

STATE OF IOWA  
DEPARTMENT OF COMMERCE  
UTILITIES BOARD

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IN RE:  AMES MUNICIPAL ELECTRIC SYSTEM	DOCKET NO. E-21743 E-21744
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**PROPOSED DECISION AND ORDER DENYING FRANCHISES**

(Issued September 12, 2007)

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## TABLE OF CONTENTS

STATEMENT OF THE CASE	2
NEED FOR THE PROPOSED LINE	7
RELATIONSHIP TO OVERALL PLAN OF TRANSMITTING ELECTRICITY IN THE PUBLIC INTEREST	20
CONSTRUCTION AND SAFETY REQUIREMENTS	23
ELECTRIC AND MAGNETIC FIELDS	25
LINE LOCATION AND ROUTE	34
I. Ames proposed route	34
II. Written objections	46
III. Requested eminent domain authority	47
A. Polk County	48
1. Parcels P-2 and P-3 Albaugh/Veasman Family	48
2. Parcel P-16 Ploegstra Family	52
B. Story County	55
1. Parcels S-2 and S-3 Larson and Bates Families	56
2. Parcel S-6 Ms. Cassandra Cole	62
3. Parcel S-7 Murphy Family	64
4. Parcel S-8 City of Huxley	66
IV. Analysis	77
FINDINGS OF FACT	91
CONCLUSIONS OF LAW	94
ORDERING CLAUSES	95

## STATEMENT OF THE CASE

On January 23, 2006, Ames Municipal Electric System (Ames) filed two petitions with the Utilities Board (Board) requesting two franchises to construct, maintain, and operate a total of 19.75 miles of 161,000-volt (161 kV) nominal, 169 kV maximum, electric transmission line proposed to be constructed in Polk and Story Counties, Iowa. The petitions were identified as Docket No. E-21743 (Polk County) and E-21744 (Story County). Ames filed revisions to the petitions and additional information on February 17, March 1, August 8, October 9, November 27, and December 20, 2006, March 14, 2007 (revised petitions Exhibits E), and on March 29, 2007.

As proposed, the transmission line would begin at MidAmerican Energy Company's (MEC) existing Northeast Ankeny Substation outside the Ankeny city limits in Polk County and terminate at an existing Ames substation located within the city limits of Ames in Story County, Iowa. (petitions for franchises; Hockmuth/Nguyen report; Tr. 205-6.) Pursuant to Iowa Code § 478.1 (2007), Ames' petition in Docket No. E-21744 (Story County) seeks a franchise for only the part of the proposed transmission line located outside the corporate limits of the city of Ames. (petition for franchise; Hockmuth/Nguyen report.) The proposed transmission line is a single-circuit line without underbuild except for two segments with single-phase distribution underbuild of 7.2 kV (0.14 mile in Polk County and 0.16 mile in Story County). (petitions for franchises; Hockmuth/Nguyen report.)

Ames requests eminent domain authority pursuant to Iowa Code § 478.6 for three parcels in Polk County, designated as parcels P-2, P-3, and P-16, and for five parcels in Story County, designated as parcels S-2, S-3, S-6, S-7, and S-8. Several owners of eminent domain parcels also filed written objections with the Board.

Several persons filed written objections with the Board, although some of the objections were withdrawn prior to hearing. The following written objections were filed and not withdrawn prior to hearing: 1) Mr. Michael O. Albaugh, Mr. Norman L. Albaugh, and Mrs. Connie J. Veasman (jointly); 2) Mr. Jim and Mrs. Arlene Bates; 3) Mr. William J. Burke; 4) Ms. Cassandra L. Cole; 5) Pastor Will Hatfield; 6) Dr. John P. Kluge; 7) Mr. Leonard and Mrs. Sue Larson, Mr. Noel and Mrs. Leona Larson, and Mr. Jim and Mrs. Arlene Bates (jointly); 8) Mr. Noel R. and Mrs. Leona O. Larson; and 9) Mr. Jason and Mrs. Tisha Murphy.

On February 8, 2007, the Board issued an order consolidating the dockets and assigning this case to the undersigned administrative law judge. On February 26, 2007, the undersigned issued a procedural order and notice of hearing and proposed to take official notice of a report dated February 2, 2007, concerning the proposed transmission line written by Mr. Dennis Hockmuth and Mr. Bao Nguyen, Utility Regulatory Engineers for the Board. The hearing was set for April 26, 2007.

Ames filed the prepared direct testimony and exhibits of Mr. Jerry R. Borland, Mr. Lyndon C. Cook, Mr. Dennis Haselhoff, Mr. Donald E. Kom, and Mr. Richard T. Myers on March 16, 2007. On March 29, 2007, Ames filed a motion for continuance of the hearing. On April 3, 2007, the undersigned issued an order rescheduling the hearing to June 7, 2007.

The Consumer Advocate Division of the Department of Justice (Consumer Advocate) filed a prehearing brief on April 4, 2007. The City of Huxley (Huxley), owner of eminent domain parcel S-8, filed the prepared direct testimony of Mr. John Haldeman on April 4, 2007. The following objectors and owners of eminent domain parcels filed additional information on April 4, 2007: Mr. Leonard and Mrs. Sue Larson, Mr. Noel and Mrs. Leona Larson, and Mr. James and Mrs. Arlene Bates (jointly); and Mr. Jason and Mrs. Tisha Murphy.

On April 16, 2007, Ames filed the prepared rebuttal testimony of Mr. Borland, Mr. Cook, Mr. Haselhoff, Mr. Myers, and Ms. Meghan E. Wagner.

On April 26, 2007, the undersigned issued an order requiring prehearing briefs and additional testimony and exhibits on certain issues. The order also required Mr. Hockmuth and Mr. Nguyen to file an updated staff report.

Ames filed a prehearing brief and the supplemental testimony and exhibits of Mr. Borland, Mr. Cook, Mr. Haselhoff, Mr. Kom, Mr. Myers, and Ms. Wagner on May 18, 2007. The Consumer Advocate filed an initial brief on May 18, 2007. Huxley filed a brief and an appearance on May 18, 2007.

Ames caused notice of the hearing to be published in Polk County in the Des Moines Register, a newspaper of general circulation in the county, on April 27 and May 4, 2007. (proof of publication.) Ames caused notice of the hearing to be published in Story County in The Tribune, a newspaper of general circulation in the county, on April 27 and May 4, 2007. (proof of publication.) Ames filed proof of publication on May 25, 2007. Ames filed proof of mailing notices for the eminent domain parcels on June 1, 2007.

The hearing was held on June 7, 2007, beginning at 9:30 a.m. in Courtroom 2A, Story County Justice Center, 1315 South B Avenue, Nevada, Iowa. Ames was represented by its attorneys, Mr. Antonio Colacino and Mr. Michael Dayton. Mr. Borland, Mr. Cook, Mr. Haselhoff, Mr. Kom, Mr. Myers, and Ms. Wagner testified on behalf of Ames. Mr. Cook testified by telephone conference call. Ames' Exhibits 1 through 20 were admitted at the hearing. The Consumer Advocate was represented by its attorney, Mr. John F. Dwyer. The Consumer Advocate did not present evidence at the hearing. Huxley was represented by its attorney, Ms. Amy S. Beattie. Mr. Haldeman testified on behalf of Huxley. Mr. Michael Albaugh, Ms. Cassandra Cole, Mr. Leonard Larson, Mr. Jason Murphy, and Mrs. Connie Veasman appeared pro se and testified on their own behalf. Mrs. Veasman's exhibits, marked as

Albaugh Exhibits 1 through 4, were admitted at the hearing.<sup>1</sup> Mr. Leonard Larson's Exhibits LL-1, LL-2, and LL-300 through LL-303 were admitted at the hearing. Mr. Hockmuth and Mr. Nguyen testified as the engineers selected by the Board to examine the petition and proposed route pursuant to Iowa Code § 478.4. The remaining objectors did not testify at the hearing, although Ms. Tisha Murphy, Mr. Mike Veasman, and Ms. Diane Cole asked questions of some of the witnesses for Ames. The parties did not object to the taking of official notice of Mr. Hockmuth's and Mr. Nguyen's report dated February 2, 2007, and updated on May 17, 2007, (Hockmuth/Nguyen report), and it was officially noticed.

During the hearing, Ames agreed to file a corrected Exhibit 8, a copy of a letter or email from Central Iowa Power Cooperative (CIPCO) regarding double-circuiting the proposed line, and notices to the eminent domain property owners. Ms. Connie Veasman agreed to file additional copies of Albaugh Exhibits 1 through 4. The Consumer Advocate, Ames, and Huxley agreed to file a single round of post-hearing briefs due July 9, 2007.

Ames filed the required documents on June 12 and 13, 2007. Ms. Veasman filed her exhibits on June 18, 2007. Huxley filed a post-hearing reply brief, and the Larsons/Bates and Ms. Cole filed letters on July 9, 2007. Ames filed a motion to extend the time to file post-hearing briefs by four days on July 9, 2007. The motion was granted in an order issued July 9, 2007. On July 13, 2007, Ames and the Consumer Advocate filed post-hearing briefs, and Ms. Cole filed a letter. The

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<sup>1</sup> Mrs. Veasman is Mr. Michael Albaugh's sister and Mr. Norman Albaugh's daughter.

Albaughs and Ms. Veasman filed a post-hearing submission and a response related to their hearing exhibits on July 13, 2007.

On July 18, 2007, Ms. Shirley L. and Mr. Adrian Ploegstra, on behalf of the Ploegstra Trust, filed a letter with the Board. The Ploegstras and the Ploegstra Trust are the owners of eminent domain parcel number P-16 (Polk County Docket No. E-21743). On July 24, 2007, the undersigned issued an order accepting the filing, although it was late, and giving Ames the opportunity to file a response on or before August 1, 2007. The order stated that no other additional filings would be allowed or considered in reaching the decision in this case. Ames filed its response on August 1, 2007.

On August 16, 2007, the Ploegstras filed an additional letter. Since the order issued July 24, 2007, stated that no other additional filings would be allowed or considered in reaching the decision in this case, the Ploegstras' August 16, 2007, letter is not considered in reaching this proposed decision.

### **NEED FOR THE PROPOSED LINE**

In order to obtain a franchise, Ames must prove that the proposed transmission line is necessary to serve a public use. Iowa Code § 478.4. Transmission of electricity to the public is "a public use" within the meaning of the statute. S.E. Iowa Cooperative Electric Association v. Iowa Utilities Board, 633 N.W.2d 814 (Iowa 2001); Vittetoe v. Iowa Southern Utilities Company, 123 N.W.2d 878 (Iowa 1963). Therefore, one issue in this case is whether the proposed transmission line is "necessary" to serve that public use.

Ames must serve customers within its assigned service territories and must maintain reliable electric service for its customers in the areas it serves. Iowa Code §§ 476.3, 476.25.

In 2002, Ames commissioned MEC Construction Services Company to study its transmission system to find alternatives to its electricity import limitations. (Tr. 117; Ames Exhibit 1.) The purpose of the study was to identify viable options to improve the Ames transmission system to alleviate the limitations. (Tr. 117; Ames Exhibit 1.) Eleven different options for additions to Ames' transmission system were evaluated for their effectiveness in serving Ames area loads under base case and single contingency conditions. (Ames Exhibit 1; Tr. 117-23.) Several options were rejected because they could not support an import level equal to the entire 2006 Ames summer peak load of 128 MW. (Tr. 121, 140-1.) Ames witness Mr. Borland testified that from the study, all viable options showed that a 161 kV transmission line extending from northeast Ankeny to Ames was needed and that the Boone Junction to Stange line needed to be re-energized to 161 kV. (Tr. 122; Ames Exhibit 1.) Mr. Borland also testified that Ames decided that the 161 kV line should extend through the City of Ames to increase the reliability and stability of the transmission system within and outside the corporate limits of the City of Ames. (Tr. 122-3.)

Ames presented evidence that it meets the electrical needs of its customers with generation located within the city limits of Ames and by capacity/energy purchases from generation outside the city. (Tr. 38-9; petitions Exhibits D.) Ames has two coal-fired generation plants and two combustion turbines with a total generation capacity of 153 megawatts (MW) located within the city of Ames.

(petitions Exhibits D; Tr. 38-9, 50.) Base load Unit #7 is a coal-fired plant built in 1967 with a capacity of 38 MW. (petitions Exhibits D; Tr. 38-9, 50.) Base load Unit #8 is a coal-fired plant built in 1982 with a capacity of 70 MW. (petitions Exhibits D; Tr. 38-9, 50.) Peaking gas Unit #1 is a diesel-fueled turbine built in 1972 with a capacity of about 18 MW. (petitions Exhibits D; Tr. 38-9.) Peaking gas Unit #2 is a diesel-fueled turbine built in 2005 with a capacity of about 27 MW. (petitions Exhibits D; Tr. 38-9, 50.) Mr. Kom testified it would be difficult and expensive to produce more power from these four units, and Ames has no plans to retire them. (Tr. 51.)

In 2005, Ames added its diesel-fueled peaking Unit #2 and made some increases in the capacity of its coal-fired units. (Tr. 55-6, 96.) Iowa State University also added new generation during the same time period. (Tr. 56, 96.) Once these changes were made, Mr. Kom testified, the combined capacity of the two peaking units is approximately 45 MW and the total capacity of Ames' four generating units is approximately 153 MW, with some of the output varying between summer and winter ratings. (Tr. 50-1, 55-6.) Iowa State University, which relies on the transmission grid jointly with Ames, has approximately 45 MW of generation capacity. (Tr. 58.)

Generation purchased from outside the city of Ames is transported to Ames via two transmission lines with total energy import capabilities into Ames limited to between 43 and 60 MW, depending on the timing. (petitions Exhibits D; Tr. 38-41, 56, 86; Ames Exhibit 8.) There is an existing 11.5-mile 161 kV transmission line running from Ames' Stange Substation to CIPCO's Boone Junction Substation built in 1989. (Tr. 39.) The other existing transmission line is a 22-mile 69 kV line running

from Ames' Plant Substation to MEC's John Deere Substation constructed in 1950.  
(Tr. 39.)

Ames witness Mr. Kom testified the existing transmission system is not capable of reliably serving the present and future electrical needs of Ames' customers. (Tr. 39-42, 56-7; Ames Exhibit 8.) The peak electric consumption of the City of Ames was 126.2 MW in 2006, and the peak electric consumption of Iowa State University was 34 MW. (Tr. 39.) Mr. Kom testified that Iowa State University relies on the same transmission as the City of Ames for access to generation on the regional grid. (Tr. 39.) Mr. Kom testified that without construction of the requested Ames to Ankeny transmission line, Ames would continue to be restricted to something less than 60 MW of import capability. (Tr. 42, 60-1.) He testified that the ideal situation would be if Ames could supply the City of Ames and Iowa State University load without its own generation running, under a single contingency, which means that either of the two transmission lines could feed the forecasted load in the coming years of about 169 MW. (Tr. 59-62, 140-1.) Mr. Kom testified the existing Boone transmission line is designed to handle well over 160 MW. (Tr. 61.)

In 2004, Ames completed a comprehensive Integrated Resource Planning Study to develop a plan to identify generation resources required to meet the forecasted electrical needs of its customers through 2025. (petitions Exhibits D; Ames Exhibit 2; testimony of Mr. Kom, Tr. 37, 49-50.) Ames stated in petition Exhibit D for both petitions that: "The study has identified that the age and condition of the two coal-fired units and current environmental regulations limit the type of upgrades that are required for continued operation of the units. This study also shows AMES

will need to increase its import capacity on the transmission system to 120 MW of firm power by 2010 to meet the required demand."

Ames further stated that it had recently completed a system contingency plan that indicated: "in the event of a single contingency loss of the 70 MW coal-fired unit, AMES would need to increase the import capacity now to offset the loss of generation and to prevent a blackout." (petitions Exhibits D.)

Ames' overall plan includes generation additions, substation additions, and multiple transmission line segments that complete a 161 kV transmission path from MEC's Northeast Ankeny Substation to CIPCO's Boone Junction Substation via the Ames electric system. (Tr. 268.) The proposed Ankeny to Ames transmission line is a key component of this plan. (Tr. 268.) Ames witness Mr. Cook testified that without the completion of the proposed line and all related components of the overall plan, the applicable Mid-Continent Area Power Pool (MAPP)/North American Electric Reliability Corporation (NERC) performance criteria cannot be met as reported to and approved by the MAPP Design Review Subcommittee (DRS). (Tr. 268.) He further testified that the proposed transmission line is the most important component of the overall plan because it completes the connection to a new outside source of import power. (Tr. 268.)

In 2005, Ames presented a load flow study by Excel Engineering (Excel) to the MAPP DRS and requested approval for an increase of 57 MW of generation and associated new 161 kV transmission lines and facilities from Boone Junction to northeast Ankeny, one of which was the proposed transmission line at issue in this case, although the specific route of the proposed line was not discussed or

considered by the MAPP DRS. (Ames Exhibits 4, 5, 15; petitions Exhibits D; Tr. 37-8, 41-2, 52-3, 97-9, 267-8.) The Excel study showed there would be satisfactory system performance with the increased generation if Ames constructed the associated transmission facilities. (Tr. 42, 268; Ames Exhibit 4.) The MAPP DRS approved the proposed project on March 2, 2005. (Ames Exhibits 5, 15; petitions Exhibits D; Tr. 37-8, 41-2, 267-8.) The MAPP DRS gave approval for a stand-alone transmission line from Ames to the Ankeny Substation and the other transmission facilities, but did not consider a particular route or the distance between the proposed line and the existing CIPCO line as part of the approval process. (Tr. 97-9, 267-8; Ames Exhibits 4, 15.)

