Union Substation located within the city limits of Cedar Falls, Iowa, and runs for approximately three miles south along the side of Union Road to a point just south of University Avenue, all within the city limits. The line would then cross Union Road

and exit the city limits. Outside the city limits, the line would continue south along the west side of Union Road 1.5 miles to the north margin of West Ridgeway Avenue. The line would then continue east along the north margin of West Ridgeway Avenue for one mile, re-enter the city limits, and continue along the north margin of West Ridgeway Avenue for about 1.3 miles to the new Industrial Park Substation at 605 West Ridgeway Avenue. The franchise is requested for approximately 2.5 miles of transmission line that would be located outside the city limits of Cedar Falls in Black Hawk County and, therefore, within the jurisdiction of the Board.

The Schous have a home at 6621 West Ridgeway Avenue and an office at 6117 West Ridgeway Ave.

1. Failure to provide notice of the petition as required by Iowa Code § 478.5 and 199 IAC 11.5(2).

Iowa Code § 478.5 and 199 IAC 11.5(2) require that the Board cause notice of a petition for an electric franchise to be published in a newspaper for two consecutive weeks. The notice is required to contain a general statement of the contents and purpose of the petition, a general description of the lands and highways to be traversed, and shall state that any objections shall be filed in writing not later than 20 days after the date of the last publication. In this case, notice was not published before the hearing on April 15, 2005. After the hearing, CFU published the required notice in the Waterloo Cedar Falls Courier on May 16 and 27, 2005. No new objections were filed.

The Schous raise the issue of failure of CFU to provide the required notice because it was not published before the hearing and, when published, the notice was only published one day each week rather than everyday for a two-week period. Both CFU and Consumer Advocate argue that notice after the first hearing provided any new objectors with an opportunity for another hearing and that publication of the notice once a week for two consecutive weeks meets the statutory requirements in Iowa Code § 478.5 and 199 IAC 11.5(2).

The Board concludes that the notice provided in this case meets the requirements of the statute and Board rules. It is evident from the record that the Schous had sufficient notice of the petition and the hearing and fully participated in the hearing. The notice that was published on May 16 and 27, 2005, provided any other interested person sufficient notice of the proposed route and the opportunity to file an objection. If an objection had been filed, another hearing could have been held. Because this procedure could have resulted in multiple hearings, giving notice after a hearing is not the recommended or most efficient procedure for contested cases involving a petition for a franchise. In this instance, however, this procedure met the statutory requirements.

The Board's decision is supported by a similar case that reached the Iowa Supreme Court, Fischer v. Iowa State Commerce Commission, 368 N.W.2d 88 (Iowa 1985). In the Fischer case, the company that filed the petition failed to include all of the allegations required by statute in the initial petition. After the first hearing, the

hearing officer allowed the company to amend the petition and held a second hearing upon the request of the property owner. The property owner then filed for judicial review of an order granting the franchise, contending that proper notice was not given and the order was invalid. The District Court affirmed the granting of the franchise and the property owner appealed to the Iowa Supreme Court.

The Iowa Supreme Court held that "[o]rdinarily, all that need be shown to validate administrative proceedings against persons who participate in a contested case hearing is that they had a reasonable opportunity to know of the claims which affected them and to meet those claims." (Citations omitted). In this case, the Schous knew the claims that affected them and had a reasonable opportunity to meet those claims. The statutory requirements for notice were satisfied with respect to the Schous and no other objections were filed.

With respect to the argument that the notice was only published twice, rather than 14 times, Iowa Code § 478.5 states that a notice addressed to the citizens of each county through which the proposed line will extend shall be published in a newspaper located in each county for two consecutive weeks. This statute does not require, as the Schous contend, that the notice be published each day of the week for two consecutive weeks. Such an interpretation would place an unreasonable burden on companies seeking franchises, since some counties in Iowa only have local newspapers located in the county that publish once a week.

The Board concludes that notice need only be published on one day of each week for two consecutive weeks to meet the statutory requirement. The Board has adopted a rule with this interpretation of the notice requirement for petitions for natural gas pipeline permits. 199 IAC 10.4(1). It is reasonable to apply this interpretation to petitions for electric franchises as well.

2. The findings of the ALJ in the proposed order are not supported by competent and substantial evidence and the ALJ erred in not admitting certain evidence offered by the Schous.

The Schous raise several issues concerning the decision of the ALJ not to admit certain evidence and argue that some of the ALJ's findings were not supported by the record. In the August 2, 2005, order, the Board established a general issue of whether there is competent and substantial evidence to support the decision of the ALJ and whether the ALJ erred in not admitting certain evidence offered by the Schous.

a. The Schous contend that evidence to support their position was erroneously not admitted into the record because it was readily available to all parties.

