ITCM Minnesota - Iowa
345 kV Transmission Line Project

Final Environmental Impact Statement
Appendix M Comments and Responses - Volume 3
Written Citizen Comments O-Z

Minnesota Department of Commerce

July 2014

PUC Docket Nos.
ET6675/CN-12-1053 and ET6675/TL-12-1337

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Appendix M - Comments and Responses - Written Citizen Comments O through Z

Comments in this appendix have been arranged in four volumes. Volume 1 includes written comments from agencies, local units of government and the applicant. Volumes 2 and 3 include written comments from citizens arranged in alphabetical order. Volume 2 includes citizen comments from A through N. Volume 3 includes citizen comments from O through Z. Volume 4 includes oral comments arranged chronologically as the public information meetings occurred – April 22, 23 and 24, 2014, in the cities of Fairmont, Jackson and Blue Earth, respectively.

A separate table of contents has been prepared to aid readers in finding particular comments and responses in this appendix. The table of contents includes the commenter's name, ID number, the page on which the comment begins and the page on which EERA staff's response begins.

FEIS ID #236

MINNESOTA DEPARTMENT OF COMMERCE

Energy Facility Permitting
85 7th Place East, Suite 500
St. Paul, Minnesota 55101-2198
ph 651.539.1885 | fax 651.539.1549
http://mn.gov/commerce/energyfacilities

PUBLIC COMMENT FORM
Draft Environmental Impact Statement
Minnesota to Iowa 345 kV Transmission Line Project
Docket Nos. ET6675/TL-12-1337 and ET6675/CN-12-1053

Name: Brian B. Olson Email: brian_olson@martin.k12.mn.us
Street Address: 204 S. Manyaska St.
City: Sherburn State: MN ZIP: 56171

Please share your comments on the draft environmental impact statement (EIS) that has been prepared for the Minnesota to Iowa 345 kV transmission line project. What information or analysis is missing or incomplete? What information or analysis needs to be clarified? What edits are needed to make the document complete and accurate? **Comments must be received by Friday, May 9, 2014.**

Dear Mr. Kirsch I don't want this to be done to our nice, friendly, little community. My future is in Astronomy + Architecture. I am originally from Fairmont. I have two Grandpa's, 86 + 87. I won't have my family grow up in a place like this if this happens. I will relocate to Fairmont or Mankato. This is another example of unfriendliness to our environment.

Signature: Brian Olson Date: 5-8-14

Please submit this form at today's meeting or mail it to the address provided on the back. You may use additional sheets, as necessary. Comments can also be e-mailed to the Department of Commerce Environmental Review Manager, Ray Kirsch, at: raymond.kirsch@state.mn.us or submitted online at: http://mn.gov/commerce/energyfacilities.

FEIS ID #236

236.

Your objection to routing near Sherburn is noted and included in the record for this EIS. Potential impacts to human settlements are discussed along with potential mitigation measures in Section 5.0 of the EIS.

FEIS ID #237

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PUBLIC COMMENT FORM
Draft Environmental Impact Statement
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Docket Nos. ET6675/TL-12-1337 and ET6675/CN-12-1053

Name: Cora Olson Email: olsoncora16@yahoo.com
Street Address: 16 W. 5th St.
City: Sherburn State: MN ZIP: 56176

Please share your comments on the draft environmental impact statement (EIS) that has been prepared for the Minnesota to Iowa 345 kV transmission line project. What information or analysis is missing or incomplete? What information or analysis needs to be clarified? What edits are needed to make the document complete and accurate? **Comments must be received by Friday, May 9, 2014.**

Mr. Kirsch, so we may be a small town and not be "much" but please dont say yes to this powerline. I live in Trimont but in all these little towns around here, we have roots. All of us see eachother and laugh and make teachers mad at us. In this school. In sherburn. How would you feel if all of a sudden you were told, OK, you, you are nothing. Either stay and face whatever may come or pack up and leave your home, your friends, everything. Living in a small town gives us a sense of community, we are one big awkward family. So please say no and let us stay here in peace. Sincerely Cora Olson.