This load flow study was initially performed and presented to the MAPP DRS without considering the possibility of joint construction with CIPCO's Boone Junction-Bondurant 161 kV transmission line. (Tr. 38, 53, 97-9, 269; Ames Exhibits 4, 15.) Subsequent to MAPP DRS approval, Ames had Excel supplement the study. (Tr. 38, 54, 269-70, 430-40; Ames Exhibits 4 (Section 9), 19, 20.) The supplemental study compared the reliability of double-circuiting the proposed line with the CIPCO line with the reliability of constructing the proposed line on separate structures. (Ames Exhibits 4 (Section 9), 19, 20; Tr. 269-70, 430-40.) Both the main study and the supplemental study complied with NERC and MAPP planning standards, which require the analysis of effects caused by the outage of two circuits built on common structures. (Tr. 270.) However, the supplemental study was not a complete study looking at single-circuit versus double-circuit transmission. (Tr. 433-40; Ames Exhibit 4, Section 9.)

As a result of the updated analysis, Excel concluded that routing the proposed line on separate structures would increase load-serving capacity by 137 to 150 MW over that attained with double-circuit construction. (Ames Exhibits 4 (Section 9), 19, 20; Tr. 287, 430-40.) The study stated that Ames' 2009 forecasted load level was 169 MW. (Ames Exhibit 4, Section 9.) It stated that with Ames generation on at full capability (178 MW), the outage of the double-circuited line limits the system's incremental load-serving capability to 200 MW over the 2009 forecasted load level of 169 MW. (Ames Exhibit 4, Section 9; Tr. 288-9, 311.) If the largest Ames generating unit were unavailable (Unit #8 at 70 MW), the study concluded the incremental load-serving limit is 130 MW if the line were double-circuited. (Ames Exhibit 4, Section 9; Tr. 289-90.) However, the study also concluded that if the proposed line were constructed independent of the CIPCO line, the corresponding incremental load-serving limits are 337 MW (all generation on) and 267 MW (Unit #8 unavailable). (Ames Exhibit 4, Section 9.) The study stated it is advisable to focus on the condition where Unit #8 is unavailable because generation unit outages are relatively frequent and of long duration as compared to line outages. (Ames Exhibit 4, Section 9.) If Unit #8 is unavailable, the study concluded that double-circuiting the line would reduce the transmission system's incremental Ames load-serving capability from 267 to 130 MW – a sacrifice of 51 percent of the new line addition's load-serving value. (Ames Exhibit 4, Section 9; Tr. 270.) Therefore, the study concluded, double-circuit construction has a significant adverse impact on the amount of incremental load-serving capability achieved with the proposed 161 kV transmission line. (Ames Exhibits 4 (Section 9), 19, 20; Tr. 270, 283-4, 286-7, 430-40.) Ames also presented

evidence that if both its coal-fired generating units were not operating, and if the John Deere – Plant 69 kV line were out, Ames may not be able to serve the entire Ames/Iowa State load if the proposed line were double-circuited, but could if the line were built on separate structures. (Tr. 433-40; Ames Exhibit 19.)

The Excel supplemental study also considered the effects of double-circuiting the proposed line on the outlet limit for additional Ames generation. (Ames Exhibits 4 (Section 9), 19, 20; Tr 430-40.) The study concluded that routing the proposed line on separate structures will increase outlet capacity by 40 MW, but only after existing generation is increased to more than twice Ames' current capacity. (Ames Exhibit 4, Section 9.) Therefore, the study concluded, the detrimental impact of double-circuit construction is not likely to be significant from a generation outlet perspective. (Ames Exhibit 4, Section 9.) The study stated that it was Excel's conclusion that the proposed line "offers significantly higher long-term system reliability and capacity benefits if routed on separate structures from the existing" CIPCO line. (Ames Exhibit 4, Section 9; Tr. 270.)

The Excel supplemental study did not recommend a specific separation distance between the two lines. (Tr. 270-1.) It only addressed the effect of joint versus separate construction. (Tr. 271.) Mr. Cook testified that applicable NERC and MAPP planning standards do not specify a preferred separation distance or routing criteria. (Tr. 271.) He further testified that based on the Excel study and applicable NERC and MAPP planning standards, there is a significant advantage to separately constructing the lines and not building them on a common structure and it would be significantly more reliable to construct the proposed line on separate

structures. (Tr. 271.) He testified that although there could be some advantages in reduced property impact with a narrower right-of-way (ROW) width on common structures, the existing CIPCO poles would need to be replaced with larger diameter, taller structures spaced more closely together, so there would still be a net impact for landowners. (Tr. 271.) He testified there would also be a negative reliability impact to the regional transmission system during construction, because CIPCO's line would need to be taken out of service for an extended period of time for reconstruction. (Tr. 271-2.)

Mr. Cook further testified there is also a disadvantage to operating and maintaining circuits on common structures because repair work becomes more difficult in proximity to other energized conductors and poses increased risks to workers. (Tr. 272.) He testified that under certain circumstances both lines would need to be taken out of service while performing a repair, thus posing operational difficulties and presenting potential reliability risks to the regional transmission network. (Tr. 272.) He testified that although increased cost would be another disadvantage, Ames did not develop specific costs to construct a double-circuit replacement line because of the negative reliability consequences found by the Excel study. (Tr. 272.)

Mr. Cook testified it was unlikely that an extreme weather event would result in failure of two parallel lines in a common corridor. (Tr. 272.) He testified double-circuited lines on common structures have a much higher risk of failure from a variety of common causes. (Tr. 272, 290-1.) He testified that reliability is increased considerably on separate structures for a number of reasons. (Tr. 290-3.) He also

testified that Ames would prefer to maintain separation of the proposed line for safety and working and reliability reasons, apart from the CIPCO requirements. (Tr. 320.)

The MAPP DRS has never reviewed a proposal to construct the transmission line on common towers with the CIPCO line, and it has never reviewed the specific route of the transmission line running 50 to 80 feet east of the CIPCO line as proposed by Ames in this case. (Tr. 97-9, 191.) Mr. Cook testified he did not believe the MAPP DRS would approve double-circuit construction because of the reduced load-serving capability of the line. (Tr. 291-2, 316.) He also testified he has spoken with CIPCO about using a common tower approach on individual structures, which they do not believe would have to be reviewed by the MAPP DRS, and CIPCO would be willing to do this if Ames established the reliability impact and paid the costs. (Tr. 316-20, 441-5.)

Ames witness Mr. Haselhoff testified it is not feasible to construct the proposed line on the existing structures that support the CIPCO line because they were not designed to support both transmission lines. (Tr. 208, 225-6.) He testified it would be possible to construct a new structure that would support both lines, and Ames double-circuits 161kV and 69kV lines within the Ames city limits. (Tr. 208, 225-6.) However, he testified, such construction would not meet the applicable reliability requirements. (Tr. 208, 235-6, 240-1.) By applicable reliability requirements, he testified he was referring to the supplemental study in Section 9 of Ames Exhibit 4. (Tr. 235-6, 239-41.) Ames witness Mr. Borland testified that double-circuiting the proposed transmission line would not violate reliability standards, but the utility would have to plan for such construction differently. (Tr. 190-1.)

With one exception, the persons who filed written objections and testified at the hearing do not challenge the need for the proposed line, and some of them recognize the need for the proposed line. (written objections; additional information filed; Tr. 101-111, 369-429.) Ms. Cole testified she wished Ames had presented evidence that it considered renewable energy sources as part of their long-term plan for meeting the energy needs of its customers. (Tr. 104-5.) She also testified Ames did not present evidence that it had put programs in place to mitigate energy demand. (Tr. 109-10.)

In its first prehearing brief, the Consumer Advocate stated that the testimony and exhibits filed at that point raised several issues, including "the amount of additional capacity required by Ames; capacity requirements under applicable reliability standards; plans for the existing generation resources owned by Ames; the possibility of increasing the capacity of existing resources, including studies and decisions made by Ames in that regard." In its second prehearing brief, the Consumer Advocate stated it identified the issues described in its first brief as meriting special attention when determining whether Ames had met its burden of proof. The Consumer Advocate stated that key to determining the need for a line to expand the potential for power imports is Ames' present and future need for additional capacity. It stated this question starts with existing capacity and includes the potential to add capacity by adding to existing Ames' generation resources. The Consumer Advocate argues that the record must provide sufficient information to reach conclusions concerning the peak capacity currently available to Ames, how the import capacity has been affected by various improvements Ames has made, and

how Iowa State University's needs and usage affect these calculations. The Consumer Advocate stated it did not take a position at the time that Ames did not need the additional capacity it is seeking by construction of the proposed line. However, the Consumer Advocate stated, it was difficult to make the necessary conclusions from the evidence filed to date.

In its post-hearing brief, the Consumer Advocate stated that the general requirements for a franchise appeared to be supported by the evidence and it challenged Ames' position on routing issues discussed below. The Consumer Advocate argued that, although there is some merit to Ames' objection to locating its proposed line on a single structure with the existing CIPCO line because this would lessen the import capacity and reliability of the system, Ames did not establish that any resultant diminishment would place its system in violation of an applicable reliability standard in the time frame projected in its testimony and exhibits. The Consumer Advocate argued that the amount of import capacity with the proposed line double-circuited with the CIPCO line would still constitute a large addition to the system capability and would seemingly place it in a very secure position. The Consumer Advocate argued that the fact that the proposed line's capacity under certain contingent conditions may be greater still if built separately must be balanced against all the other interests affected by the proposed line.

The Consumer Advocate further argued that the full burden of ROW infrastructure should not fall predominantly on a small group of citizens or potentially deter future economic development if those results can be avoided. The Consumer Advocate argued that Ames and CIPCO could jointly build a new line to higher standards lessening its susceptibility to damage and improving the reliability calculation. It argued Ames could take other actions to increase reliability of the system in addition to building the proposed line, such as increasing generation capacity and participating in new generation resources. It argued that to the extent double-circuiting the proposed line would cause Ames to strengthen its system in additional ways, it would result in a more diversified and robust system for all participants.

Mr. Hockmuth and Mr. Nguyen testified that placement of the proposed line on common structures with the existing CIPCO line would not violate any reliability standards as adopted by the Board. (Tr. 26, 29.) They also stated in their staff report that placement of the line as Ames proposed so close to the CIPCO line would compromise reliability to some extent even though it would be built on separate structures.

Ames presented substantial evidence that demonstrates the proposed transmission line is needed for the reasons given and is necessary to serve a public use. (petitions for franchises; Tr. 26, 29, 37-42, 49-62, 86, 96-9, 117-23, 140-1, 191, 267-72, 283-93, 311, 316-20, 430-45; Ames Exhibits 1, 2, 4, 5, 6, 7, 8, 15, 19, 20; Hockmuth/Nguyen report.) For the specific scenarios Ames analyzed, the evidence presented by Ames shows that double-circuiting the proposed line for the 4.5-mile

segment at issue in this case would significantly reduce the amount of incremental load-serving capability achieved with the proposed 161 kV transmission line. (Ames Exhibits 4 (Section 9), 19, 20; Tr. 311, 430-45.) However, the evidence shows that even if double-circuited, the addition of the proposed line would still significantly increase Ames' import capability and the reliability of the area transmission system. (petitions for franchises; Tr. 26, 29, 37-42, 49-62, 86, 96-9, 117-23, 140-1, 191, 267-72, 283-93, 311, 316-20, 430-45; Ames Exhibits 1, 2, 4, 5, 6, 7, 8, 15, 19, 20; Hockmuth/Nguyen report.) The evidence presented does not support a conclusion that construction of the proposed line on common structures with the CIPCO line would violate applicable reliability standards. (Tr. 26, 29, 190-1, 208, 235-6, 240-1; Ames Exhibit 4, Section 9.)

#### **RELATIONSHIP TO OVERALL PLAN OF TRANSMITTING ELECTRICITY IN THE PUBLIC INTEREST**

To obtain a franchise, Ames must prove that the proposed transmission line is reasonably related to an overall plan of transmitting electricity in the public interest. Iowa Code §§ 478.3(2), 478.4.

In its petition, a utility company seeking a franchise must include information showing the relationship of the proposed project to economic development, comprehensive electric utility planning, needs of the public both present and future, existing electric utility system and parallel routes, other power systems planned for the future, possible alternative routes and methods of supply, present and future land use and zoning, and inconvenience or undue injury to property owners. Iowa Code § 478.3(2). Ames provided much of this information in its petitions, testimony and

exhibits, but the information was incomplete. (petitions for franchises; Tr. 38, 41-45, 52-3, 267-8, 433-40; Hockmuth/Nguyen report; Ames Exhibits 1 through 8, 15.)

Ames witnesses Mr. Kom and Mr. Cook testified that the proposed Ames to Ankeny 161 kV transmission line is a significant component of the comprehensive transmission plan for the Ames area. (Tr. 41, 267-8.) This plan includes the following components: 1) construction of a 161-69 kV substation at the Ames Stange Substation; 2) re-termination of the existing Ames to Boone Junction 69 kV line (built to 161 kV standards) and operation of the line at 161 kV; 3) construction of a 161-69 kV substation at the Ames Plant Substation; 4) construction of the proposed Ames to Ankeny transmission line; and 5) construction of a 161 kV transmission line connecting the Stange 161 kV Substation to the Plant 161 kV Substation. (Tr. 41, 267-8.) Ames has constructed the first three components and is operating them. (Tr. 41.) Mr. Kom testified that failure to construct the last two components would weaken the effectiveness of the overall plan. (Tr. 41-2.)

As discussed above, in order to receive the necessary approval from the MAPP DRS for its 57 MW of generation increase made in 2005, Ames hired Excel to perform a system study to analyze the impact of the increased generation on the system. (Tr. 42, 52-3, 267-8; Ames Exhibit 4.) Mr. Kom testified the DRS would approve the generation increase only if Ames could show the transmission system would continue to meet MAPP's reliability criteria. (Tr. 42.) The Excel study showed there would be satisfactory system performance with the increased generation if Ames constructed the above five transmission facilities. (Tr. 42, 267-8; Ames Exhibit

4.) Ames submitted the Excel study report to the MAPP DRS, which accepted it at a meeting on March 2, 2005. (Tr. 38, 42, 45, 267-8; Ames Exhibit 15.)

However, as discussed above, the Excel study presented to the MAPP DRS did not consider the option of double-circuiting the Ames line with the existing CIPCO line. (Tr. 38, 53, 97-9, 269; Ames Exhibit 4.) This analysis was only studied later and presented in Section 9 of Ames' Exhibit 4, and the supplemental study was not a complete study using the same methods as the original study. (Tr. 433-40; Ames Exhibit 4, Section 9.) In its petitions, Ames was required to include information showing the relationship of the proposed project to comprehensive electric utility planning and the existing electric utility system and parallel routes. Iowa Code § 478.3(2)(b) and (d). Given the location of the existing CIPCO line and the location of the transmission options Ames was studying, comprehensive planning would have included consideration of the double-circuit option as part of Ames' 2002 Transmission Planning Study, the 2005 Excel study from the beginning, and Ames' routing study, and would have evaluated it in the same way as the other options and contingencies that were studied. (Docket No. E-21744 petition for franchise; Ames Exhibits 1, 3, 4.) Similarly, given the location of the existing MEC transmission line along NE 29<sup>th</sup> Street in Polk County, comprehensive utility planning would have included consideration of a multiple-circuit option with the existing MEC line. (Docket No. E-21743 petition for franchise; Ames Exhibits 1, 3, 4.)

In addition to meeting the MAPP reliability requirements, the proposed transmission line will increase transmission reliability in the greater Ames area, provide voltage support to the transmission system, and provide additional transmission facilities for a more robust, more reliable transmission system. (Tr. 43, 267-8; Ames Exhibits 4, 5, 6, 7, 8.) The proposed line will complete the connection to new outside sources of power. (Tr. 268.) The addition of the proposed line will improve the load-serving capability of other utilities in the area as well. (Tr. 40; Ames Exhibits 4, 5, 6, 7, 8.)

In general, the evidence presented in this case shows that the proposed 161 kV transmission line represents a reasonable relationship to an overall plan of transmitting electricity in the public interest. Iowa Code § 478.3(2). (petitions for franchises; Tr. 38, 41-5, 52-3, 267-8; Hockmuth/Nguyen report; Ames Exhibits 1 through 8, 15.) However, the evidence presented in this case also shows that Ames should have analyzed the double-circuit option with the existing CIPCO line and the triple-circuit option with the MEC transmission line earlier and more comprehensively as part of its comprehensive electric utility planning and consideration of the existing electric utility system and parallel routes. (Tr. 38, 53, 97-9, 269, 433-40; petitions for franchises; Ames Exhibits 1, 3, 4.)

### **CONSTRUCTION AND SAFETY REQUIREMENTS**

In order to obtain a franchise, Ames must show that the proposed transmission line will conform to the construction and safety requirements of Iowa Code §§ 478.19 and 478.20 and the Board rules at 199 IAC chapters 11 and 25.

Ames proposes to construct a 161 kV transmission line approximately 19.75 miles long originating at the existing MEC Northeast Ankeny Substation in Polk County and terminating at the existing Ames Plant Substation within the corporate limits of the City of Ames in Story County. (petitions for franchises; Hockmuth/Nguyen report; Tr. 205-6.) The proposed transmission line is a single-circuit line without underbuild except for two segments with single-phase distribution underbuild of 7.2 kV (0.14 mile in Polk County and 0.16 mile in Story County). (petitions for franchises; Hockmuth/Nguyen report.) The design of the proposed line includes an overhead ground wire with optical fibers to protect the conductors from lightning strikes and to enable communications between substations. (Tr. 206; Hockmuth/Nguyen report.) Pole heights are proposed to be between 60 and 106 feet above ground, with the typical structure 75 feet above ground. (Tr. 210.)