The Schous argue that the ALJ committed error in refusing to admit certain evidence. They also argue the evidence was readily available to all parties so there is no surprise. The specific items of evidence that were not admitted are described by the Schous as follows:

1. A 1978 report by an engineer that was referred to by the ALJ. The Schous state it was provided by CFU, which should take responsibility for entering it into the record.

2. An "EMF-RAPID report" that the Schous allege is well-known in the industry and available on the Web and from court proceedings in other states.

3. Certain conclusions of the National Institute of Environmental Health Studies (NIEHS) regarding the effect of power-line frequency electric and magnetic fields on human health.

4. The printed publication entitled Black on White. The Schous indicate that they will be receiving copies of the book when it is published and will send a copy to each party. Excerpts of the book appear to have been admitted as Exhibits 213 and 216.

5. Evidence from Susan Malloy and Arthur Furstenburg, as well as from Lief Salford and Magda Havas.

The Schous contend that in ruling on the admissibility of their evidence, they should not be held to the same standard as those parties represented by counsel and, since they have no experience in administrative proceedings or rules of evidence, they should have been given additional latitude by the ALJ. The Schous also contend that the material they offered was readily available to the other parties and on that basis should have been admitted into the record.

CFU contends that the Schous should be held to the same standard as other parties even if they chose not to be represented by counsel at the hearing. Consumer Advocate contends that the Schous are in error when they allege that the information cited is not in the record and they fail to specify any opinion or fact contained in any of the material that the ALJ did not consider.

The record shows that the ALJ appropriately considered the Schous' lack of counsel throughout this proceeding by providing ample instructions regarding the

appropriate procedures. For instance, in the order issued January 11, 2005, establishing the procedural schedule for this docket, the ALJ stated that when a party, including a person filing an objection, has a substantial amount of information to present, the information should be presented in the form of prepared testimony and exhibits according to the procedural schedule. The ALJ stated that any person filing an objection is presumed to be a party to the case, although no objector is entitled to party status merely because that person has written a letter. The ALJ stated that to qualify as a party, an objector must be able to demonstrate some right or interest that may be affected by the granting of the franchise. The ALJ further stated that because objectors are presumed to be parties up to the time of the hearing, an objector will receive copies of all documents that are filed in the case.

There may have been some ambiguity concerning whether Diane Schou was considered a party to this case. In an order issued April 5, 2005, denying CFU's motion for a medical exam of Diane Schou, the ALJ stated, "Ms. Schou is an objector, but it is not clear that she is a party." Generally speaking, the Board considers all objectors to be parties to the case if they have filed a written objection and they, therefore, have the rights and obligations of any other party. Another party may object that an objector does not have sufficient interest in the case to be a party and the ALJ should then decide if the objector has demonstrated sufficient interest to be a party or dismiss the objector as a party. In this instance, Bert and Diane Schou demonstrated sufficient interest in the proceeding to be parties to the case. In any

event, any ambiguity regarding this question was harmless to the Schous, as their participation was not restricted.

On February 22, 2005, the ALJ issued an order revising the procedural schedule and rescheduling the hearing. In the order, the ALJ also described for the Schous the requirements for service of documents on other parties and the certificate of service that should accompany the service of documents. The ALJ then stated that information filed by the Schous in letters dated February 18, and 22, 2005, appeared to be testimony and exhibits in support of the objection and although the filing was not in the traditional testimony and exhibit format, it would be treated as prepared testimony and exhibits.

In the February 22, 2005, order, the ALJ granted the Schous time to file additional evidence and granted the request to reschedule the hearing. The ALJ also stated that reasonable accommodations in the hearing room would be made for Diane Schou.

On March 23, 2005, the ALJ issued an order stating that the Schous must file a printed copy of certain evidence if they proposed that the evidence should be considered in the proceeding. The ALJ stated specifically that the information referred to by the Schous was not part of the record in the case at that time. In response to the March 23, 2005, order, the Schous on March 29, 2005, filed hard copies of some information including excerpts from the 1978 engineer report and the NIEHS study. Thus, in each of these orders the ALJ recognized that the Schous

were not represented by counsel and instructed the Schous in the appropriate procedures.

At the hearing, the ALJ admitted, with no objection by the other parties, the Schous' Exhibit Nos. DS-201, 202, 203, 212, 213, 214, 215, 216, and 217. These exhibits contain the information prefiled by the Schous. Exhibit 216 contains four sections, identified as sections a through d, that were filed on March 29, 2005, by the Schous in response to the ALJ's March 23, 2005, order. Exhibits DS-218 and 219 were offered by the Schous at the hearing and admitted into evidence by the ALJ. During Mr. Schou's testimony, the ALJ informed him that he could put the entire NIEHS report into the record. Mr. Schou replied "I'm happy with what I've submitted. I won't weigh it [the record] down any more." (Tr. 188.)