The design of the proposed line conforms to the National Electrical Safety Code requirements and Board construction and safety rules. (petitions for franchises; Hockmuth/Nguyen report; Tr. 206, 209-11, 213-4.) The proposed line will be constructed, operated, and maintained in accordance with all applicable federal and state construction and safety standards. (petitions for franchises; Hockmuth/Nguyen report; Tr. 206, 211-4.)

Ames has designed the proposed line to enhance reliability by using a special T-2 conductor that is less prone to galloping than the more common single-conductor lines. (Tr. 273.) It would also use a braced-post insulator design that is very robust and less prone to insulator mechanical failure from ice and wind loading. (Tr. 273.)

Ames has shown that the proposed line will conform to the construction and safety requirements in Iowa Code §§ 478.19 and 478.20 and 199 IAC chapters 11 and 25. (petitions for franchises; Hockmuth/Nguyen report; Tr. 205-6, 209-14, 273; Ames Exhibits 9, 10, 11, 12.) No additional terms, conditions, or restrictions regarding construction and safety requirements need to be imposed pursuant to Iowa Code § 478.4.

### **ELECTRIC AND MAGNETIC FIELDS**

Electric and magnetic fields are produced by anything that produces, transmits, or uses electricity, such as appliances and electric transmission lines. (Tr. 249.) There are also natural sources of electric and magnetic fields, such as our own bodies, that produce electric fields as a result of the normal functioning of our circulatory and nervous systems. (Tr. 249.)

Electric fields are the result of voltages applied to conductors and equipment. (Tr. 249.) They are measured in volts per meter (V/m) or kilovolts per meter (kV/m). (Tr. 249.) One kV/m equals 1,000 volts/m. (Tr. 249.) Magnetic fields are produced by the flow of electric currents and are measured in units called milligauss (mG). (Tr. 249.) Most research has focused on magnetic fields because electric fields are blocked by conducting objects, such as trees and buildings, and are therefore of less concern. (Tr. 249.)

Electric and magnetic fields are present in nearly every place we encounter on a daily basis, including our homes. (Tr. 249.) Typical sources of electric and magnetic fields in homes include appliances, wiring, electric current flowing on water

pipes, and nearby electric distribution and transmission lines. (Tr. 249.) If a home is very close to a transmission line or distribution line (which run next to most residences), the lines could be the dominant, but not the only, source of magnetic fields in the home. (Tr. 250.) However, since magnetic fields decrease rapidly as you get further away from the source of the field and most homes are set far away from transmission lines, the contribution of transmission lines to a home's magnetic field level may be low to nonexistent. (Tr. 250.) Therefore, appliances are usually the strongest sources of magnetic fields in homes. (Tr. 250.) A study by the United States Environmental Protection Agency conducted in 1992 showed the median magnetic field at six inches from a sampling of appliances was 90 mG (copier), 150 mG (drills), 600 mG (can opener), 300 mG (hair dryer), and 6 mG (baby monitor). (Tr. 250.) A survey of homes conducted to estimate the levels and sources of residential magnetic fields showed a wide range of all-room (away from appliances) magnetic field levels. (Tr. 250.) It showed that 75 percent of the homes had an average all-room magnetic field level less than or equal to approximately 1 mG. (Tr. 250.) Most people in the United States are exposed to an average magnetic field level over the course of a 24-hour period equal to less than 2 mG, and this average level typically includes regular exposures to levels in the range of tens to hundreds of mG. (Tr. 251.)

Ames witness Ms. Wagner is a Scientist with Exponent, Inc. (Exponent), a research and consulting firm. (Tr. 245, 247, 258.) Ms. Wagner has a Master of Public Health in Epidemiology. (Tr. 247, 258.) Much of her work at Exponent has focused on evaluating the literature on the possible health effects of electric and

magnetic fields. (Tr. 248.) She has developed a working knowledge of electric and magnetic fields, particularly as they relate to power systems. (Tr. 248, 258.)

The proposed Ankeny-Ames transmission line route is adjacent to an existing 161 kV transmission line operated by CIPCO for 4.5 miles, and is adjacent to an existing double-circuit 161 kV transmission line operated by MEC for 1.2 miles. (Tr. 250, 260-1; petitions for franchises.) The MEC line is in Polk County at the southernmost portion of the proposed Ankeny-Ames line near the MEC Northeast Ankeny Substation. (Tr. 261; petitions for franchises.) The MEC line is not near the CIPCO line, which is in Story County at the location adjacent to the proposed Ankeny-Ames line. (Tr. 261; petitions for franchises.)

Electrical engineers at Exponent calculated the electric and magnetic field levels associated with the operation of the transmission lines before and after the construction of the proposed Ankeny-Ames line. (Tr. 250.) Fields were calculated assuming average power demand in summer for three sections along the proposed route: 1) the proposed line in isolation (referred to as Section 1); 2) the proposed line adjacent to the existing CIPCO line (referred to as Section 2); and 3) the proposed line adjacent to the existing MEC line (referred to as Section 3). (Tr. 250.)

In Section 1, the proposed line in isolation, the proposed line will be constructed in the middle of a new 75-foot wide ROW. (Tr. 250.) The highest magnetic field level will be measured directly underneath the proposed line at approximately 6 mG. (Tr. 250.) This level will decrease rapidly with distance to levels below 1 mG at approximately 100 feet. (Tr. 250.) At the edge of the ROW, the magnetic field level for average electricity demand in summer will be 3.7 mG. (Tr.

251.) The electric field level will also be highest near the conductors at 1 kV/m, and decrease to 0.10 kV/m at approximately 100 feet. (Tr. 250.) The electric field level will be less than 0.5 kV/m at the edge of the ROW. (Tr. 251.)

In Section 2, the proposed line will be constructed on an expanded 75-foot wide ROW in the vicinity of an existing CIPCO line and Interstate 35. (Tr. 251.) Where possible, the centerline of the proposed line will be in the middle of the ROW. (Tr. 251.) The magnetic field level at the new east edge of the ROW will increase above the current level, from approximately 2.4 mG to 3.7 mG. (Tr. 251.) The electric field level at the new east edge of the ROW will increase from approximately 0.06 kV/m to 0.43 kV/m. (Tr. 251.)

In Section 3, the proposed line will be constructed on an expanded 35-foot ROW in the vicinity of an existing MEC double-circuit line. (Tr. 251.) The proposed line would be constructed across NE 29<sup>th</sup> Street from the existing MEC line and would be constructed two feet from the east ROW edge on the east side of the street. (Tr. 251.) The magnetic field level at the new east edge of the ROW would increase above the current level from approximately 2.2 mG to 6 mG. (Tr. 251.) The electric field level at the new east edge of the ROW would increase above the current level from approximately 0.04 kV/m to 0.89 kV/m. (Tr. 251.)

The field levels associated with the proposed line are within the range of typical levels of electric and magnetic fields people encounter in their homes, offices, and other locations on a daily basis. (Tr. 250-1.)

The two states that have set standards to limit magnetic fields from new transmission lines are New York with a limit of 200 mG and Florida with a limit of 150

mG at the edge of the ROW at maximum loading. (Tr. 251.) There are no Iowa or federal limits. (Tr. 251.) The rationale for these standards was to ensure that the magnetic field levels of new transmission lines would not exceed magnetic field levels produced by existing transmission lines at that time. (Tr. 252.) The standards were not developed to protect against health effects. (Tr. 252.)

Research on the possible health effects of electric and magnetic fields has been going on for over 100 years, with increased intensity in the last 30 years. (Tr. 252.) The research includes hundreds of epidemiology studies, animal studies, and studies of cells and tissues in the laboratory. (Tr. 252.) These studies have become very advanced over time, so scientists have a large and high quality body of research to consider when forming conclusions about the possible health effects of electric and magnetic fields. (Tr. 252.)

In order to come to a conclusion about whether an exposure, such as to electric and magnetic fields, poses a health risk, scientists consider all of the research that has been published in the field, including epidemiology studies, animal studies, and studies in cells and tissues. (Tr. 252.) It is important to evaluate the entire body of research because no single study is capable of addressing all the issues that must be considered and each study has strengths and weaknesses. (Tr. 252.) It is essential that both epidemiology and animal studies are considered in a risk assessment, because each have inherent limitations that are addressed in the other. (Tr. 252.) Epidemiology studies are non-experimental, meaning that researchers do not have control over the things people are exposed to in the study. (Tr. 252.) Scientists tightly control all aspects of animal studies, and therefore, have

a greater certainty that an observed effect is due to the exposure being studied and not some other factor. (Tr. 252.) However, animal studies are limited because it is often difficult to extrapolate findings to what we would expect to see in humans. (Tr. 252.) When scientists consider both types of studies together, they get a better picture of the possible relationship between the exposure and the disease. (Tr. 252.)

Epidemiology studies measure statistical associations, which is an estimate of how often two things occur together in the population being studied. (Tr. 253.) Most epidemiology studies related to electric and magnetic fields enroll a group of persons with a disease (i.e., cases), and a group of similar persons who do not have the disease (i.e., controls), estimate everyone's past exposure to magnetic fields, and compare these exposure levels between the cases and the controls. (Tr. 253.) A positive association would mean that persons with the disease have higher estimates of past magnetic field exposure compared to persons who do not have the disease. (Tr. 253.) An association that is reported in a study between a particular exposure and a disease is not enough evidence to conclude that the exposure is a cause of the disease. (Tr. 253.) An association is just a measure of how things vary together. (Tr. 253.) It does not mean that, since two factors tend to occur together more often than one would expect just by chance, the two factors are causally related. (Tr. 253.) Other factors related to how the study is designed and conducted can make it seem as though there is a real association even though there is not. (Tr. 253.) These factors need to be carefully evaluated before concluding an association is real, and if real, whether it reflects a causal relationship. (Tr. 253.) In addition, evidence from all

of the types of studies needs to be considered together in order to replicate and explain the observed association. (Tr. 253.)

Numerous national and international organizations responsible for public health have convened groups of scientists to review the research and come to a conclusion about the possible risks associated with electric and magnetic fields. (Tr. 253.) These include the U.S. National Institute of Environmental Health Sciences (NIEHS, 1998), the International Agency for Research on Cancer (IARC, 2002), the International Commission on Non-Ionizing Radiation (ICNIRP, 2003), and the National Radiological Protection Board of Great Britain (NRPB, 2001; NRPB 2004). (Tr. 253.) These groups included dozens of scientists chosen to represent the relevant areas of expertise required to answer questions about health. (Tr. 253.)

The conclusions of these reviews have been consistent: they agreed that the body of scientific research does not support the conclusion that electric and magnetic fields are the cause of any adverse health effect, including adult and childhood cancer, neurodegenerative diseases, suicide and depression, and reproductive effects. (Tr. 253.) Each group expressed that the evidence in support of a causal relationship is weak because it is founded largely on findings from epidemiology studies that are inconsistent, weak, and possibly erroneous. (Tr. 253-4.) The animal studies did not report consistent increases in cancer among animals exposed to high levels of magnetic fields, and the laboratory studies have not been able to explain how magnetic fields could cause disease. (Tr. 254.) Most of the reviews noted that epidemiology studies in total suggest an association between magnetic fields at higher average exposure levels (greater than 3-4 mG) and childhood leukemia. (Tr.

254.) However, combined with the lack of consistent findings from animal and laboratory studies, the groups concluded that the overall evidence does not support the conclusion that electric and magnetic fields are a cause of childhood leukemia. (Tr. 254.)

The conclusions of these reviews are also broadly consistent with the conclusions and recommendations of other scientific organizations that have considered this topic, including the Health Council of the Netherlands (HCN, 2001; HCN, 2004; HCN, 2005), the Swedish Radiation Protection Authority (2007), the National Cancer Institute (2005), the Department of Communications, Marine and Natural Resources in Ireland (2007), and the Scientific Committee on Emerging and Newly Identified Health Risks for the European Commission (2006). (Tr. 254.)

There are no federal or state health-based standards for either 60-Hz electric or magnetic fields. (Tr. 254.) However, there are general recommendations from scientific organizations regarding exposures to high levels of electric and magnetic fields. (Tr. 254.) Exposure to high levels of electric and magnetic fields, not typically found in our communities, can cause stimulation of nerves and muscles, a shock-like effect. (Tr. 254.) To protect against these effects, the ICNIRP recommends that public exposure to magnetic fields be limited to 833 mG and occupational exposure be limited to 4,200 mG. (Tr. 254.) The International Committee on Electromagnetic Safety (ICES) recommends that magnetic field exposures of the general public be limited to 9,040 mG. (Tr. 254.) The ICNIRP recommends that electric field exposure of the general public be limited to 4.2 kV/m and the ICES recommends a limit of 5

kV/m. (Tr. 254.) Both organizations recommend much higher limits for occupational electric field exposures. (Tr. 254.)

The electric and magnetic field levels associated with the proposed project are well below the ICNIRP and ICES recommendations. (Tr. 254.) Ames witness Ms. Wagner testified she has reached conclusions similar to those of the national and international agencies listed above through her reading and review of the research literature. (Tr. 255.) Based upon her evaluation of the research, Ms. Wagner concluded that the electric and magnetic field levels that would be produced by the proposed project would not adversely affect public health or safety. (Tr. 255, 260-1.)

No one presented any expert or scientific evidence that contradicted the expert testimony presented by Ames. Some of the objectors expressed concerns that the electric and magnetic fields from the proposed line would adversely affect their health. (Albaugh/Veasman objection; Tr. 389-90; Burke objection;<sup>2</sup> Kluge objection.) Ms. Veasman testified that her mother died within a year and a half after the power lines were put up across the road from her home and her father has just started chemo treatment for lymphoma. (Tr. 389-90.) Ms. Veasman is not convinced that power lines have no adverse health effects. (Tr. 389-90.) The undersigned is sympathetic to Ms. Veasman in the loss of her mother and her father's cancer. However, she did not present medical or other scientific evidence to support her concerns. There is no medical or scientific evidence in the record to support the conclusion that the existing power line caused Ms. Veasman's parents' health issues

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<sup>2</sup> The Burke and Kluge properties are not on the route proposed by Ames.

or that the proposed line would adversely affect the health of any member of the public.

Ames has presented sufficient proof that the electric and magnetic field levels associated with the proposed line will not adversely affect public health and safety. (Tr. 245-262.) Based on the record, no additional terms, conditions, or restrictions related to electric and magnetic field levels need to be imposed pursuant to Iowa Code § 478.4.

## **LINE LOCATION AND ROUTE**

### **I. Ames' proposed route**

Ames' proposed route begins at MEC's Northeast Ankeny Substation in Polk County and runs north along NE 29<sup>th</sup> Street, then west along NE 126<sup>th</sup> Avenue, then north along the east side of Interstate 35 to the corporate limits of the City of Ames. (petitions for franchises; Hockmuth/Nyugen Report; Tr. 205-6, 269; Ames Exhibits 3, 12, 13, 14.) The proposed route does not run along Interstate 35 farther south because there is a private airport that prevents this. (Tr. 367.) The proposed transmission line would ultimately terminate at the Ames Plant Substation located within the City of Ames. (petitions for franchise; Hockmuth/Nyugen Report; Tr. 205-6, 269.) However, Ames requests a franchise from the Board for only the part of the line outside the corporate limits of the City of Ames because the Board does not have jurisdiction over transmission lines inside city limits. (petitions for franchise.) Iowa Code § 478.1.

Ames has obtained all other necessary permits and approvals required to construct the proposed line from the appropriate governing bodies. (Tr. 215.)

Ames hired Mr. Stephen Rodick, P.E., a consulting engineer located in Kansas City, Missouri, to perform a routing study to identify the most preferred routing for the new 161 kV transmission line between northeast Ankeny and Ames. (Tr. 123; Ames Exhibit 3.) Ames witness Mr. Borland testified that Mr. Rodick is a recognized expert in transmission line engineering. (Tr. 123.) The routing study was completed in December 2005. (Tr. 123; Ames Exhibit 3.) Mr. Borland worked for the City of Ames and was involved in the initial planning for the proposed transmission line, but no longer works for Ames. (Tr. 112-4.) Other current Ames staff who testified were not involved in this initial planning because they did not work for Ames at the time. (Tr. 36, 267.)

The routing study stated the following in Part 2, Selection of Alternative Line Routes:

In routing any transmission line, there can conceivably be an infinite number of alternative routes. In order to limit the study of alternative routes to reasonable scope, the approach used here was to first identify several routes, any of which appear to be feasible at this time. In identifying potential routes, some of the criteria included:

- Routes along existing corridors are preferred to routes that do not follow existing corridors. Examples of existing corridors include existing transmission lines, roads and railroads.
- Routes that follow property or field lines are preferred to routes that cut across parcels.
- Routes crossing commercial or agricultural land use are preferred to routes crossing residential land use.

- Close proximity to certain public facilities, such as schools, hospitals and parks, should be avoided if possible.

Alternative line routes between the Power Plant Substation and the N.E. Ankeny Substation (Plant – Ankeny) were identified by using a combination of resources:

- The author, along with AMES staff, viewed the study area by airplane.
- Aerial photography, in digital format, was obtained from Story and Polk Counties. These became the map base for examining topographic details, plotting alternative routes, and takeoff of certain evaluation criteria.
- Extensive ground reconnaissance was done by vehicle.

A grid of many potential route segments was identified. Several of those were eliminated because of various conflicts to siting of a transmission line such as: inadequate flight-line clearance to the Ames airport, conflict with existing utilities, and residential development. The grid of potential route segments is shown on a series of maps in Appendix A.

From the grid of remaining line segments, eleven line routes (A through K, described below) were identified by the author in consultation with Ames staff for evaluation. During the summer of 2004, Ames retained DGR Consulting Engineers to provide engineering services related to final centerline selection, permitting, and design of the line. In addition, AMES retained Myers and Associates to provide services related to acquisition of right-of-way and permits. A twelfth route – L – was identified by the team which is largely a combination of routes J and K.

At the hearing, Mr. Borland testified Ames' consultant interviewed him to determine what Ames cared about in planning the route, and his primary concern was proximity to homes. (Tr. 148-9.) When specifically asked on cross-examination how the statutory instruction to follow roads, division lines of land, and railroads fit into the routing study, Mr. Borland stated it used weighting factors and focused on proximity to homes. (Tr. 149.) In response to a second question that told Mr.

Borland of the statutory requirement, Mr. Borland testified the existing CIPCO transmission line created a viable route in regard to a division line of property, due to the cases before the Board. (Tr. 150.) When specifically asked whether he regarded Interstate 35 as a road that the statute states is one of the routes Ames was supposed to follow, Mr. Borland responded that he did. (Tr. 150.) When asked whether Ames and Mr. Rodick used the Iowa Code § 478.18 criteria when they started their planning, Mr. Borland testified they did, in their understanding of it. (Tr. 181.) When asked to describe how they did so, Mr. Borland testified that they looked at certain effects of the line with regard to the placement of structures, and although the routing study did not specifically mention it, the study talks about routes along existing corridors are preferred to routes that do not follow existing corridors, and then stated the existing corridors could be transmission lines, roads, and railroads. (Tr. 181-2.) Mr. Borland testified routes that followed property or field lines were preferred to routes that cut across parcels in regards to division lines of property, and crossing commercial or agricultural land was considered preferable to crossing residential land. (Tr. 182.) He testified this was shown by the study's most negative impact in regards to homes. (Tr. 182.) Mr. Borland testified that although they "really didn't specifically cull out that section of the Code," the study took the criteria into consideration through the weighting and scoring. (Tr. 182.)

When asked what he meant by existing transmission lines, Mr. Borland testified they considered corridors more than the line itself. (Tr. 182.) Mr. Borland testified it was viewed that making use of an existing corridor, not specifically the transmission line itself, was a more preferred route than establishing a new route.

(Tr. 182-3.) When specifically asked, Mr. Borland testified when the route study referred to routes that follow property or field lines, it meant they looked at division lines of land, and they looked at roads, railroads, and existing transmission line corridors. (Tr. 183-5.) When asked why the routing study's evaluation criteria do not include division lines of land as a factor, Mr. Borland testified they looked at the other side of that and considered diagonally crossing parcels as a negative. (Tr. 184.) Mr. Borland testified that when they looked at existing transmission line corridors, they looked at following a corridor rather than following the transmission line itself using the same structures. (Tr. 183.) He believes that following an existing transmission line corridor, not necessarily using the same structures, is in compliance with Iowa Code § 478.18. (Tr. 183-4.)

On redirect, Mr. Borland testified they followed Iowa Code § 478.18 as interpreted by the Board and the courts. (Tr. 197-8.) Mr. Borland testified he was aware of cases and decisions by the Board and Iowa Supreme Court that would allow deviations from roads or division lines where the routes followed existing transmission lines. (Tr. 198.) He testified that it was his understanding that the routing study criteria of "routes along existing corridors are preferred to routes that do not follow existing corridors" and "[e]xamples of the existing corridors include existing transmission lines, roads, and railroads," were consistent with Iowa Code § 478.18. He testified the routing study criteria that stated: "routes that follow property or field lines are preferred to routes that cut across parcels" was following the § 478.18 requirement to follow division lines of properties. (Tr. 199.)

The routing study used a mathematical analysis to evaluate the various route options. (Tr. 123; Ames Exhibit 3.) Twelve different routes were investigated in the routing study. (Tr. 123-7; Ames Exhibit 3.) Most of the route options ran between the new Ames Plant Substation and MEC's Northeast Ankeny Substation. (Ames Exhibit 3; Tr. 143.) In evaluating the alternative routes, the routing study considered various characteristics. (Ames Exhibit 3; Tr. 127-30.) In total, 45 various routing characteristics in five general categories were studied. (Tr. 127-30; Ames Exhibit 3.) The five general categories included transmission line characteristics, buildings and other facilities near the proposed route, crossings, ROW characteristics, and costs. (Tr. 127-30; Ames Exhibit 3.)

"Length parallel to existing lines" was one of the criteria under the transmission line characteristics category and was viewed as a positive. (Tr. 128, 132, 136; Ames Exhibit 3.) Ames witness Mr. Borland testified: "When the City of Ames Electric Services Department began the routing study, another Iowa utility was in [the] process of obtaining a franchise agreement for a transmission line from Council Bluffs to Des Moines. We understand from decisions of the IUB and the Iowa Supreme Court that it was appropriate for a utility to follow an existing easement for that new transmission line. From these observations, it was viewed that the CIPCO 161 kV line was an existing route and it should be included in the Routing Study selection criteria." Mr. Borland further testified: "Paralleling the CIPCO 161 kV line was considered an acceptable route. Other transmission line routings before the Iowa Utilities Board at this time were being more favorably viewed when the

proposed transmission line was placed on or near an existing transmission corridor. Therefore, we viewed paralleling the CIPCO line in a positive way." (Tr. 136-7.)

Part 1 of the routing study stated: "Some potential line segments follow existing transmission lines. Where there is sufficient right-of-way available, the new line will be constructed adjacent to the existing line." (Ames Exhibit 3.) Mr. Borland testified that consideration of paralleling the CIPCO transmission affected the route selection and testified the route study gave a positive effect to paralleling the CIPCO line. (Tr. 137; Ames Exhibit 3.)

Mr. Borland testified Ames chose Route L because it had the highest score for multiple reasons. (Tr. 130; Ames Exhibit 3.) Mr. Borland testified Route L had the least amount of residences, learning institutions, day care facilities, hospitals, and nursing homes near the route. (Tr. 130.) Route L crossed the least amount of private parcels of land and crossed several public parcels including the City of Ames sewer treatment plant. (Tr. 130.) Mr. Borland testified the route is mostly agricultural and followed existing ROWs. (Tr. 130.) Therefore, he testified, it was evaluated the highest and rated as the most preferred route. (Tr. 130; Ames Exhibit 3.) Mr. Borland noted Route L was not the least expensive route out of the 12 alternatives considered. (Tr. 130.) The routing study stated that in addition to it's highest ranking, the City of Ames and the City of Nevada own approximately three miles of public property adjacent to Route L and that utilizing Route L would minimize the impact to the public. (Ames Exhibit 3.) Mr. Borland testified no easement acquisition would be required on the property the City of Ames owns along the east side of Interstate 35. (Tr. 131.) Mr. Borland testified that even if the advantage of using the

existing route were eliminated from the mathematical scoring, Route L would still have the highest score. (Tr. 137, 194-7; Ames Exhibit 17.)

Mr. Borland testified that Ames initially considered placement of the proposed line along the west side of Interstate 35 or rebuilding the existing 69 kV transmission line that runs along Highway 69. (Tr. 131.) He testified that the proposed line could not be routed along the west side of Interstate 35 for a number of reasons, including: 1) north of Highway 30, industrial and commercial building development was too close to the ROW of Interstate 35 to allow any new transmission line construction; 2) an existing gravel pit and storage area just south of Interstate 35 precluded consideration; 3) both of these areas would have various National Electrical Safety Code clearance violations; 4) there were other interfering uses such as cell phone towers further south along the west side of Interstate 35; and 5) there was limited access from local roads, which would limit the ability to repair the line and thus impact its reliability. (Tr. 131.) Mr. Borland testified Ames eliminated the option of rebuilding the existing 69 kV line because of proximity to the Ames Regional Airport. (Tr. 131-2.) He testified the pole height for a 161 kV line would violate the required Federal Aviation Administration (FAA) 100:1 glide slope, and therefore, the FAA would deny any application to increase the pole heights along Highway 69. (Tr. 131, 145-6.)

Ames witness Mr. Haselhoff testified the proposed route follows road ROW, property boundary lines, division lines of land, and an existing transmission line corridor. (Tr. 206-7.) Mr. Haselhoff testified it is Ames' intent to locate each structure near the property lines to minimize the impact to the property owners. (Tr. 207.) He

testified this may not always be possible because of obstacles in the field, such as the line segment that parallels the existing CIPCO transmission line, where Ames proposes to place its structures approximately 80 feet east of the CIPCO structures. (Tr. 207.)

For approximately 4.5 miles, Ames' proposed route runs next to an existing CIPCO 161 kV transmission line that is just to the east of Interstate 35 in Story County. (Docket No. E-21744 petition; Tr. 223, 269, 336; Ames Exhibits 12, 13, 16.) The CIPCO line existed prior to construction of Interstate 35. (Tr. 223.) The CIPCO line is on a 200-foot wide easement, some of which overlaps the ROW of Interstate 35. (Tr. 223, 280; Ames Exhibit 16.) There is not enough room between the existing CIPCO transmission line and the Interstate 35 ROW to construct Ames' proposed line to the west of the CIPCO line and to the east of Interstate 35. (Tr. 280-1; Ames Exhibit 16.) In addition, the CIPCO transmission line is not always parallel to Interstate 35, and there is no way to build the proposed line west of the CIPCO line without jumping back and forth across the CIPCO line. (Tr. 281; Ames Exhibit 16.)

In most locations, the Ames easement overlaps the CIPCO easement and the easterly portion of the proposed Ames easement lies outside the CIPCO easement. (Tr. 209, 224, 227, 281; Ames Exhibit 16.) In most locations where the existing CIPCO line and the proposed Ames line would cross the same parcel, the poles for the proposed Ames line would be constructed along the east edge of the CIPCO easement. (Tr. 223-4, 281; Ames Exhibit 16.) In some cases, the proposed transmission line and easement have been moved farther east of the CIPCO line at the request of the individual property owners. (Tr. 209, 224.) Ames has attempted to

accommodate landowners' requests regarding pole and line placement to reduce interference with the landowners' use of the land in return for a signed voluntary easement, with and without success. (Tr. 209.)

At some locations, and where requested by landowners, Ames has proposed reducing its easement impact by moving its poles further to the west, subject to approval by CIPCO. (Tr. 281.) However, CIPCO has required a separation of 80 feet between the existing CIPCO line and the proposed Ames line for increased reliability and ease of maintenance. (Tr. 214, 226, 282.) For most of the 4.5-mile stretch, Ames has been able to obtain voluntary easements that comply with CIPCO's requirement. (Tr. 282.) Ames witness Mr. Cook testified it is Ames' intent to continue to work with property owners to minimize impacts where practicable and subject to CIPCO's approval. (Tr. 282.)

Ames witness Mr. Haselhoff testified that Ames has chosen to use single-pole structures to reduce the impact on property owners along the line segment paralleling the CIPCO line. (Tr. 207.) The use of single-pole structures makes it easier to farm around the line and reduces the amount of land taken out of production. (Tr. 207.) It lessens inconvenience to landowners. (Tr. 207.) Ames also proposes to use braced line post insulator assemblies for increased mechanical strength. (Tr. 207.) This allows span lengths to be increased so fewer poles are needed. (Tr. 207, 216.) Ames proposes to use self-supporting steel structures on concrete foundations that do not require guying for most large angle structures. (Tr. 208.) Small angles would be supported with engineered laminated wood poles designed to handle the angles without guys. (Tr. 208.) These would be easier to farm around. (Tr. 208.) Mr.

Haselhoff testified guys and anchors would only be used where they can be installed in fence lines. (Tr. 208.)

Mr. Haselhoff testified Ames considered the use of H-frame structures and single-pole structures with concrete foundations to be able to increase span lengths, but they would require the structures to be placed farther out in the field and significantly increase the needed easements, so these options were not considered practical or feasible. (Tr. 208.) The span lengths of the proposed route do not match the span lengths of the CIPCO line. (Tr. 216; Hockmuth/Nguyen report.) The CIPCO line uses H-frame structures with a span length of approximately 600-800 feet. (Tr. 216.) The poles Ames has proposed cannot accommodate larger spans. (Tr. 216.) Also, Mr. Haselhoff testified, some landowners requested that the proposed structures not be placed in alignment with the existing structures to allow them to maneuver farm equipment around the structures and not take as much land out of production. (Tr. 216.)

Mr. Haselhoff testified it is not feasible to construct the proposed line on the existing structures that support the CIPCO line because they were not designed to support both transmission lines. (Tr. 208, 225-6.) He testified it would be possible to construct a new structure that would support both lines, and Ames double-circuits 161kV and 69kV lines within the Ames city limits. (Tr. 208, 225-6.) However, he testified, such construction would not meet the applicable reliability requirements. (Tr. 208, 235-6, 240-1.) By applicable reliability requirements, he testified he was referring to the supplemental study in Section 9 of Ames Exhibit 4. (Tr 235-6, 239-41.) He testified the CIPCO line is a very important line in the CIPCO system and it

would be difficult to take the line out of service to double-circuit it or reconstruct it. (Tr 241.) He testified if Ames were to double-circuit its proposed line with the CIPCO line, if the structures were to fail, both circuits would go down, and this would have a negative impact on the system reliability of the regional transmission grid. (Tr 241.) He also testified additional ROW may be required to construct and maintain the taller structures that would be necessary to support both lines. (Tr. 208.)

Ames witness Mr. Borland testified that double-circuiting the proposed transmission line would not violate reliability standards, but the utility would have to plan for such construction differently. (Tr. 190-1.)

Mr. Haselhoff testified Ames has had discussions with CIPCO about the possibility of double-circuiting the lines. (Tr 218-9, 228-9, 239-40.) He testified that after Ames did the additional analysis in section 9 of the power flow study, if he recalled correctly, CIPCO told Ames it could not double-circuit its line due to reliability and system stability concerns. (Tr 228-9, 239-40.) At the hearing, Ames agreed to file the letter or e-mail from CIPCO that said Ames could not double-circuit the proposed line. (Tr 243-4.) After the hearing, Ames filed minutes of a meeting between Ames and CIPCO and an e-mail from CIPCO. (Ames materials filed June 13, 2007.) These materials do not support the testimony that CIPCO refused to allow the double-circuiting. Rather, they show a continuing discussion of issues and problems related to double-circuiting, things that CIPCO would require, and an invitation to discuss the matter further. (Ames materials filed June 13, 2007.)

Ames witness Mr. Haselhoff testified Ames did not further evaluate the costs of double-circuiting the line as compared to its proposed line, but he knows it would

be more expensive. (Tr. 240, 242.) Ames witness Mr. Borland testified the routing study assumed an additional cost of \$120,000 per mile for double-circuiting the line, although costs have escalated since then. (Tr. 187-90; Ames Exhibit 3.) Ames witness Mr. Kom testified that Ames looked at the additional cost to double-circuit on one-mile sections or less and determined there would be an increased cost of approximately \$80,000 per pole, and preliminary numbers showed an increased cost of \$500,000 to \$1 million per mile. (Tr. 442-3.)

## **II. Written objections**

Iowa Code § 478.5 provides that any person whose rights may be affected has the right to file a written objection to the proposed project or the grant of a requested franchise.

Several persons filed written objections with the Board. (written objections; Hockmuth/Nguyen report; Tr. 334-6.) Most of the objections were filed by persons who also had an interest in one or more eminent domain parcels, and those objections are discussed below. Several of the remaining objections were withdrawn prior to the hearing. (written objections; Hockmuth/Nguyen report; Tr. 334-6.)

As of the date of the hearing, in addition to the objections filed by owners of eminent domain parcels, three persons had filed written objections and had not formally withdrawn them: Mr. William J. Burke, Pastor Will Hatfield, and Dr. John P. Kluge. (written objections; Hockmuth/Nguyen report; Tr. 334-6.) Mr. Burke and Dr. Kluge do not live along the proposed route and it appears their objections were filed with respect to alternate routes no longer proposed by Ames. (written objections; Hockmuth/Nguyen report; Tr. 334-6.) In his written objection, Pastor Hatfield

recognized the need for the proposed line but urged Ames to reconsider its location to avoid going through a residential area. (written objection.) Pastor Hatfield asked Ames to consider an alternate route that would run the line as proposed north of Ankeny, but cross Interstate 35 to the west at the Ames sewage treatment plant, and then proceed north to Ames. (written objection.) Pastor Hatfield signed a voluntary easement, and Ames witness Mr. Myers testified Pastor Hatfield's concerns were addressed. (Tr. 335.) The signing of a voluntary easement does not necessarily negate an objection. These three objectors did not file information in addition to their original objections or appear or testify at the hearing. The three written objections do not provide a reason to deny the requested franchises. Nor do they provide a reason to require any additional terms, conditions, or modifications of the requested franchises.

### **III. Requested eminent domain authority**

As of the date of the hearing, Ames has obtained voluntary easements for 20 of the 23 required in Polk County, and 36 of the 41 required in Story County. (Tr. 328.) Landowners and tenants will be compensated for any property damages resulting from the construction activities of the proposed project. (Tr. 329.)

Ames witness Mr. Myers testified that Ames believes negotiations with these landowners are at an impasse and the grant of eminent domain authority is necessary. (Tr. 332.) He testified that Ames hopes once the petitions are approved, negotiations will become more fruitful. (Tr. 332.) He testified Ames is continuing to try and obtain voluntary easements from these landowners. (Tr 328, 332.)

Mr. Myers testified that Ames intends to reduce tree removal issues as much as possible by limiting trimming and removal to approximately 25 feet on either side of the centerline. (Tr. 333-4.) He testified property values have not been adversely affected along the proposed route. (Tr. 333.) Ames correctly states in its post-hearing brief that concerns over the amount of compensation to be paid for the requested easements are to be addressed in other appropriate proceedings. Iowa Code chapters 6B and 478.