A review of the record in this case shows that the ALJ provided the Schous with many opportunities to file additional information and provided sufficient guidance and latitude in offering and presenting evidence. The Schous chose not to be represented by counsel and cannot use that as a basis for overturning the ALJ's decision not to admit the additional documents. Parties who represent themselves are still required to follow the procedural rules for the contested case and are bound by the rules of evidence in administrative proceedings. Matter of Estate of De Tar, 572 N.W.2d 726, 729 (Iowa 1997).

With regard to the specific items the Schous argue should have been included in the record, the Board finds the items were not offered as ordered by the ALJ, are

cumulative, and provide little probative support for the Schous' case. The Schous filed excerpts of the items on March 29, 2005, and those excerpts were admitted into the record at the hearing as Exhibit 216, sections a-d, and have been considered by the Board.

The Schous chose to offer only excerpts of the engineer's 1978 report, the EMF-RAPID report, the NIEHS report, and the book Black on White. The Schous had informed the ALJ that hard copies of the book Black on White were not available at the time of the hearing but the book could be downloaded from the Internet. After the hearing, the Schous filed the book and are now asking it be substituted for the excerpts in Exhibit DS-216. The motion to exclude the book is discussed later in this order.

The Board will exclude the items requested to be entered into the record as described above. The ALJ offered the Schous the opportunity to provide the information prior to and at the hearing. They chose not to take advantage of these opportunities to offer the evidence. The fact that evidence may be available to other parties does not relieve the party wishing to rely on the evidence of the obligation to offer the evidence into the record in a timely manner.

In addition, Iowa Code § 17A.14 states that irrelevant, immaterial, or unduly repetitious evidence should be excluded. The Board finds that the items would be unduly repetitious of other information already in the record and, to the extent they

may be different, would prejudice the other parties by admitting them after the close of the record.

b. The Schous contend that CFU did not serve them with all of the prefiled testimony.

At the hearing, the Schous contended they had not been served with CFU Exhibits 5-8 that were attached to the prefiled testimony of CFU witness Curtis S. Johnson. The exhibits contain charts showing the strength of electromagnetic fields at various distances and loads from a transmission line similar to the proposed line. The Schous were provided the exhibits at the hearing and did not object to the admission of the exhibits.

Mr. Johnson discussed the charts extensively in the prefiled testimony that the Schous admit receiving. If the exhibits were not attached, then by reading the prefiled testimony the Schous knew or should have known of the charts. They could have requested a copy prior to the hearing. At the hearing, the Schous did not ask any questions of Mr. Johnson regarding the charts or request time to study them to determine if they had questions. The Board finds that it is not clear from the record that Exhibits 5-8 were served on the Schous with the prefiled testimony of Mr. Johnson. However, it is clear that the Schous were not prejudiced in the presentation of their case by the omission, if it did occur, and they had sufficient notice of the exhibits to have requested a copy prior to the hearing in any event.

c. The Schous contend that the findings of the ALJ concerning the capacity of the proposed line are not credible.

The Schous argue that the evidence presented by CFU that the proposed transmission line would ordinarily carry only 33 megawatts (MW) at peak load conditions was not credible based upon the specifications of the conductor and the properties of electric current. The Schous point out that the petition specifies the line will be a 161 kV line with a 336 ACSR conductor. They contend that the 33 MW load could easily be carried by a 69 kV line and this would reduce the EMF emissions. The Schous also contend that the values used by CFU to calculate EMF levels are not accurate based upon the proposed load of the line.

The Schous also re-argue the issue, discussed above, that they did not receive the charts in Exhibits 5-8 to Mr. Johnson's testimony until the hearing. The Schous argue that they did not have time to obtain an expert witness to review the charts and based upon what they consider the grossly understated capacity of the proposed line, the EMF emissions are grossly understated.

It has been found previously that the Schous were not prejudiced by the failure, if it occurred, to receive the charts in Exhibits 5-8 prior to the hearing. In addition, the record does not contain any credible evidence to support the Schous contention that the line will be oversized or the projected load unreasonable. The preponderance of the evidence supports the ALJ's findings on the capacity of the line.

d. The Schous contend that the evidence does not support the findings of the ALJ concerning the distance of their house from the proposed line.

The ALJ found that the Schous' home was approximately 400 feet from the route of the proposed line. This finding is based upon the testimony of Mr. Johnson that the line would be approximately 97 feet from the property line, 400 feet from the residence and 250 feet from the office. Mr. Johnson also testified that the proposed line would be built 3 feet in from the north edge of the 100 foot right-of-way and so would be 97 feet from the Schou's property line on the south edge of the right-of-way.

Mr. Johnson referred to an aerial map entered into evidence as Exhibit 4 in support of this testimony and does not appear to have visited the location. Under cross-examination, Mr. Johnson was unable to testify to the accuracy of the distances shown on Exhibit 4 between the proposed line and the Schous' house and office. Mr. Johnson's testified as follows:

> Wait a minute. Seventy feet. No, that 70 feet might not be right.
>
> I'm sure the shorter distance there is the distance from the house to the line, but it's got to be more than that because the right-of-way is greater than, you know—the right-of-way is 100 feet wide, so the 70 must be a typo or something. I can't explain that. (Tr. 70, l. 9-16.)