**A. Polk County**

In Polk County, Docket No. E-21743, Ames is seeking eminent domain authority over three parcels of land designated as Parcels P-2, P-3, and P-16. (Docket No. E-21743 petition Exhibit E; Tr. 329.) Ames has been unsuccessful in its attempts to obtain voluntary easements across these three parcels. (Tr. 329.)

**1. Parcels P-2 and P-3 Albaugh/Veasman Family**

Ames requests a 30-foot wide easement along the west edge of Parcels P-2 and P-3, which are adjoining properties on the east side of NE 29<sup>th</sup> Street. (Docket No. E-21743 petition Exhibit E; Hockmuth/Nguyen report.) Ames proposes to construct the poles and line two feet from the west edge of Parcel P-2 and between two and ten feet from the west edge of Parcel P-3. (Docket No. E-21743 petition Exhibit E; Hockmuth/Nguyen report.)

Parcels P-2 and P-3 are owned by the Albaugh family, including Mr. Norman Albaugh, Mr. Michael Albaugh and his sister, Ms. Connie Veasman. (Docket No. E-21743 petition Exhibit E; Tr. 329; 334, 388.) Mr. Norman Albaugh, the father of Mr. Michael Albaugh and Ms. Connie Veasman, lives in his home on Parcel P-3. (written

objection.) In addition to holding ownership interests in these parcels, Mr. Michael Albaugh and Ms. Veasman filed a written objection, additional information, and exhibits, and testified at the hearing. (written objection; post-hearing submission and response; Albaugh Exhibits 1-4; Tr. 388-404.)

Parcels P-2 and P-3 are on the east side of NE 29<sup>th</sup> Street in Polk County. (Docket No. E-21743 petition Exhibit E; written objection.) There is an existing double-circuit 161 kV transmission line running along the west side of NE 29<sup>th</sup> Street at the location of Parcel P-3 constructed by MEC in 2003-4. (Tr. 389; written objection; post-hearing submission and response; Albaugh Exhibit 4.) Mr. Albaugh and Ms. Veasman are upset that Ames and MEC did not coordinate their plans for the two lines and double-circuit them on the same structures. (Tr. 389-404; written objection; post-hearing submission and response; Albaugh Exhibits 1-4.) They believe Ames and MEC acted with complete disregard for the adverse impact of having two 161 kV lines running along the same road and very close to their father's residence when one easement and one set of structures would have accomplished both utilities' goals and the two utilities were already working together on plans for the substation and transmission lines in the area. (Tr. 389-404; written objection; post-hearing submission and response; Albaugh Exhibits 1-4.) They point out that Ames hired MEC to perform the transmission planning study issued November 21, 2002. (Tr. 390; Ames Exhibit 1.) They feel that Ames and MEC were not forthcoming with information about their plans and they feel deceived. (Tr. 389-404; written objection; post-hearing submission and response.)

Mr. Albaugh and Ms. Veasman are also concerned that two power lines within 150 feet of their fathers home will cause adverse health effects, will be a detriment to future development, will have a negative visual impact, and will reduce their property's value. (Tr. 389-404; written objection; post-hearing submission and response; Albaugh Exhibits 1-4.) They are upset that on Parcel P-3, three trees will have to be removed, two poles will be placed in the yard, the proposed line will be placed 70 feet from their father's house, and they have been offered inadequate compensation. (Tr. 389-404; written objection; post-hearing submission and response; Albaugh Exhibits 1-4.) Ms. Veasman understands that the issue of compensation is not determined in this proceeding. (Tr. 397-8.) She also understands that their property is very near the MEC Northeast Ankeny Substation and the substation is designed to tie into electric transmission lines. (Tr. 399.)

The concerns expressed by Mr. Albaugh and Ms. Veasman regarding adverse health risks are discussed above. Ames witness Mr. Myers testified to his attempts to obtain a voluntary easement from Mr. Albaugh and Ms. Veasman. (Tr. 329-30.) He testified the primary concern appeared to be the owners did not want an easement on the property, and he was not able to obtain a voluntary easement. (Tr. 329-30.) Mr. Myers testified one oak tree and two fir/pine trees on Parcel P-3 will have to be removed, and Ames will pay compensation for damages for the tree removal. (Tr. 334.)

Ames witness Mr. Cook testified there is a limited corridor option coming out of the substation and the routing options are extremely limited. (Tr. 308.) Mr. Borland testified he understands the concern over multiple lines in the vicinity of the property,

but the property is located near the substation at which the proposed line would terminate and there are a number of electric lines that connect into the substation. (Tr. 134.) He testified Ames looked at a number of alternative routes and used their consultant's experience in the determination of the most appropriate weighting factors for the route. (Tr. 123-32, 134.)

Ames proposes an H-frame structure on Parcel P-3 and some of the structures on P-3 are more than 2-3 feet from the property line. Ames witness Mr. Haselhoff testified this is necessary because the proposed line would cross an existing 161 kV line in this vicinity. (Tr. 215.) Ames witness Mr. Haselhoff testified he did not know why Ames and MEC did not coordinate activities so that the proposed line could be placed on the same structures as the MEC line near Parcels P-2 and P-3 because he was not brought into the project team until after those decisions were made. (Tr. 233-5.) Mr. Haselhoff testified it does not look like Ames could add another circuit on the existing MEC poles. (Tr 230-231.) When asked whether it would be possible to construct the proposed line on common towers with the existing MEC line at the location of Parcels P-2 and P-3, Mr. Haselhoff testified it would be very difficult to do this on the north end where MEC taps an Alliant Energy 161 kV line. (Tr. 236-237.) He testified it would take a lot of analysis and design work and he does not know if it could be physically done or not. (Tr. 237-8.) There are feasibility and cost considerations for double-circuiting the lines. (Tr. 231, 242.)

The Board has adopted most of the National Electrical Safety Code (NESC) as part of the Iowa Electrical Safety Code in 199 IAC 25.2(1). NESC Rules 221 and 222, which are adopted, allow joint use of structures, and NESC Rule 222 specifically

states that "joint use of structures should be considered for circuits along highways, roads, streets, and alleys." Board rule 11.6 expresses a preference for constructing multiple lines along the same public ROW on common structures. 199 IAC 11.6. Although these rules do not require Ames to triple-circuit its proposed line along NE 29<sup>th</sup> Street, and further evaluation may show that it cannot be done, if Ames chooses to re-evaluate route options, it must consider these rules, discuss the possibility of triple-circuiting with MEC, and present evidence regarding this consideration in its revised petition. Northeast 29<sup>th</sup> Street in Polk County is a road within the meaning of Iowa Code § 478.18, and a route evaluation that included it as an option could be in accordance with § 478.18, so long as Ames evaluates triple-circuiting the line with the existing MEC line.

## **2. Parcel P-16 Ploegstra Family**

Parcel P-16 is owned by the Shirley Ploegstra Trust and Ms. Shirley L. and Mr. Adrian Ploegstra. (Tr. 330; Docket No. E-21743 petition Exhibit E.) The Ploegstras did not file an objection or participate in the hearing. However, on July 18, 2007, the Ploegstras filed a letter stating they wanted to rebut statements made by Ames witnesses about their interests. (Ploegstra filing.) The Ploegstra's parcel is a 74-acre parcel of land that parallels Interstate 35 for one-half mile just to the east of Interstate 35. (Ploegstra filing; Docket No. E-21743 petition Exhibit E.) Ames is seeking a 75-foot-wide easement across the Ploegstra's property for its proposed line. (Ploegstra filing; Docket No. E-21743 petition Exhibit E.) As proposed, the easement would be located immediately along the east side of the existing east ROW of Interstate 35 and Ames proposes to place the seven poles on Parcel P-16 two feet from the west edge

of the easement. (Hockmuth/Nguyen report; Docket No. E-21743 petition Exhibit E; Ames Exhibit 12.)

When constructing Interstate 35, the Iowa Department of Transportation (IDOT) acquired about four acres from the prior owner for fill dirt and to build an overpass. (Ploegstra filing.) This four-acre section does not just follow the Interstate 35 ROW along the entire west edge of the Ploegstra property, but rather "bumps out" for approximately 1,100 feet. (Ploegstra filing; Ames response; Docket No. E-21743 petition Exhibit E.) The Ploegstras want Ames to construct the transmission line across the "bump-out" with the north and south ends being on the Ploegstra's property, thus keeping the proposed line on a north/south axis consistent with Interstate 35. (Ploegstra filing; Ames response.) The Ploegstras said they would grant Ames an easement if they constructed the proposed line as requested. (Ploegstra filing.) The Ploegstras state that Ames' argument that the IDOT has regulations that prohibit placement of the line on their property has no merit, and if they exist, that Ames should request a waiver. (Ploegstra filing.) The Ploegstras argue that it makes sense to construct the line across the "bump-out" because the land has been stripped of its black dirt and has no value for farming or other purposes. (Ploegstra filing.) The Ploegstras point out that in order to follow the fence line, the transmission line would have to be constructed with abrupt turns. (Ploegstra filing.) They state that in a similar situation to the north of them, the IDOT returned the land to the landowner after using it and the fence was built straight through. (Ploegstra filing.) The Ploegstras farm the land and state that the impact of any taking of private property should be held to a minimum. (Ploegstra filing.) They

ask that Ames not be granted eminent domain across their property. (Ploegstra filing.)

Mr. Myers testified to the efforts he made to obtain a voluntary easement, but this was unsuccessful. (Tr. 330.) Mr. Myers testified Mr. Ploegstra was unhappy with an indented property line left by the IDOT following work on Interstate 35 and stated he would give Ames an easement if it would cross the IDOT property in the area. (Tr. 330.) He testified Ames needs a 75-foot wide easement across the property along Interstate 35 because it cannot use ROW on Interstate 35 for construction as it could along county roads. (Tr. 330.)

Ames filed a response to the Ploegstra's letter on August 1, 2007. Ames stated in its response that it discussed placement of the proposed line along the IDOT/Interstate 35 ROW with IDOT, and requested going straight through the "bump-outs." The IDOT told Ames it could not place any poles on the IDOT ROW. (Ames response; Tr. 281.) Ames was able to span some of the shorter "bump-outs" without placing poles in the IDOT ROW and the IDOT allowed the conductors to overhang the ROW. (Ames response.) However, Ames stated, the Ploegstra "bump-out" is too long and Ames cannot span it without placement of any structures in the IDOT ROW. (Ames response.) Therefore, Ames had to go around the "bump-out" and plans to place seven pole structures adjacent to the property division line/road ROW line on Parcel P-16. (Ames response; Ames Exhibit 12; Docket No. E-21743 petition Exhibit E.) It appears that three of the poles would be placed along the "bump-out." (Ames Exhibit 12; Docket No. E-21743 petition Exhibit E.) Ames stated that there would be some overhang of conductors across Parcel P-16, but this overhang would

not interfere with farming operations, Ames would pay compensation for the easement, and the issue of the amount of compensation is properly addressed in other proceedings. (Ames response.)

The Ames response to the Ploegstra letter shows that Ames acted reasonably to request permission from the IDOT to route the line through the "bump-out" and that the request was refused. Ames' proposed route through the Ploegstra property does not appear to be unreasonable and it appears to conform to applicable requirements. If the Ploegstras wish to ask the IDOT to return the "bump-out" land to them so the fence can be built straight through as they state was done to the north of them, they are of course free to do so. If this is successful, then Ames should place its proposed line along the fence if it chooses to re-propose a route along Interstate 35.

**B. Story County**

In Story County, Docket No. E-21744, Ames seeks eminent domain authority over five parcels designated as S-2, S-3, S-6, S-7, and S-8. (Tr. 330; Docket No. E-21744 petition Exhibit E.) Ames requests a 75-foot wide easement across each of these parcels. (Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report; Tr. 238; Ames Exhibit 16.) Ames has been unsuccessful in its attempts to obtain voluntary easements from the owners of these parcels. (Tr. 330-1.)

Each of these five parcels is located along the section of Ames' proposed route where it parallels an existing CIPCO transmission line. (Docket No. E-21744 petition; Hockmuth/Nguyen report; Ames Exhibit 16; Tr. 336.) On each of these parcels, there is an existing CIPCO transmission line and easement near the east

side of the IDOT/Interstate 35 ROW and near the west side of the parcels. (Docket No. E-21744 petition; Hockmuth/Nguyen report; Ames Exhibit 16.) Ames proposes to construct its new line to the east of the existing CIPCO line at varying distances, but typically approximately 75-80 feet from the existing CIPCO line. (Docket No. E-21744 petition; Hockmuth/Nguyen report; Ames Exhibit 16.) This would generally place the Ames proposed line approximately 110 to 150 feet from the IDOT/Interstate 35 ROW at most locations. (Hockmuth/Nguyen report; Ames Exhibit 16.)

Ames has obtained voluntary easements from the owners of the remaining ten parcels that are located along this section where the proposed route parallels the existing CIPCO line. (Tr. 336, 367; Docket No. E-21744 petition.) Mr. Myers testified the owners of three of the remaining five eminent domain parcels in Story County have offered to sign a voluntary easement for the right price. (Tr. 367.)

**1. Parcels S-2 and S-3 Larson and Bates Families**

Parcel S-2 is owned by Mr. Noel R. and Ms. Leona Larson, Mr. Leonard and Ms. Sue Larson, and Mr. James A. and Ms. Arlene L. Bates. (Docket No. E-21744 petition Exhibit E.) Parcel S-3 is owned by Mr. Leonard and Ms. Jacqueline Larson and Mr. James A. and Ms. Arlene L. Bates. (Docket No. E-21744 petition Exhibit E.) In addition to holding ownership interests in these parcels, the Bates and Larsons filed written objections, additional information, and exhibits, and Mr. Leonard Larson testified at the hearing. (written objections; additional information; Exhibits LL-1, LL-2, LL-300, LL-301, LL-302, LL-303; Tr. 410-29.)

Parcels S-2 and S-3 are adjacent properties located on the southeast and northeast corners of the intersection of Interstate 35 and Iowa Highway 210 at Exit

102. (Ames Exhibit 16; Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report.) There is an interchange at this corner, and Ames proposes to route its line along the east side of the interchange access roads. (Ames Exhibit 16; Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report.) The existing CIPCO line follows Interstate 35 at this location, so next to the interchange, the proposed Ames line would jog to the east and would not directly parallel the existing line. (Ames Exhibit 16; Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report.) Other than at the interchange, the Ames proposed line would be east of the existing CIPCO line and there is partial overlap of the CIPCO and Ames easements. (Ames Exhibit 16; Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report.)

Mr. Larson testified the CIPCO easement was signed in 1948. (Tr. 413, 428.) He testified the CIPCO poles and transmission line were placed on the fence lines of the farm fields as they existed at the time. (Tr. 428.) There was no road. (Tr. 428.)

Mr. Larson suggested two alternative routes for the Ames line: 1) follow NE 29<sup>th</sup> Street north through Polk County and 570<sup>th</sup> Avenue and 580<sup>th</sup> Avenue north through Story County, finishing at the proposed endpoint on Highway 30 at the Ames city limits (Option 1); and 2) starting from the Northeast Ankeny Substation, go east to the railroad, then north along the railroad until approximately one mile north of the Skunk River, turn and go west one half-mile to 580<sup>th</sup> Avenue, then north to Highway 30 (Option 2). (Larson/Bates information; Tr. 221, 342, 414-6; Larson Exhibit LL-302; written objections.) Mr. Larson stated Option 1 is similar to Ames' Option B set forth in Ames Exhibit 3, is shorter than Ames' preferred route, and goes farther east allowing for growth along the Interstate 35 corridor. (Larson/Bates information.) He

stated Option 2 would cause the least hardship for growth for Ames, Huxley, and Ankeny, and would reduce easement costs, construction costs, and crop damage costs because the route is along railroad and county ROWs. (Larson/Bates information.) He stated Ames could further reduce costs by combining the proposed line on common poles with existing lines along Highway 210. (Larson/Bates information.) He stated it would be easier to maintain and repair the proposed line if it were placed nearer to roads. (Larson/Bates information.) Mr. Larson stated the Option 2 route would not go past any houses in Elkhart and only four houses in Cambridge. (Larson/Bates information.) He also stated the balance of Option 2 where it leaves the railroad would be along county pavement with about 160 feet of ROW. (Larson/Bates information.)

In his information and testimony, Mr. Larson discussed plans for development north of Des Moines and along the Interstate 35 corridor by various planning agencies, including the Des Moines Area Metropolitan Planning Organization. (Larson/Bates information; Tr. 410-7.) He stated his farms are in the proposed growth area and are in a prime location for development at Interstate 35 Exit 102. (Larson/Bates information; Larson Exhibits LL-300, LL-301, LL-303; Tr. 412.) He stated that the proposed line in addition to the existing CIPCO line would restrict future development along the Interstate 35 corridor. (Larson/Bates information.)

The Larsons and the Bates stated that adding another set of poles going through their farm fields parallel to the CIPCO line would cause numerous problems in farming, particularly with the larger farm implements being used today. (Larson/Bates information; written objections.) Mr. Larson stated the existing CIPCO line is about 60 years old, and the Larsons and Bates stated it would be less burdensome for landowners if the proposed line were placed on the same structures as the CIPCO line. (Larson/Bates information; Tr. 413; written objections.) Mr. Larson testified that CIPCO has double-circuited lines with Alliant, MEC, and numerous other rural electric cooperatives. (Tr. 413.) He testified the proposed Ames easement is more restrictive than the existing CIPCO easement and would not allow any buildings or dirt work. (Tr. 413-4.) Mr. Larson disagrees with Ames' argument that since the CIPCO and Ames easements would partially overlap, there would not be major impact to the landowners. (Tr. 413-4.) The Larsons and the Bates support an alternative route that would not restrict economic development, but at a minimum, say the CIPCO and Ames lines should be double-circuited and put as close as possible next to the Interstate 35 fence line. (Tr. 415; written objections; Larson/Bates information.) The Larsons and Bates understand that the proposed transmission line would benefit the entire area and there is a need for the proposed line. (written objections; Tr. 422.)