The Schous stated in the letter filed March 22, 2005, and treated by the ALJ as prefiled testimony, that the distance from the 6621 West Ridgeway Avenue house to the edge of the south edge of the pavement is 53 feet and to the north edge of the pavement is 75 feet. This appears to conflict with Mr. Johnson's testimony and the information provided by Board engineer Mr. Hockmuth that the West Ridgeway

Avenue right-of-way is 100 feet in width. It obviously conflicts with the distance shown on Exhibit 4 and the Schous contend their house is not shown on Exhibit 4.

The Board finds that the preponderance of the evidence does not support the ALJ's finding that the Schous' residence is 400 feet from the proposed line. The ALJ appears to have accepted Mr. Johnson's direct testimony concerning the distance of the proposed line from the Schou residence without addressing the discrepancies raised by Mr. Johnson on cross-examination or the contradictory evidence from the Schous. The testimony of Mr. Johnson concerning Exhibit 4 shows that his testimony that the house is 400 feet from the proposed route is not credible. Additionally, it is not clear from the record whether the aerial map in Exhibit 4 includes the Schou residence.

There in no evidence how far the house is set back from the property line. The Schous' measurements showed the house is 53 feet from the nearest edge of West Ridgeway Avenue and 75 feet from the farthest edge. There is no evidence showing whether the Schous' measurements are accurate and whether they are consistent with the credible evidence from Mr. Johnson and Mr. Hockmuth that the house is more than 97 feet from the proposed route. This is the distance Mr. Johnson calculates from the proposed line to the Schous' property line based upon the width of the right-of-way on West Ridgeway Avenue. Mr. Hockmuth also testifies that the right-of-way is 100 feet wide.

The Board will modify the proposed order to reflect that the evidence shows that the Schou residence is at least 97 feet from the proposed line, but that the exact distance from the proposed line to the residence is not discernable in the record. The Board also finds that this modification is not determinative and does not require the Board to modify the proposed route.

Mr. Johnson testified that he knew of two states that have standards for EMF levels. New York has a standard of 200 milligauss and Florida has a standard of 150 milligauss, both standards measured at the edge of the right-of-way. The exposure levels calculated at the south edge of the right-of-way near the Schou residence were between 0.913 at 100 amps and 8.534 at 450 amps. CFU proposes to operate the line at 100 amps. This evidence demonstrates that at the distance the Schou residence will be from the proposed line the EMF levels will be minimal and do not support a modification of the route.

e. The Schous contend that the evidence concerning the field readings of electromagnetic fields (EMF) emissions is not scientifically verifiable and therefore not supported by the evidence.

The evidence in the record concerning EMF emissions readings indicates the readings were performed under Mr. Johnson's supervision and are reflected on charts in Exhibits 5-8. The Board has previously discussed the allegation that these exhibits were not served on the Schous with Mr. Johnson's prefiled direct testimony.

Although the field readings of EMF emissions may not have been performed with the exactitude of a scientific study, Mr. Johnson testified that the readings were

performed using a software model that is used in the industry for such purposes and field readings were taken off of a line considered to have characteristics similar to those of the proposed line. The Schous did not object to this testimony, the Schous did not cross-examine Mr. Johnson about the line readings, and the Schous did not offer any evidence showing the line readings did not approximate the EMF emissions from the proposed line.

The questions raised by the Schous on appeal concerning the field readings in Exhibits 5-8 could have been asked of Mr. Johnson at the hearing. The Schous could have presented evidence concerning what they consider to be the correct readings. Without some evidence to contradict the readings provided by Mr. Johnson, the evidence in the record supports the ALJ's findings regarding the readings.

f. The Schous contend that the findings of the ALJ concerning the health effects of the proposed power line are not supported by the record.

The Schous presented a variety of information to support their position that EMF fields generated by power lines would cause adverse health effects for Mrs. Schou. All of the information properly filed by the Schous in the letters and attachments was entered into the record at the hearing without objection. In addition, the ALJ ordered that the Schous' letters filed on February 18 and June 22, 2005, would be treated as prefiled testimony. At the hearing, the ALJ did not go through the formality of having Mr. Schou attest to the letters or spread them on the record as

she did with the testimony of CFU's witnesses, but the ALJ did admit the letters into the record.

CFU presented the testimony of three witnesses on the health effects of the proposed power line: Mr. Johnson, CFU's manager of engineering services; Dr. Brian Paul Sires, a neurologist; and John W. Lamont, a professor of computer and electrical engineering. No objection was made to any of the testimony of the three witnesses, although the Schous have raised questions about the witnesses' expertise in the notice of appeal and their brief.

Mr. Johnson concluded, based upon his field readings of EMF emissions, that the fields generated by the power lines would not cause health or other adverse consequences. Dr. Sires testified he was unaware of any conclusive evidence that power lines similar to the one proposed caused cancer or other organic disease in humans. Mr. Lamont testified that there is not any direct evidence of adverse health effects from exposure to electromagnetic fields generated by power lines. Mr. Lamont testified that people are exposed to more electromagnetic fields at work and at home than they are from power lines.

The ALJ found that the Schous presented "no evidence regarding electric or magnetic field levels of the proposed line and no persuasive evidence that showed there would be any adverse health effect from the electric and magnetic fields of the proposed line in this case" and the evidence "shows that scientific and medical

studies have not established a causal connection between electric transmission lines and health symptoms such as those described by Mrs. Schou."

The Board has no reason to question the testimony of Mrs. Schou about her health and the effects that she believes electromagnetic fields have on her condition. However, the evidence presented by the Schous does not support their position concerning the adverse health effects that the new line will have on Mrs. Schou. The evidence presented by the Schous was anecdotal, did not show a causal connection between EMFs and human health problems, or involved sources of EMFs other than power lines. The evidence presented in this case supports the ALJ's findings that there is no medical or scientific evidence in the record that establishes a causal connection between electromagnetic fields and organic disease in humans.

The evidence shows that the proposed line will have electromagnetic emissions similar to or less than those normally found in a work or home environment and the proposed line will be built with a conductor configuration that minimizes EMF emissions. This is true even though the evidence concerning the distance from the line to the Schous' home is inconclusive. In addition, the Schous have cited no decision in which a court has found that a line should not be built or should be removed because of scientific evidence showing a causal link between electromagnetic fields and organic diseases in humans.

The Board found one decision from Minnesota that addressed the issue of whether EMF levels have an adverse effect on humans. Power Line Task Force,

Inc., v. Public Utilities Commission, 2001 Minn. App LEXIS 474 (Minn. Ct. App. 2001) (unpublished). In the Power Line Task Force case, the Minnesota court affirmed the order of the Minnesota Public Utilities Commission (PUC), a state agency with jurisdiction in Minnesota similar to the Board's jurisdiction in Iowa, denying a complaint in which a group of citizens sought a PUC order to immediately shut down a power line because it created a safety hazard for persons living nearby. The group of citizens, collectively the Power Line Task Force, Inc., argued the commission could not make a decision without conducting a more extensive investigation to determine the safety hazard posed by the line. The Court found merit in the PUC's conclusion that, given the lack of "resources at hand and the current state of scientific knowledge," neither the present record nor any record that could feasibly be developed at the time would justify shutting down the line. The Board notes that the PUC had reviewed the same NIEHS report as offered by the Schous in this docket and used it to support the PUC decision.

Without probative scientific or medical evidence or precedent from a court decision, the Board has no basis on which to find that power lines cause adverse health conditions in humans. Accepting that Mrs. Schou believes she suffers from a condition that is exacerbated by electromagnetic emissions, the record still does not present the Board with evidence upon which to order further investigation or to deny the construction of the power line if CFU has satisfied the statutory requirements.

The Board's findings in this case are consistent with two prior Board decisions in which the Board addressed whether there was evidence that EMF fields caused adverse health conditions in humans that would require modification of the route of a proposed electric transmission line. Waverly Municipal Electric Utility, Docket No. E-20990, "Proposed Decision and Order Granting Franchise" issued September 27, 1990 (affirmed without comment March 8, 1991); Midwest Power, a Division of Midwest Power Systems, Inc., Docket Nos. E-21043, E-21044, E-21045 (consolidated), "Decision and Order Granting Franchise" issued March 9, 1993.

In both of these decisions, the Board found that there was insufficient support to justify placing any terms or conditions on the franchise due to EMF concerns. The Board recognizes that these decisions are from several years ago, but the evidence presented in the case before the Board contains no additional scientific or legal finding that EMF's cause adverse health conditions in humans.

3. Application of the appropriate standard for admission of expert testimony and the qualifications of CFU's witnesses.

The Schous contend that CFU witness Dr. Siles was not qualified to testify as an expert on the effect of EMF on humans. While the Schous did not raise the same issue with CFU's other witnesses, the Board will consider the qualifications of the three CFU witnesses and the opinions they gave concerning power line emissions and EMF effects on humans.

Mr. Johnson, Dr. Siles, and Mr. Lamont testified as experts on the effect of electromagnetic fields on humans. The Schous did not object at the hearing to any

of the testimony or exhibits or the qualification of the witnesses as experts. The Schous have raised questions about the expertise of these witnesses in the appeal and their brief.