Ames witness Mr. Myers testified to the efforts he made to try to obtain voluntary easements across Parcels S-2 and S-3, but without success. (Tr. 330-1, 343-4.) Mr. Myers testified that Mr. Larson, through his attorney, agreed to grant Ames a voluntary easement for a certain price, but since Ames did not file an

amended petition Exhibit E with respect to Parcels S-2 and S-3, it appears that Ames still seeks eminent domain authority over Parcels S-2 and S-3. (Docket No. E-21744 petition; Tr. 330-1, 336, 338-9, 343.) Mr. Myers testified he believes the owners' primary concern was that they did not want the proposed line on their property and the amount of compensation to be paid, which is not an issue to be determined in this proceeding. (Tr. 330-1, 343-4.)

Ames witnesses Mr. Myers and Mr. Haselhoff testified that Mr. Larson's Option 1 would go by two grain bins and one metal building and would pass by 16 homes in Polk County. (Tr. 220-1, 342.) They testified Option 1 would pass in front of 28 homes, two commercial sites, two grain bins, and one steel building, and would encounter numerous existing transmission and distribution lines in Story County. (Tr. 220-1, 342.) Mr. Haselhoff testified these could result in potential clearance violations of the NESC. (Tr 221.) In addition, Mr. Myers testified, the Story County portion of the route would be approximately 1.75 miles longer than the proposed route and thus affect 16 to 20 additional landowners. (Tr. 342.)

Mr. Haselhoff testified Option 2 would pass through Elkhart and Cambridge and require extensive tree removal, and it has limited access for construction and maintenance. (Tr 221.) Mr. Haselhoff testified that in some areas the railroad ROW is very narrow and the railroad has encroachment requirements that appear could not be satisfied in these areas. (Tr 221.) He testified the route has areas in close proximity to buildings and grain bins and the required clearances of the NESC could be compromised. (Tr 221.) Mr. Myers testified that in Polk County, Option 2 would involve four grain bins, three houses, one tower, substantial tree removal, and is

approximately 2.5 miles longer than the proposed route, resulting in approximately ten additional landowners. (Tr. 342.) He testified that in Story County, Option 2 would involve one tower, 12 homes, a Cambridge city park, two transmission lines, one commercial site, one school, extensive tree removal, and is approximately 1.5 miles longer than the proposed route and would involve an additional 15 landowners. (Tr. 342.) Mr. Myers testified that in Story County the railroad seems to be in a flood plain area with lots of creeks and rivers and water along the railroad and access to the line during wet periods would be a serious problem. (Tr. 342.) In addition, he testified, access roads crossing the railroad either do not exist or have been closed, making maintenance difficult. (Tr. 342.) He testified that neither option compared favorably to the proposed route. (Tr. 343.)

Ames witness Mr. Myers testified that much of the Larsons/Bates information relates to future economic development and potential future widening of Interstate 35. (Tr. 338.) He testified that Ames believes that placing the proposed line along Interstate 35 is preferable to placing it along another road to the east because development would not be built to "front" or access from Interstate 35, but rather would back up to Interstate 35. (Tr. 339.) Since Ames' proposed line is on the east side of the existing CIPCO line across these parcels, Ames does not expect that the line would be impacted if Interstate 35 were widened. (Tr. 338.) Mr. Myers testified the Manager of Projects for the Iowa Department of Transportation told him that any widening would be accomplished through use of the median rather than taking additional ROW. (Tr. 338.) Mr. Myers testified that the Larsons' and the Bates' concerns regarding valuation and development would be addressed in a separate

proceeding and just compensation for any diminution in value would be paid. (Tr. 338, 343-4.)

**2. Parcel S-6 Ms. Cassandra Cole**

Parcel S-6 is owned by Ms. Cassandra L. Cole. (Docket No. E-21744 petition Exhibit E.) Ms. Cole filed a written objection and additional information and testified at the hearing. (written objection; information filed; Tr. 101-10.) Ms. Cole objects to the proposed line because she already has the existing CIPCO transmission line crossing her property and does not want an additional line on her property. (written objection; information filed; Tr. 101-10.) She stated in her objection that the existing CIPCO line is approximately 30+ feet from the Interstate 35 fence line and Ames proposes to place its electric line an additional 75 feet into her property. (written objection; information filed; Tr. 101-10.) She stated this would place an extraordinary, undue burden for her current use of the property and loss of future revenue opportunities for property owners who already have a high voltage transmission line on their properties. (written objection; information filed; Tr. 101-10.)

Ms. Cole also stated that the proposed line would not be accessible for maintenance and repairs because the IDOT would not allow Ames to access the line from Interstate 35. (written objection; information filed; Tr. 101-10.) She testified there is no road back to the proposed line and Ames would have to drive over one-half mile of her property east-to-west to access the line and another one-fourth mile north-to-south to install it and to do maintenance and repairs. (written objection; information filed; Tr. 101-10.) She stated this would have a significant adverse

impact on her property now and in the future. (written objection; information filed; Tr. 101-10.)

Ms. Cole testified this is an area with significant growth and opportunity for residential development. (Tr. 103-4.) She testified she wished Ames considered use of renewable energy sources and activities to reduce demand in their long-term plan. (Tr. 104-5, 109-10.) Ms. Cole is unhappy with the amount of compensation offered by Ames. (Tr. 107; information filed.) She testified that although partially overlapping the Ames easement with the CIPCO easement minimizes the burden on her property, she would still have an additional 2.2 to 2.5 acres that would be drastically impacted and could not be used for dwellings or other future uses. (Tr. 106-7.) She also questioned whether it was wise to put two transmission lines right next to each other due to potential windstorms, ice storms, and other unforeseeable events. (Tr. 107-8.)

Ms. Cole suggests running the proposed Ames line along the west side of Interstate 35 for the properties that already have an existing transmission line on the property and supports the alternative routes proposed by Mr. Larson that are primarily on public county road ROW. (written objection; information filed; Tr. 101-10.) At the very least, Ms. Cole stated, Ames should work with CIPCO to share poles for the two lines. (written objection; information filed; Tr. 101-10.) She stated this would significantly reduce the negative impacts to landowners and the additional cost would be negligible if distributed out over the Ames ratepayers over 50+ years. (written objection; information filed; Tr. 101-10.) Ms. Cole stated that she would withdraw her objection if Ames would work with CIPCO on a common structure

approach, and that the impacted property owners are requesting that Ames and CIPCO work together to place the structures to the west of the current CIPCO line nearer to the Interstate 35 ROW and then reduce the width of the CIPCO easement. (information filed.)

Mr. Myers testified to the attempts he made to obtain a voluntary easement from Ms. Cole. (Tr. 331.) He testified Ames has made commitments to relocate poles to lessen interference with farm activities in an attempt to obtain a voluntary easement. (Tr. 331.) Mr. Myers believes Ms. Cole's primary concern had been that she did not want the proposed line on her property, but since Ames committed to make changes to reduce interference, he believes her primary remaining concern is the amount of consideration for the easement. (Tr. 331.)

### **3. Parcel S-7 Murphy Family**

Parcel S-7 is owned by Mr. Jason P. and Ms. Tisha Murphy. (Docket No. E-21744 petition Exhibit E.) The Murphys filed a written objection, additional information, and Mr. Murphy testified at the hearing. (written objection; additional information; Tr. 404-9.) Ames' proposed line would run through a wooded area on Parcel S-7. (written objection; additional information; Tr. 404-9; Ames Exhibit 16.) The Murphys are upset because Ames would have to take out a large number of trees on their property. (written objection; additional information; Tr. 404-9.) The Murphys use the trees to visually block themselves from the interstate and to reduce interstate noise. (Tr. 406.) They are concerned the loss of trees would greatly reduce their property value. (additional information.) The Murphys suggest the line be moved farther east to accommodate future growth in the Huxley area along

Interstate 35 and that it be placed along a road for easier access during repair and maintenance. (written objection; additional information.) Mr. Murphy questioned whether the rough terrain on their property was a good location to build the line. (Tr. 406.) He testified they do not object to another transmission line on their property if both lines are placed on one set of poles and it looks nice. (Tr. 406-8; additional information.)

The CIPCO line and 200-foot wide CIPCO easement were already on the property when the Murphys purchased it. (Tr. 407.) CIPCO clears trees and brush on the existing easement. (Tr. 407.) The Ames easement would partially overlap the CIPCO easement on Parcel S-7. (Tr. 408; Ames Exhibit 16.) Ames has offered to move the location of the two poles on Parcel S-7 to accommodate the Murphys. (Tr. 408-9.)

Mr. Myers testified he made numerous attempts to obtain a voluntary easement from the Murphys without success. (Tr. 331.) He testified Ames has looked at redesigning the proposed line to lessen the impact on the property. (Tr. 331.) Mr. Myers testified the Murphys asked that the proposed line be moved to the west of the existing CIPCO line, which is not possible because there it is not enough room, or that it be relocated off their property. (Tr. 331.) Mr. Myers testified that on Parcel S-7, the proposed Ames line would be close to the east edge of the area previously trimmed by CIPCO for its existing line. (Tr. 334.) He testified Ames would trim trees for 25 feet on either side of the centerline of the proposed line and structures. (Tr. 334.)

**4. Parcel S-8 City of Huxley**

Parcel S-8 is owned by the City of Huxley (Huxley) but is apparently not currently within the Huxley city limits. (Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report; Tr. 372-3.) On Parcel S-8, Ames seeks a 75-foot wide easement along the east edge of the existing CIPCO easement, with the easements partially overlapping. (Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report; Ames Exhibit 16.) The existing CIPCO easement runs along the west edge of the property and next to the Interstate 35 ROW. (Docket No. E-21744 petition Exhibit E; Hockmuth/Nguyen report; Ames Exhibit 16.) The existing CIPCO easement partially overlaps the IDOT/Interstate 35 ROW. (Ames Exhibit 16.) Ames proposes to construct the line and four poles approximately 37.5 feet east of the west line of the Ames easement. (Hockmuth/Nguyen report.) Ames witness Mr. Haselhoff testified Ames has had discussions with CIPCO about double-circuiting the Ames line, but this would reduce the reliability of both lines. (Tr 218-9.) Mr. Haselhoff testified he believed Ames conveyed this information to Huxley. (Tr 219.)

Huxley filed the direct testimony of Mr. John Haldeman, an appearance by its attorney, a prehearing brief, and a post-hearing reply brief, and Mr. Haldeman testified at the hearing. (Tr. 369-88.)

Mr. Haldeman is the City Administrator of Huxley. (Tr. 370-1.) Huxley acquired Parcel S-8 east of Interstate 35 for the purpose of expanding its wastewater treatment facility. (Tr. 371.) When Huxley purchased the property, CIPCO already had an easement for its transmission line across the property. (Tr. 374.) Huxley cannot build its wastewater treatment facility within the CIPCO easement. (Tr. 379.)

Huxley and Ames attempted to reach a resolution concerning Huxley granting an easement to Ames for the proposed transmission line. (Tr. 371, 374-80.) Mr. Haldeman advised representatives of Ames it was his understanding that if Ames would pay the additional cost of the engineering work and agreed compensation was reached, that the agreement would go to the Huxley City Council for approval. (Tr. 379-80, 382.)

However, the Huxley City Council has chosen not to grant an easement to Ames at this time for several reasons. (Tr. 371.) Parcel S-8 already has an easement running through it along the entire west boundary of the property for the existing CIPCO transmission line. (Tr. 371-2.) Huxley believes that all options for double-circuiting the proposed Ames line with the existing CIPCO line on common structures should be explored. (Tr. 372.) Mr. Haldeman testified Huxley asked Ames to explore this matter with CIPCO and provide information why the lines cannot be on common structures. (Tr. 372.) He further testified that Huxley has not received anything definitive from Ames on this issue. (Tr. 372.) Huxley is not willing to grant a voluntary easement to Ames unless the proposed line is placed on common structures with the existing CIPCO line. (Tr. 372.)

Huxley has determined that granting an easement to Ames would require the movement of Huxley's planned wastewater treatment facility further east on the property than was originally contemplated. (Tr. 372.) The movement of the facility has already increased Huxley's engineering costs. (Tr. 372.) Huxley believes there may be additional construction costs due to the movement of the facility. (Tr. 372.) There is a possibility that Huxley would need more ground for its wastewater

treatment plant in the future due to changing regulations, expansion of Interstate 35 that forces the easement to the east, or increased development in the Huxley community. (Tr. 380-1, 383-7; Ames Exhibit 18.) There are terrain issues specific to the site that limit areas for relocation of the treatment plant because the plant is on gravity feed. (Tr. 381-2.) Mr. Haldeman testified that if Huxley granted the easement to Ames, under certain circumstances, it could come to the point that the two utilities would need the same area on the property. (Tr. 383-7.)

Huxley also objects to the placement of the proposed line because it expects that the northeast corner of the Highway 210 Huxley exit (Exit 102) will be a major growth area for the city. (Tr. 372-3.) Mr. Haldeman testified the city's boundaries extend to the east side of Interstate 35. (Tr. 372.) He testified within the past year, Monsanto has completed a large facility on the northwest corner of the Highway 210, Huxley Exit, and Huxley expects its future growth will include properties located east of Interstate 35. (Tr. 372.) Mr. Haldeman testified Huxley has had contact from property owners east of Interstate 35 expressing interest in annexation into the city. (Tr. 372-3.) Huxley believes that placement of an additional transmission line at this location will take away area that would be used for expected growth and will hamper the ability of potential commercial or industrial expansion in this area. (Tr. 373.)

Huxley also argues that Ames does not have the legal ability to condemn the property of another city. (Tr. 373; Brief and Reply Brief.) Huxley argues that statutes delegating powers of eminent domain are to be strictly construed and restricted to their expression and intention. As such, it argues, entities are precluded from condemning land unless there is a clear statutory authority to do so. Huxley argues

that a city's condemnation authority is derived from Iowa Code § 6A.4(6), which grants cities the authority to condemn private property for a public use. It further argues this section limits a city's authority to condemn private property and there is nothing in Iowa Code chapter 6A that alters this restriction. Similarly, Huxley argues, an electrical franchise's authority for condemnation is derived from Iowa Code § 478.15, which refers only to the private owner of lands and to the use of proceedings as provided for the taking of private property for works of internal improvement. Huxley argues that these proceedings are provided for in Iowa Code § 6B.1A, which only allows for the condemnation of private property. Huxley argues that as with Iowa Code chapter 6A, there are no provisions in chapters 6B or 478 that alter this express limit on a franchise holder's ability to condemn. Huxley further argues that the Iowa Supreme Court has repeatedly noted that condemnation under these chapters is limited to private property.

In contrast, Huxley notes, Iowa Code § 306A.5 confers authority on cities and highway authorities having control over highways to condemn private or public property. Huxley argues the Iowa Legislature understood the differences between this chapter and the other eminent domain statutes as the Iowa Supreme Court has held those general provisions do not apply to condemnation for highways. For these reasons, Huxley argues, the power to condemn one city's property is not conferred on another city, and the City of Ames cannot be granted the power of eminent domain to condemn an easement from the City of Huxley.

Huxley agrees with the Consumer Advocate's arguments set forth below. It argues that nothing in Iowa Code chapters 6A, 6B, or 478, or the Iowa Constitution,

gives Ames the authority to exercise eminent domain over public property owned by Huxley or any other municipality. It argues those sections only discuss condemnation of private property, and no Iowa court has recognized a right to take public property. Huxley argues that although other states may have found an implied right for one city to condemn the public property of another city within the general grant of eminent domain, the case cited by Ames also said that the implication must arise only from the language used, only to the extent of the necessity, and the necessity cannot have been created by the condemning entity. Huxley argues the case further narrowed its ruling by holding that such power cannot be found by implication in the Constitution.

Huxley argues that if Ames is allowed to condemn portions of its property intended to be used for a wastewater treatment facility, Ames would be able to destroy part of the City of Huxley devoted to a governmental purpose for its own convenience. Huxley further argued that if Ames were allowed to condemn Huxley's property, this would not end the matter, because Huxley could then re-acquire the land through the same principles because Huxley's wastewater treatment facility for its own residents is a paramount use to Ames building transmission lines for the sale of electricity to other entities. Huxley argued that in Iowa, the power to condemn one city's property is not conferred on another city and therefore, Ames does not have the authority to exercise eminent domain over Huxley.

Ames witnesses Mr. Haselhoff and Mr. Myers testified about the attempts Ames has made to obtain a voluntary easement without success. (Tr. 217-9, 222-3, 331, 339-40, 344-5.) Huxley did not purchase Parcel S-8 until after the informational

meeting had been held, the proposed route was selected, and a significant number of voluntary easements had been obtained. (Tr. 339, 374.) Mr. Myers testified the prior owner of the parcel had agreed to give Ames a voluntary easement. (Tr. 339, 344.) Ames deferred negotiations with the prior owner on this easement once it learned Huxley was negotiating to purchase the property and began negotiating with Huxley once it purchased the property. (Tr. 339-40, 344, 374-5.) Mr. Haselhoff and Mr. Myers testified Huxley's administrator Mr. Haldeman stated there would not be any problems with granting an easement. (Tr. 218, 339-40.) Several meetings between representatives of the two cities were held. (Tr. 217-8, 222-3, 339-40, 344-5, 375-7.) Ames offered to pay additional engineering costs and move its poles within the CIPCO easement. (Tr. 218-9.) However, Mr. Myers testified, after January 20, 2006, there were delays and the easement was not returned. (Tr. 345.) Mr. Myers testified he believes Huxley's main concern is entering into an agreement with Ames prior to Huxley having acquired a needed easement from one or more of its neighbors. (Tr. 331, 368.) He testified little more than one or two trees and brush would be removed on Parcel 8 and this would be limited to 25 feet on either side of the centerline of the proposed line. (Tr. 334.) Mr. Haselhoff has seen a copy of the working site plan for the property and he testified it shows a significant area through which to put the Ames line, particularly considering the existence of the CIPCO easement. (Tr. 218-9; Ames Exhibit 18.)

With respect to the issue of whether one city can be granted eminent domain authority for an easement over property owned by another city, Ames argues that the power of eminent domain does not derive from the Iowa Constitution, but rather is

limited by the constitutional provision that states private property shall not be taken for public use without just compensation. (Ames Prehearing Brief; Ames Post-Hearing Brief.) Ames argues the power of eminent domain is a right inherent in the sovereign, and the Constitution only conditions its use in the taking of private property upon payment of just compensation as assessed by a jury. Ames argues that Iowa Code chapter 6A delegates to cities the power of the sovereign to exercise the right of eminent domain. Ames argues it has the authority under the Iowa Constitution and Iowa Code chapter 6A to initiate eminent domain proceedings in order to build an electrical transmission line to provide electrical power to its citizens. Ames recognizes that for an electric transmission line to be built outside of the Ames city limits, for which a franchise is required under Iowa Code chapter 478, it may not exercise its eminent domain authority outside of the city without approval of the Board. Ames argues that construction of the proposed line is for a public use and the evidence it presented clearly establishes the proposed use is a reasonable and necessary public use. It argues that transmission of electric current for distribution to the public is a public use for which the power of eminent domain may be exercised. It argues the statutory authority allowing the use of eminent domain to cross private lands with the transmission line, subject to approval by the Board, is unquestioned. Therefore, it argues, the only remaining question is whether the City of Ames can acquire by eminent domain an easement through the proposed wastewater plant site owned by the City of Huxley.

Ames argues that at the time of the informational meeting, Parcel S-8 was owned by a private individual and easement negotiations were conducted with him

virtually to completion. Prior to consummation of the easement negotiations, Ames states, the individual sold the property to Huxley in January 2006. Ames argues that representatives of Huxley made representations to Ames that the grant of an easement would not be a problem, provided that certain terms were agreed to in the easement. Ames states that the cities negotiated on virtually all of these terms, numerous drafts of easements were traded back and forth, and agreement on the language was virtually finalized, subject to the approvals of both city councils. Ames argues that Huxley also required that all other ROW be acquired by Ames for the proposed route before the easement for Huxley would be effective and Ames agreed to this. Ames argues that at no time, prior to the filing of written testimony by Huxley City Administrator Mr. Haldeman, was Ames ever advised that Huxley would not permit the crossing of its property by the proposed line, provided that the franchise was approved by the Board and easements had been obtained from all other landowners. Ames notified representatives of Huxley that its property would be listed as an eminent domain parcel for the purposes of this proceeding and Ames' attorney was initially advised that Huxley would not formally participate in these proceedings to object to the proposed routing.

Ames stated it recognized there is an unresolved question under Iowa law as to whether one city may condemn an easement across land owned by another city. Ames argues there is no Iowa authority that such a proceeding can be pursued, but there is also no Iowa authority that states such a proceeding cannot be pursued. Ames argues this issue has been considered in other jurisdictions. Ames argues authority from other jurisdictions implies that when a condemnor seeks to condemn

property already in public use that it may do so if the condemnor's use does not destroy the existing use. Ames argues that Huxley made numerous representations that the proposed line would not interfere with Huxley's intended use as a wastewater treatment plant, and that plans were presented for the wastewater treatment plant that reflected the accommodation of the proposed transmission line.

Ames concedes that Huxley raises valid questions concerning the power of one city to condemn an easement across land owned by another city. Ames stated it does not want its petition to be denied over a question that it expects will be resolved by mutual agreement between the two cities. Ames argues that on the record made in this proceeding, the Board should authorize Ames to proceed with acquisition of an easement across the Huxley parcel, provided that such authority exists under Iowa Code chapter 6A, and that such question would be determined, if necessary, in eminent domain proceedings that may subsequently be brought. Ames argues it should not be the policy of the Board that one city can stop a project initiated in good faith by another city simply by acquiring a piece of property lying in the path of the other city's project. Alternatively, Ames argues, the Board should approve the petitions for the franchises subject to obtaining a voluntary easement from the City of Huxley.

The Consumer Advocate argues that Iowa Code § 478.1 gives the Board the power to grant eminent domain authority only to utilities seeking a franchise outside of cities. (Initial Brief.) The Consumer Advocate argues that this limitation of power to outside city limits strongly implies the power of eminent domain would be similarly constrained. It argues this is in keeping with the state's commitment to home rule,

which allows cities to govern matters within their own jurisdictions unless otherwise inconsistent with other statutory provisions. The Consumer Advocate states that Iowa Code §§ 364.1 and 364.2(4) grant cities the authority to grant utility franchises and to confer the power to condemn private property. The Consumer Advocate argues that to interpret Iowa Code § 478.1 as allowing the Board to also grant eminent domain authority over city property would be a significant intrusion into matters normally addressed by cities and over which cities already have full authority. The Consumer Advocate argues the conflict between Board authority and city authority created by that interpretation should be avoided in the absence of direct legislative intent to achieve such a result. The Consumer Advocate states that although Iowa Code § 364.4(1)(a)(1) gives cities the power of eminent domain "outside the city" for the purpose of operating a city utility, there is no suggestion in the statute that the term "outside the city" was intended to include property inside another city.<sup>3</sup> The Consumer Advocate argues it is hard to imagine a better way to create inter-city conflicts and undermine cooperation and good will than to permit one city to take control of another city's streets and ROW through this means. Therefore, the Consumer Advocate argues, without some clear signal that the Legislature intended to create an exception to municipal home rule authority by this provision, the interpretation that land outside cities includes land within other cities should be avoided.

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<sup>3</sup> The undersigned notes that the evidence in the record shows that although Huxley owns Parcel S-8, the parcel is not yet inside the city limits of Huxley. (Hockmuth/Nguyen Report.)

The Consumer Advocate further argues that the condemnation authority established in Iowa Code chapters 6A and 6B limits the power of condemnation to private property. It states there is a question whether the power of eminent domain as conferred on various entities in Iowa includes the power to condemn publicly owned property in any situation. In this case, Huxley owns the land over which Ames seeks eminent domain authority. The Consumer Advocate argues that Iowa Code chapters 6A and 6B, the primary code chapters that create and govern the power of eminent domain in Iowa, repeatedly refer to the property to be condemned as private property.

The Consumer Advocate states that in Iowa Code chapter 478, there is nothing that explicitly limits the power to private property. However, it argues, in referring to the procedures to be followed by utilities, Iowa Code § 478.15 specifies the procedure to be followed when the utility cannot come to agreement with the private owner of lands, and this reference is a strong indication that the procedure being discussed concerns the condemnation of private property and not public property. The Consumer Advocate argues the commonly understood meaning of the term private property is property that is not owned by the government or condemned for a public use. It argues these common meanings should apply. The Consumer Advocate argues there is a clear distinction between the two types of property and if the Legislature had intended publicly owned lands to be subject to condemnation, that intent could have been easily expressed. The Consumer Advocate argues that ignoring the obvious meaning of such references is not justified. The Consumer Advocate argues that if the City of Huxley owns Parcel S-8, it appears that the Board

lacks the power to grant Ames the power of eminent domain over Huxley's property for this reason as well as its apparent lack of authority under Iowa Code chapter 478.

The Consumer Advocate argues that courts generally have held that property may not be condemned if it has already been dedicated in some fashion to a public use and a subsequent condemnation would interfere with that use. The Consumer Advocate argues that according to Huxley's testimony, Huxley has designated Parcel S-8 for a wastewater treatment facility and the transmission line's proposed location would interfere with that purpose. Therefore, the Consumer Advocate argues, under this doctrine, Ames must prove that its proposed use would not interfere with Huxley's planned use.

#### **IV. Analysis**

The Board is a state agency and its authority is limited to that granted by the Iowa Legislature. There is nothing in Iowa Code chapters 6A, 6B, or 478 that gives any indication the Legislature intended that in an electric franchise proceeding, the Board could grant one city the authority to condemn another city's property, even if that property is outside the corporate limits of the second city. There is nothing in these chapters or in Iowa Code chapter 364 that indicates the Legislature intended to give cities the authority to condemn another city's property for purposes of obtaining a transmission line easement. Rather, the language of these chapters refers only to the taking of private property by eminent domain.

Iowa Code § 478.15, in allowing the Board to grant eminent domain authority to companies that have obtained franchises from the Board, states that: "If agreement cannot be made with the private owner of lands as to damages caused by

the construction of said transmission line, or electric substations, the same proceedings shall be taken as provided for taking private property for works of internal improvement." The procedure referred to and to be followed is set forth in Iowa Code chapter 6B, which refers repeatedly to private property and never to public property. For example, Iowa Code § 6B.1(2) defines an "acquiring agency" as the state of Iowa or any other person given "the right by statute to condemn private property or to otherwise exercise the power of eminent domain." Iowa Code § 6B.1A states that: "the procedure for the condemnation of private property for works of internal improvement," etc., "shall be in accordance with the provisions of this chapter."

Other sections of Iowa Code chapter 478 support the conclusion that condemnation in franchise cases is only available over private property. Iowa Code § 478.9 states that no exclusive right shall be given by franchise or otherwise to place electric wires "along or over or across any public highway or public place or ground."<sup>4</sup> Iowa Code §§ 478.2 and 478.6 require that the statement of individual rights required pursuant to Iowa Code § 6B.2A(1) be read and distributed at informational meetings and served on landowners. According to Iowa Code § 6B.2A(1)(f), the attorney general is to adopt a statement of rights that may be used by rule. The attorney general has done so at 61 IAC chapter 34, and rule 34.1 states

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<sup>4</sup> The undersigned notes that if approval is received from the appropriate highway authority, the Board will grant a franchise for a transmission line running across or along a public highway, although not necessarily within the public road right-of-way.

that: "[j]ust as the law grants certain entities the right to acquire private property, you as the owner of the property have certain rights."

Iowa Code chapter 6A sets forth Iowa's eminent domain law. This chapter grants the state of Iowa and other entities, including cities, the authority to condemn private property for certain public uses, and never states it is granting any entity, including cities, the authority to condemn public property. Iowa Code §§ 6A.1, 6A.2, 6A.4. Iowa Code § 6A.4(6) states that: "The right to take private property for public use is hereby conferred: ... 6. Cities. Upon all cities for public purposes which are reasonable and necessary as an incident to the powers and duties conferred upon cities." The chapter repeatedly refers to the authority to condemn private property and never to public property.

Iowa Code chapter 364, which sets forth the powers and duties of cities, states at § 364.4 that a city may acquire property outside the city, but this power does not include the power to acquire property outside the city by eminent domain, except for the enumerated purposes (including the operation of a city utility) and subject to the provisions of chapters 6A and 6B. Thus, any eminent domain authority under this chapter appears to be limited to private property. Iowa Code chapters 6A and 6B.

In contrast, Iowa Code § 306A.5 provides that: "cities and highway authorities having jurisdiction and control over the highways of the state, as provided by chapter 306, may acquire private or public property rights for controlled-access facilities and service roads, including the rights of access, air, view, and light, by gift, devise, purchase, or condemnation." Clearly, the Legislature knew how to grant cities the

authority to condemn public as well as private property. However, it did not do so in Iowa Code chapters 478, 6A, or 6B, which are the applicable chapters in this case.

Statutes delegating the power of eminent domain are to be strictly construed and restricted to their expression and intention. State v. Johann, 207 N.W.2d 21, 24 (Iowa 1973) (Johann); Iowa State Highway Commission v. Hipp, 259 Iowa 1082, 147 N.W.2d 195, 198 (Iowa 1966) (Hipp). In the Johann decision, the Iowa Supreme Court held that any proceedings to condemn public land under a statute granting certain entities the power to condemn private property would be illegal. Johann, at 24-25. The Court held that the condemnor had no power to condemn public property. Id.

As the Court stated in Hipp, it is not the function of the Board or the undersigned administrative law judge to broaden the statutes. Hipp, at 199. There is no authority under Iowa law to grant the City of Ames eminent domain authority for its proposed transmission line over property owned by the City of Huxley to be used for its wastewater treatment plant. The evidence presented by Ames regarding representations made by representatives of Huxley that led Ames to believe it would be granted a voluntary easement clearly show that Ames was frustrated by its negotiations with Huxley. However, so long as Huxley chooses not to grant a voluntary easement over its property, Iowa law does not allow Ames the ability to condemn it. Iowa Code chapters 6A, 6B, 364, 478; Johann; Hipp.

Ames requests that even if it is decided that Ames does not have the power to condemn Huxley's property, the Board authorize it to proceed with acquisition of an easement across Huxley's property, if such authority exists under chapter 6A, and that the question of such authority be determined in the eminent domain proceedings. Alternatively, Ames requests the Board to approve the petitions for franchises, subject to Ames obtaining a voluntary easement from Huxley. The undersigned declines to do so because the alternatives would not comply with the Iowa franchising and eminent domain process and the Board is the correct agency to interpret its own statutes.

In addition to the lack of authority for Ames to obtain eminent domain authority over land owned by the City of Huxley, Ames has failed to satisfy other statutory requirements regarding line location and route.

The Board has the authority to impose modifications of the location and route of the proposed line that are just and proper. Iowa Code § 478.4. Iowa Code § 478.18 and Board rule 199 IAC 11.1(7) require transmission lines to be constructed near and parallel to roads and railroads and along division lines of land wherever practical and reasonable. The same section and rule require the utility to construct the line so as not to interfere with the use of the public of the highways or streams of the state and so as not to unnecessarily interfere with the use of any lands by the occupant. Board rule 11.1(7) states:

*Route selection.* The planning for a route that is the subject of a petition for franchise must begin with routes that are near and parallel to roads, railroad rights-of-way, or division lines of land, according to the government survey, consistent with the provisions of Iowa Code section 478.18(2). When a route near and parallel to these features

has points where electric line construction is not practical and reasonable, deviations may be proposed at those points, when accompanied by a proper evidentiary showing, generally of engineering reasons, that the initial route or routes examined did not meet the practical and reasonable standard. Although deviations based on landowner preference or minimizing interference with land use may be permissible, the petitioner must be able to demonstrate that route planning began with a route or routes near and parallel to roads, railroad rights-of-way, or division lines of land.

The Iowa Supreme Court has interpreted "division lines of land" to mean section lines, quarter section lines, and quarter-quarter-section lines. Hanson v. Iowa State Commerce Comm'n, 227 N.W.2d 157 (Iowa 1975).

In addition, no transmission line outside of cities "shall be constructed, except by agreement, within 100 feet of any dwelling house or other building, except where such line crosses or passes along a public highway or is located alongside or parallel with the right-of-way of any railway company." 199 IAC 11.1(7); Iowa Code § 478.20.

The requirement in Iowa Code § 478.18 and rule 11.1(7) means that Ames must start its planning using roads, railroads, or land division routes. Iowa Code § 478.18; 199 IAC 11.1(7); Hanson, at 163. The route must follow a road, railroad, or land division route wherever practical and reasonable. Id. If such routes contain points of impracticality or unreasonableness, generally for engineering reasons, Ames may deviate from the route at those points. Id. Although deviations based on landowner preference or to minimize interference with land use may be permissible, Ames must be able to demonstrate that route planning began with a route or routes near and parallel to roads, railroad ROW, or division lines of land. Id.

The Iowa Supreme Court struck down a proposed diagonal route that the Court called "a wholesale departure from railroad and land division routes" when the utility had not begun its planning along division lines of land and railroad routes. Id. The Court noted that diagonal routes running directly from the origin to the termination of the line would be the cheapest, simplest, and most convenient location, but stated that the Legislature chose the system of requiring lines to follow division lines of land wherever practical and reasonable, and utilities must follow that requirement. Hanson, at 162.

The Court approved a route that deviated from division lines of land when the planning began with division line locations and deviations were based on engineering considerations of practicality and reasonableness in Anstey v. Iowa State Commerce Comm'n, 292 N.W.2d 380 (Iowa 1980) (Anstey). The Court also upheld the Board's conclusion that a new transmission line should follow an existing ROW and that new construction along division lines of land was not practical or reasonable under the circumstances in Gorsche Family Partnership v. Midwest Power, et al, 529 N.W.2d 291 (Iowa 1995). However, the Gorsche decision did not overrule or change the Hanson and Anstey decisions and does not authorize utilities to build transmission lines on new diagonal routes that neither follow existing routes nor division lines of land, roads, or railroads as required by Iowa Code § 478.18.

The Board has approved construction of a new transmission line that followed an existing route in cases in addition to Gorsche. In re: MidAmerican Energy Company, Docket Nos. E-21752, E-21753, & E-21754, "Proposed Decision and Order Granting Franchises" (July 26, 2006) and "Order Affirming Proposed Decision

and Order Granting Franchises" (September 12, 2006) (MidAmerican I); In re MidAmerican Energy Company, Docket Nos. E-21621, E-21622, E-21625, E-21645, & E-21646, "Proposed Decision and Order Granting Franchises" (December 8, 2004) (became the final decision of the Board because the proposed decision was not appealed; franchises were issued on December 29, 2004) (MidAmerican II). In each of these cases, the utility owned the existing transmission line and proposed to construct the new line on common structures with the existing line.