Iowa Rule of Evidence 5.702 provides the requirements for admission of expert testimony in Iowa. The rule is as follows:

> If scientific, technical, or other specialized knowledge will assist the trier of fact to understand the evidence or to determine a fact in issue, a witness qualified as an expert by knowledge, skill, experience, training, or education may testify thereto in the form of an opinion or otherwise.

The Iowa Supreme Court has stated that there is no hard and fast test that must be followed to qualify a witness as an expert; the degree of complexity in the subject of the testimony is a factor in weighing the qualifications of the witness. Johnson v. Knoxville Community School District, 570 N.W.2d 633, 637 (Iowa 1997). In this case some of the testimony involved complex issues. Since there was no objection to the witnesses testifying as experts, any questions about the testimony of a witness on an issue goes to the weight to be given the testimony and not its admissibility.

Mr. Johnson's expertise and background is in engineering and managing water, gas, communications, and electric utilities for CFU. Mr. Johnson's testimony concerning the effects of power line emissions on humans is based upon his review of information he obtained and not from any studies in which he participated. Mr. Johnson is an expert on the construction of power lines.

Dr. Sires is a neurologist and has practiced in the field for over 14 years. Dr. Sires testified as a medical expert and stated that he was aware of studies that had been conducted to determine if there was a causal relationship between electromagnetic fields and organic disease in humans. Dr. Sires testified that the studies did not support a causal connection. Dr. Sires was qualified as an expert in the field of neurology.

Mr. Lamont is a professor of Electrical and Computer Engineering at Iowa State University and his background shows extensive experience in studies conducted to determine whether electric power lines had an adverse effect on humans. Mr. Lamont, in his testimony, demonstrated an extensive knowledge of the subject and was a credible witness. Mr. Lamont qualified as an expert on the subject of the effect of EMF emissions on humans.

In conclusion, the Board finds that all three of the witnesses were qualified to testify as experts. The Schous' contention that Dr. Siles was not qualified to testify as an expert regarding the effect of EMF on humans is rejected.

4. Exclusion of evidence concerning landing strip

The Schous contend that CFU failed to address the location of a helicopter landing strip within ½ mile of the proposed power line. The record contains no evidence concerning a helicopter landing strip on the Schou property. Since the Schous produced no evidence concerning the alleged helicopter landing strip, the

ALJ did not commit any error in not addressing the purported landing strip in the proposed order.

5. Alternate routes not properly considered

The Schous contend the ALJ did not give proper consideration to the alternate routes considered by CFU, especially the one offered by Consumer Advocate. Mr. Johnson testified concerning the comparison of the other routes considered and the proposed route presented in this case. Mr. Hockmuth, a Board engineer, filed a report concerning the proposed power line. Mr. Hockmuth's report was made part of the record by official notice. The transcript contains over 40 pages of testimony and cross-examination concerning the proposed route and alternate routes considered by CFU. The ALJ described the evidence in the record in detail in the proposed order on pages 19-25.

Iowa Code § 478.4 provides the Board may grant a franchise in whole or in part upon the terms, conditions, and restrictions, and with the modifications as to location and route as the Board deems just and proper. The statute then provides that the Board shall make a finding that the proposed line is necessary to serve a public use and represents a reasonable relationship to an overall plan of transmitting electricity in the public interest.

The ALJ stated that it would be unjust and improper to consider only the interests of the Schous when deciding whether to require modification of the route and the interests of the utility and all of its customers must also be considered. The

ALJ found that the evidence demonstrated that the proposed route would not unnecessarily interfere with the use of the land by its occupants and CFU had proven the proposed route was the most practical and reasonable alternative and should be approved.

The statute gives the Board broad discretion in determining whether the route of a proposed electric transmission line should be modified. The "just and proper" standard allows the Board to protect the public interest, whether the public interest is based upon the interests of one customer or a number of customers. The "just and proper" standard established for modification of a route is a separate requirement and must be addressed in addition to the requirement that the Board find the proposed line is necessary for the public use and part of an overall plan for electricity use.

Although the ALJ may not have expressed recognition of the broad discretion provided in the statute, in this case the ALJ reached the proper conclusion based upon the evidence. The Schous did not provide any probative evidence that linked human diseases with EMFs from power lines. The evidence showed that the proposed line would expose Mrs. Schou to minimally higher levels than she is already exposed to from normal day-to-day exposure. Mr. Schou was asked at the hearing if he had measured the EMF levels at his residence and he was unable to provide any readings. The probative evidence was that the power line would barely increase the EMF levels above those already existing on the Schou property.

CFU considered five alternate routes and evaluated them for cost, homes or lots within 100 or 200 feet of the proposed line, and other concerns. Exhibit 3 summarizes the testimony of Mr. Johnson and the results of the evaluation of the alternate routes. Four of the alternate routes were for overhead construction and had more 90-degree angles, other construction costs, or would be located near more homes than the proposed route. The fifth was for underground construction and this alternative would increase costs over $10 million above when compared to overhead construction.

Consumer Advocate questioned Mr. Johnson about an additional alternative that combined parts of alternates 1 and 5. Mr. Johnson testified that Consumer Advocate's alternate route would require additional cost since it would have more than one right angle, would go over a house, and would be located very close to a new housing development. In Mr. Johnson's opinion, the alternative would not compare favorably with the proposed route.

The Board finds the evidence concerning the alternate routes shows that the chosen route is the most reasonable route of those studied. The proposed route will be located near fewer homes. Among the available and qualifying routes, it will cost the least. The evidence concerning any adverse effects on Mrs. Schou's health from the proposed line was not persuasive and does not provide the Board any basis for modifying the proposed route. It is the Board's statutory responsibility to ensure that the public interest is protected whether it involves one resident or a number of

residents. In this case the evidence does not support a modification of the route to accommodate the interests of Mrs. Schou.

6. Failure to meet the standard of "necessary for public use."

Iowa Code § 478.4 requires the Board to make a finding that the proposed line is necessary for the public use. In enacting chapter 478, the legislature directed the Board to decide whether a public use exists and, if so, the necessity of the proposed line to serve that public use. S.E. Iowa Cooperative Electric Association v. Iowa Utilities Board, 633 N.W.2d 814, 819 (Iowa 2001). The Iowa Supreme Court has determined that the transmission of electricity to the public constitutes a public use as contemplated by Iowa Code § 478.4. Id. at 820. The issue then is whether the particular line in question is necessary to serve the public use.

To determine whether the proposed line is necessary for the public use, the Board must weigh all of the factors presented, including efficiency and reliability. In this case, the evidence indicates that the proposed line will increase reliability for CFU's entire system by completing a loop around Cedar Falls on the west and south sides. The line will also prevent possible duplication of transmission lines since it is designed to connect with MidAmerican Energy Company (MidAmerican) lines with an extension from the Industrial Park Substation. Cedar Falls is experiencing an increased demand for electricity in the industrial park and the line will provide a high voltage source for the substation that is being constructed to serve this load.

The evidence supports the ALJ's findings that the line is necessary for the public use. The evidence also shows that the line represents a reasonable relationship to an overall plan for transmitting electricity in the public interest. Currently, there is only one source of 161 kV transmission for CFU's Union Substation and this raises reliability concerns. With the construction of the proposed line, there will be two sources of power to the Union Substation, thus enhancing the reliability of the system as well as meeting the load growth in the industrial park. Construction of the proposed line to meet the reliability requirements of the system and to meet new load is a reasonable part of an overall plan to meet the needs of Cedar Falls. The proposed line also prevents duplication of electric lines by interconnecting with MidAmerican. In the context of retail electric service, avoiding duplication is a legitimate consideration. S.E. Iowa at 820.

The Schous presented no evidence that countervails the evidence presented by CFU showing the need for the line. The Schous base some of their argument on the projections of growth in the 1978 engineer's report. The proposed line may not have been needed within the time frame projected by the report; however, CFU has shown that it is needed at this time to meet current load growth.

7. Failure to properly weigh evidence of injury to Mrs. Schou.

The Schous contend the ALJ did not properly weigh the effect of the proposed line on the health of Mrs. Schou. Although the ALJ may not have expressed the weight that could be given to an individual in determining whether the proposed line

should be modified, the Board finds that the ALJ's findings are supported by the evidence and the preponderance of the evidence does not support modification of the proposed route.

The Board does not discount that Mrs. Schou has significant health problems and that the Schous believe that the proposed line will have an adverse effect on Mrs. Schou's health. However, the evidence presented concerning the very low EMF levels that will result from the proposed line and the lack of medical and scientific evidence showing adverse health effects on humans from transmission line electromagnetic fields does not support modifying the route of the proposed line.

BOARD DECISION

The Board has reviewed the record in this case and the briefs of the parties. Based upon that review, the Board finds that the proposed order of the ALJ is supported by the evidence except for the distance from the Schou home to the proposed power line. The Board finds that the preponderance of the evidence does not support an evidentiary finding that the Schou home is 400 feet from the route of the proposed power line. Even though the exact distance between the proposed line and the Schous' residence could not be determined from the record, the findings of the ALJ in Finding of Fact paragraphs 6 and 7 concerning the health effects of the line are supported by the evidence. The failure to resolve the issue of the exact distance of the Schou residence from the route of the proposed line does not require a modification of the two Findings of Fact.

Consumer Advocate proposes in its reply brief that a condition be placed on the franchise that limits the operation of the line under conditions of a load exceeding 100 amps and the magnetic field at the Schou house not exceed 0.1 milligauss at peak load conditions. Consumer Advocate asserts that this condition would be consistent with the testimony of Mr. Johnson about the planned operations of the proposed line.