In Ames' routing study, there is no reference to the requirement that Ames had to begin its route planning using roads, railroads, and division lines of land pursuant to Iowa Code § 478.18(2) and 199 IAC 11.1(7). (Ames Exhibit 3.) There is no indication in the study that Ames or Mr. Rodick were aware of this requirement or that they followed this requirement. (Ames Exhibit 3.) Similarly, in his prepared testimony, the only Ames witness involved in the early planning of the route, Mr. Borland, did not refer to the requirement and there is no indication in his prepared testimony that Ames or Mr. Rodick began route planning according to the requirement. (Tr. 116-39.) There is no discussion in the study or Mr. Borland's prepared testimony of any engineering judgment that routes following roads, railroads, or division lines of land contained points that were unreasonable or impractical and therefore Ames considered the use of existing routes. (Ames Exhibit 3; Tr. 116-39.) Furthermore, there is no discussion that existing routes were considered so the route would not unnecessarily interfere with the use of land by the owners and occupants. (Tr. 116-39; Ames Exhibit 3.)

From Mr. Borland's testimony and the routing study, it does not appear that Mr. Borland, Ames, or Ames' consultant, Mr. Rodick, began planning the route following roads, railroads, and division lines of land. (Tr. 116-99; Ames Exhibit 3.) Rather, it appears that they considered the existing CIPCO transmission corridor (but not using common structures with the existing transmission line) to be one of the preferred routes to be used when beginning the planning of the proposed route. (Tr. 116-99; Ames Exhibit 3.) Although Ames argues to the contrary in its briefs, Ames did not begin its planning for the route according to the requirements of Iowa Code § 478.18 and 199 IAC 11.1(7).

Instead, Ames began its planning using existing routes, roads, and railroad ROW. However, Ames did not look at existing routes within the meaning of the Gorsche, MidAmerican I, and MidAmerican II cases. In each of these cases, the planning utility owned the existing transmission line and proposed to place the new line on the same structures as the existing line. The key reason for doing so as discussed in each of these cases was to minimize interference with land use by the occupants, which is one of the criteria in § 478.18 and rule 11.1(7).

For example, the Court stated in Gorsche, at page 293:

The board concluded that the use of the existing route would minimize the interference with the use of land and reduce disruption to landowners. Construction of the new line and revamping of the old line simultaneously would reduce the need for additional land acquisition by using existing transmission line easements. It further found that major tree and brush clearing would not be required (an environmental concern) and that the use of existing and previous field entrances will minimize disruption to the land. In addition, substitution of single-pole structures will decrease the amount of land needed for each structure and the total number of structures required. Longer spans and fewer support structures will reduce

construction and maintenance impacts. The board concluded that "[t]he use of the existing 161 kV route is ... the most reasonable and practical from the points of land usage, environmental impact, and economics."

Ames argues that its proposed route meets the requirements of the cases allowing utilities to follow existing routes, and the Consumer Advocate argues that it does not. (Ames Prehearing and Post-Hearing Briefs; Consumer Advocate Initial and Post-Hearing Briefs.) The arguments of the Consumer Advocate are more consistent with the facts of this and prior cases, and are therefore more persuasive.

In this case, Ames treated the existing CIPCO line as if it were a road and proposes to place its new line next to the CIPCO line. It does not propose to use common structures. Its proposal would significantly increase interference with land use by these landowners who would now have two transmission lines running across their properties, with the Ames line significantly into the middle of the properties.

Placement of the Ames line so there would be two lines, two sets of poles, and additional easement width would be an extraordinary burden on these landowners. The statute and rules require that lines be placed so as to minimize interference with the use of property by the landowners. Ames' proposed placement of its line next to the existing CIPCO line and an average of 80 feet to the east of it is not use of an existing route within the meaning of Gorsche, MidAmerican I, and MidAmerican II. It does not comply with the statutory requirements. It is unreasonable.

Ames has not demonstrated that the route it selected is practical and reasonable or that it is in compliance with the requirements of Iowa law. (petitions for franchises; Hockmuth/Nguyen report; written objections and additional information filed; Ames Exhibits 1, 3, 12, 13, 14, 16, 17, 18; Ames materials filed June 13, 2007; Albaugh post-hearing submissions and response; Albaugh Exhibits 1-4; Larson Exhibits LL1, LL2, LL-300 through LL-303; Ploegstra filing; Ames' response; Tr. 101-10, 112-4, 116-39, 143, 145-6, 148-50, 180-99, 205-9, 214-44, 269, 280-2, 308, 328-45, 368-429, 442-3.) Iowa Code § 478.18; 199 IAC 11.1(7); Hanson, Anstey, Gorsche, MidAmerican I; MidAmerican II. Ames does not have the authority under Iowa law to condemn the property of another city for an easement for its proposed transmission line. Iowa Code chapters 6A, 6B, 364, 478; Johann, Hipp. For these reasons, Ames' petitions for the two franchises it requests should be denied.

The evidence does not show that there is a clearly preferable alternative route to the one proposed by Ames. In addition, although Ames' evidence does not support a conclusion that double-circuiting its proposed line with the CIPCO line would violate reliability standards, the evidence does not clearly demonstrate that Ames should double-circuit its proposed line with the existing CIPCO line or triple-circuit it with the existing MEC line in Polk County along NE 29<sup>th</sup> Street. Therefore, this decision does not mandate that Ames follow any particular route or take any particular action with respect to multiple-circuiting of a proposed line. Rather, if Ames chooses to file a petition, it will be up to Ames to re-evaluate route alternatives according to applicable requirements and present a new proposed route that meets the requirements.

If Ames does so, although Interstate 35 presents access challenges greater than a typical road ROW, Interstate 35 is a road within the meaning of Iowa Code § 478.18, and a route evaluation that includes consideration of following Interstate 35 could be in conformance with § 478.18. However, use of Interstate 35 as a road option within the meaning of the statute would require placement of structures and line near the edge of the Interstate 35 ROW to minimize interference of use of property by the landowners. Placement of poles significantly to the east of the Interstate 35 ROW as Ames proposed in the segment to the east of the CIPCO line is not following Interstate 35 as a road within the meaning of § 478.18.

In its post-hearing brief, the Consumer Advocate argued that the Board should consider conditioning approval of the petitions on altering the route to reduce the impact of the 4.5-mile overlap with the CIPCO transmission line. The Consumer Advocate argued that in Gorsche, double-pole structures carrying one line were replaced with single-pole structures carrying two lines, directly contrary to Ames' proposal in this case, which is to retain the existing double-pole CIPCO line and add more structures to support an additional line. The Consumer Advocate argues it is doubtful the Board or the Court would have viewed a route near an existing line as favorably as two lines combined on the same structures. The Consumer Advocate argues that Gorsche would require combining the CIPCO and Ames line on single pole structures to minimize impact on the land.

The Consumer Advocate argues the following key factors bear consideration in this case: the CIPCO line was constructed in the 1940s, presumably along land division lines; it was constructed on double-pole structures on a 200-foot wide

easement; and due to the construction of Interstate 35 [after the CIPCO line was already built], the CIPCO line for much of the 4.5 mile stretch is out in agricultural fields some distance from the fence line bordering Interstate 35. This means that the CIPCO line is less accessible because the utility cannot reach it by entering private property and maintaining the line along the property line.

The Consumer Advocate argues that the intent of Iowa Code § 478.18(2) is to minimize interference with landowners and it attempts to achieve that goal by favoring land division lines which generally correspond to property boundary lines, roads, and railroads. However, due to the construction of Interstate 35 after the installation of the CIPCO line, that section of the route does not closely track property boundaries, roads, or railroads. The Consumer Advocate argues there is a degree of access from perpendicular roads, but beyond that point, access must be obtained by traversing the property of landowners along the 4.5-mile section. Therefore, the Consumer Advocate argues, to add a second line through the same properties separate from the CIPCO line seems questionable in light of the intent of Iowa Code § 478.18(2).

The Consumer Advocate argues that another consideration is the fact that the corridor lies along a major north-south interstate highway in reasonably close proximity to rapidly expanding urban areas and related commercial developments.

Therefore, the Consumer Advocate argues, since the CIPCO line itself occupies more space than needed and is not optimally positioned, it would make a less-than-ideal situation worse to build another line along side it. The Consumer

Advocate also argues that necessary repair work to the lines could involve a significant invasion of the landowner's interests.

The Consumer Advocate argues that these factors suggest this may be the perfect opportunity for CIPCO to rebuild at least that portion of its line, combine it on the same structures with the Ames proposed line, and reposition it to better comply with Iowa Code § 478.18(2). The Consumer Advocate argues this approach would minimize the burden on the properties and favorably position the area for additional economic development opportunities. The Consumer Advocate argues that permitting construction of another line farther out in the fields while leaving the CIPCO line in place appears to be technically inappropriate and a makeshift solution, missing an opportunity that may not arise again in the foreseeable future. The Consumer Advocate argues that another and not insignificant advantage of combining the two lines is that it may resolve the situation with the City of Huxley and obviate the necessity of testing the limits of municipal condemnation authority. The Consumer Advocate also argues that if CIPCO and Ames move the new line closer to the Interstate 35 fence line, it may be possible to keep the existing CIPCO line active during construction. In any event, argues the Consumer Advocate, considering the permanent nature of the facility and long-term effects it may have, construction challenges should not deter an otherwise appropriate resolution of this issue.

If Ames chooses to re-evaluate route options, if it evaluates an Interstate 35 option at the segment along the CIPCO line, Ames must explore and evaluate the possibility of rebuilding a double-circuited line with CIPCO and moving the line closer

to the Interstate 35 ROW with a narrower easement as suggested by the Consumer Advocate. If Ames chooses to file a petition, it must present evidence of this exploration and evaluation in its petition.

### **FINDINGS OF FACT**

1. On April 6, 2005, Ames held the informational meeting for Story County in Huxley, Iowa, in Docket No. E-21744, as required by Iowa Code § 478.2. (Docket No E-21744 petition for franchise; Hockmuth/Nguyen report; Docket No. E-21744 file; Tr. 327.) On April 6, 2005, Ames held the informational meeting for Polk County in Ankeny, Iowa, in Docket No. E-21743, as required by Iowa Code § 478.2. (Docket No. E-21743 petition for franchise; Hockmuth/Nguyen report; Docket No. E-21743 file; Tr. 327.)

2. Ames has agreed to pay all costs and expenses of this franchise proceeding pursuant to Iowa Code § 478.4. (petitions for franchises).

3. The evidence presented in this case shows that the proposed transmission line is needed for the reasons given and is necessary to serve a public use. (petitions for franchises; Tr. 26, 29, 37-42, 49-62, 86, 96-9, 117-23, 140-1, 191, 267-72, 283-93, 311, 316-20, 430-45; Ames Exhibits 1, 2, 4, 5, 6, 7, 8, 15, 19, 20; Hockmuth/Nguyen report.) For the specific scenarios Ames analyzed, the evidence presented by Ames shows that double-circuiting the proposed line for the 4.5-mile segment at issue in this case would significantly reduce the amount of incremental load-serving capability achieved with the proposed 161 kV transmission line. (Ames Exhibits 4 (Section 9), 19, 20; Tr. 311, 430-45.) However, the evidence shows that

even if double-circuited, the addition of the proposed line would still significantly increase Ames' import capability and the reliability of the area transmission system. (petitions for franchises; Tr. 26, 29, 37-42, 49-62, 86, 96-9, 117-23, 140-1, 191, 267-72, 283-93, 311, 316-20, 430-45; Ames Exhibits 1, 2, 4, 5, 6, 7, 8, 15, 19, 20; Hockmuth/Nguyen report.) The evidence presented does not support a conclusion that construction of the proposed line on common structures with the CIPCO line would violate applicable reliability standards. (Tr. 26, 29, 190-1, 208, 235-6, 240-1; Ames Exhibit 4, Section 9.)

4. In general, the evidence presented in this case shows that the proposed 161 kV transmission line represents a reasonable relationship to an overall plan of transmitting electricity in the public interest. Iowa Code § 478.3(2). (petitions for franchises; Tr. 38, 41-5, 52-3, 267-8; Hockmuth/Nguyen report; Ames Exhibits 1 through 8, 15.) However, the evidence presented in this case also shows that Ames should have analyzed the double-circuit option with the existing CIPCO line and the triple-circuit option with the MEC transmission line earlier and more comprehensively as part of its comprehensive electric utility planning and consideration of the existing electric utility system and parallel routes. (Tr. 38, 53, 97-9, 269, 433-40; petitions for franchises; Ames Exhibits 1, 3, and 4.)

5. The evidence presented in this case shows that the proposed transmission line will conform to the construction and safety requirements in Iowa Code §§ 478.19 and 478.20 and 199 IAC chapters 11 and 25. (petitions for franchises; Hockmuth/Nguyen report; Tr. 205-6, 209-14, 273; Ames Exhibits 9, 10, 11, 12.) No additional terms, conditions, or restrictions regarding construction and safety requirements need to be imposed pursuant to Iowa Code § 478.4.

6. Ames has presented sufficient proof that the electric and magnetic field levels associated with the proposed line will not adversely affect public health and safety. (Tr. 245-62.) Based on the record, no additional terms, conditions, or restrictions related to electric and magnetic field levels need to be imposed pursuant to Iowa Code § 478.4.

7. Ames has obtained all other necessary permits and approvals required to construct the proposed line from the appropriate governing bodies. (Tr. 215.)

8. As discussed in the body of this decision, Ames has not proven that the route it selected is reasonable and practical or that it is in compliance with the requirements of Iowa law. (petitions for franchises; Hockmuth/Nguyen report; written objections and additional information filed; Ames Exhibits 1, 3, 12, 13, 14, 16, 17, 18; Ames materials filed June 13, 2007; Albaugh post-hearing submissions and response; Albaugh Exhibits 1-4; Larson Exhibits LL1, LL2, LL-300 through LL-303; Ploegstra filing; Ames' response; Tr. 101-10, 112-4, 116-39, 143, 145-6, 148-50, 180-99, 205-9, 214-44, 269, 280-2, 308, 328-45, 368-429, 442-3.) Iowa Code § 478.18; 199 IAC 11.1(7); Hanson, Anstey, Gorsche, MidAmerican I; MidAmerican II. Ames does not have the authority under Iowa law to condemn the property of another city

for an easement for its proposed transmission line. Iowa Code chapters 6A, 6B, 364, 478; Johann, Hipp. For these reasons, Ames' proposed route is not approved and its petitions for franchises should be denied.

9. As discussed in the body of this decision, the evidence does not show there is a clearly preferable alternative route to the one proposed by Ames. In addition, although Ames' evidence does not support a conclusion that double-circuiting its proposed line with the CIPCO line would violate reliability standards, the evidence does not clearly demonstrate that Ames should double-circuit its proposed line with the existing CIPCO line or triple-circuit it with the existing MEC line in Polk County along NE 29<sup>th</sup> Street. Therefore, this decision does not mandate that Ames follow any particular route or take any particular action with respect to multiple-circuiting of a proposed line. Rather, it will be up to Ames to decide whether it wants to re-evaluate route alternatives according to applicable requirements and file a petition with a new proposed route that meets the requirements as discussed in the body of this decision.

### **CONCLUSIONS OF LAW**

1. The Board has the authority to grant franchises to construct, maintain, and operate transmission lines capable of operating at an electric voltage of 69 kV or more along, over, or across any public highway or grounds outside of cities for the transmission, distribution, or sale of electric current. Iowa Code § 478.1.

2. The Board may grant franchises in whole or in part upon such terms, conditions, and restrictions, and with such modifications as to line location and route, as may seem to it just and proper. Iowa Code § 478.4.

3. To obtain a franchise, the petitioner must show 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. Iowa Code § 478.4.

4. As discussed in the body of this decision, Ames has not met the requirements of Iowa Code chapter 478 and 199 IAC 11, and of the Hanson, Anstey, Gorsche, MidAmerican I, and MidAmerican II cases, with respect to planning and routing of the proposed transmission line.

5. As discussed in the body of this decision, Ames does not have the authority under Iowa law to condemn the property of another city for an easement for its proposed transmission line. Iowa Code chapters 6A, 6B, 364, 478; Johann, Hipp.

6. As discussed in the body of this decision, the requested franchises should not be issued to Ames for the proposed transmission line described in the petitions. Iowa Code Chapters 6A, 6B, 364, 478; 199 IAC 11; Hanson, Anstey, Gorsche, MidAmerican I, MidAmerican II, Johann, Hipp.

**IT IS THEREFORE ORDERED:**

1. Official notice is taken of the report dated February 2, and updated on May 17, 2007, filed by Mr. Dennis Hockmuth and Mr. Bao Nguyen.

2. Motions and objections not previously granted or sustained are overruled. Arguments in written filings or made orally at the hearing that are not addressed specifically in this proposed decision and order are rejected, either as not

supported by the evidence or as not being of sufficient persuasiveness to warrant comment.

3. The petitions for franchises filed by Ames are hereby denied.

4. The Board retains jurisdiction of the subject matter in this docket pursuant to Iowa Code chapter 478.

5. This proposed decision and order will become the final order of the Board unless the Board moves to review it or a party files an appeal to the Board within 15 days of its issuance. 199 IAC 7.8(2).

6. A copy of this proposed decision and order will be served by ordinary mail upon Ames, Huxley, and the objectors and owners of eminent domain parcels on the Board's service list, and will be delivered to the Consumer Advocate.

**UTILITIES BOARD**

/s/ Amy L. Christensen  
Amy L. Christensen  
Administrative Law Judge

ATTEST:

/s/ Judi K. Cooper  
Executive Secretary

Dated at Des Moines, Iowa, this 12<sup>th</sup> day of September, 2007.