The Board will not place a condition on the operation of the line. CFU has stated that it does not expect the peak load of the proposed line to be more than 100 amps. The Board has no basis on which to believe that CFU will operate the line in a manner different than indicated, so the evidence does not support placing a condition on the line. As found earlier in this order, there is no probative evidence concerning the actual distance from the proposed line to the Schou residence, so a condition based upon the anticipated milligauss exposure without an accurate measurement of the distance is not be supported by the record.

V. FINDINGS OF FACT

The Finding of Facts made by the ALJ in the proposed order are affirmed.

VI. CONCLUSIONS OF LAW

The Conclusions of Law in the proposed order are affirmed.

MOTION TO STRIKE BOOK BLACK ON WHITE

On August 18, 2005, CFU filed a motion to strike from the record the hard copy of the book Black on White filed by the Schous on August 2, 2005. On September 1, 2005, the Schous filed a response to the motion.

The Board will grant the motion. Excerpts from the book were admitted into the record and although the Schous indicated they would be providing a hard copy at a later date, they did not have the hard copy admitted into the record and they were not granted leave to make the substitution by the ALJ. In addition, the hard copy of the book is cumulative and repetitive of evidence presented in the excerpts already offered and received into the record. The book provides no probative evidence showing a causal relationship between EMF fields and human health.

MOTION TO STRIKE APPEARANCE AND MOTION TO STRIKE APPEARANCE AND BRIEF

On July 29, 2005, CFU filed a response to the notice of appeal filed by the Schous and a motion to strike the appearance of Carol A. Overland as an attorney for the Schous in the appeal. Ms. Overland is an attorney, but does not appear to have been admitted to practice in Iowa. On August 19, 2005, Ms. Overland filed a notice of appearance and the appearance of Jason P. Hoffman, an Iowa attorney. CFU complains in its motion to strike appearance and brief filed September 2, 2005, that Mr. Hoffman is required by Iowa Supreme Court rule 31.14(2) to sign the brief filed by Ms. Overland since Mr. Hoffman is not a resident Iowa attorney.

On September 8, 2005, Ms. Overland filed an affidavit stating that she agrees to and submits to comply with all provisions and requirements of the Iowa Rules of Professional Conduct. Although Ms. Overland's affidavit does not address the issue of Mr. Hoffman signing the initial brief, the Board finds that Ms. Overland has substantially complied with the requirements of 199 IAC 7.2(7)"e" and Iowa Supreme Court rule 31.14(3) and may appear as counsel in this proceeding. The Board will deny the motion to strike appearance and initial brief.

MOTION TO STRIKE EXHIBITS ATTACHED TO BRIEF

On August 19, 2005, the Schous filed a brief addressing the issues to be considered on appeal. Attached to the brief are approximately 24 exhibits consisting of articles and reports concerning the health effects of EMFs, the NIEHS study, the 1978 engineer's report on the future electric needs of Cedar Falls discussed earlier in this order, and other items. CFU objects to the admission of the exhibits into the record. CFU argues that no witness has sponsored the exhibits and the ALJ has not reopened the record for further evidence.

The Board will not admit the exhibits attached to the Schous' brief into the record. Board rules require when the record was made before an ALJ that a party file a motion to reopen the record for the reception of further evidence prior to expiration of the time for appeal from the ALJ's proposed decision. 199 IAC 7.7(15). The time for reopening the record has passed. The exhibits attached to the brief will not be considered in reaching a decision.

ORDERING CLAUSES

IT IS THEREFORE ORDERED:

1. The proposed decision and order issued by the presiding officer on July 6, 2005, is affirmed.

2. The Finding of Facts in the numbered paragraphs are affirmed.

3. The Conclusions of Law are affirmed.

4. The motion to strike filed by Cedar Falls Utilities on August 18, 2005, is granted.

5. The motion to strike appearance filed by Cedar Falls Utilities on July 29, 2005, is denied.

6. The motion to strike the exhibits attached to the Schous' reply brief filed on CFU on September 2, 2005, is granted.

7. The motion to strike appearance and brief filed by Cedar Falls Utilities on September 2, 2005, is denied. Carol A. Overland is granted permission to appear as counsel in this proceeding and to file briefs on behalf of the Schous.

8. Motions and objections not addressed in this order or previously granted or sustained are overruled. Arguments in the briefs not addressed specifically in this order are rejected, either as not supported by the evidence or as not being of sufficient persuasiveness to warrant comment.

9. This order shall become the final order of the Utilities Board. A petition for rehearing may be filed with the Board pursuant to Iowa Code §§ 476.12 and

478.32 within 20 days or a petition for judicial review may be filed pursuant to Iowa Code § 478.32 and Iowa Code chapter 17A.

UTILITIES BOARD

/s/ John R. Norris

/s/ Diane Munns

ATTEST:

/s/ Judi K. Cooper
Executive Secretary

/s/ Elliott Smith

Dated at Des Moines, Iowa, this 21st day of September, 2005.