Signature: Cora Olson Date: 5-7-14

Please submit this form at today's meeting or mail it to the address provided on the back. You may use additional sheets, as necessary. Comments can also be e-mailed to the Department of Commerce Environmental Review Manager, Ray Kirsch, at: raymond.kirsch@state.mn.us or submitted online at: http://mn.gov/commerce/energyfacilities.

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Your objection to routing near Sherburn is noted and included in the record for this EIS. Potential impacts to human settlements are discussed along with potential mitigation measures in Section 5.0 of the EIS.

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PUBLIC COMMENT FORM
Draft Environmental Impact Statement
Minnesota to Iowa 345 kV Transmission Line Project
Docket Nos. ET6675/TL-12-1337 and ET6675/CN-12-1053

Name: Martha Olson Email: Martha_olson@martin.k12.mn.us
Street Address: 16 West 5th Street
City: Sherburn State: Minnesota ZIP: 56171

Please share your comments on the draft environmental impact statement (EIS) that has been prepared for the Minnesota to Iowa 345 kV transmission line project. What information or analysis is missing or incomplete? What information or analysis needs to be clarified? What edits are needed to make the document complete and accurate? **Comments must be received by Friday, May 9, 2014.**

Do you know what your doing to our Community? Did you realize your crushing kids dreams? If you put up these power lines your not only affecting the town of Sherburn but you are hurting Welcome, Trimont, Ceylon, Dunell, and other townships all around. We invest our time, money, and heart into this town. Generation after generation have lived and graduated in this town. We have a beautiful school where kids not only from Sherburn but from the surrounding towns and kids like foreign exchange students attend. They come all the way from Korea, Austria, and Spain. They have dreams and goals and the people in this community have high hopes for us students but if you put the power line up all spirits will be crushed.

Signature: Martha Olson Date: 5/7/14

Please submit this form at today's meeting or mail it to the address provided on the back. You may use additional sheets, as necessary. Comments can also be e-mailed to the Department of Commerce Environmental Review Manager, Ray Kirsch, at: raymond.kirsch@state.mn.us or submitted online at: http://mn.gov/commerce/energyfacilities.

FEIS ID #238

238.

Your objection to routing near Sherburn is noted and included in the record for this EIS. Potential impacts to human settlements are discussed along with potential mitigation measures in Section 5.0 of the EIS.

FEIS ID #239

Legalectric, Inc.
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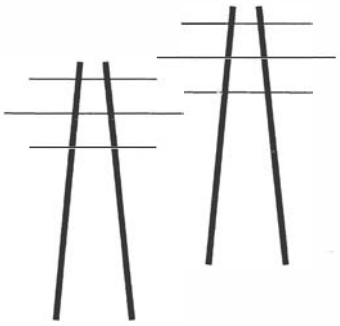

May 9, 2014

Ray Kirsch, Project Manager
Dept. of Commerce
85 – 7th Place East, Suite 500
St. Paul, MN 55101

eFiled and emailed to raymond.kirsch@state.mn.us

RE: CETF and NoCapX 2020 DEIS Comments
ITC Midwest MN/IA 345 kV Transmission Project
PUC Dockets 12-1053 & 12-1337

Dear Mr. Kirsch:

These comments are submitted on behalf of Citizens Energy Task Force and No CapX2020. Thank you for the opportunity to comment on the DEIS for the ITC Midwest MN/IA 345 kV transmission project.

PROCEDURAL COMMENTS

239-1

Environmental review is to "accompany" a project permitting process. We ask that the timing of the release of the FEIS be coordinated with the hearing record, and the hearing record should be left open for at least a week after the release of the FEIS for comments on the adequacy of the FEIS, specifically that the Dept. of Commerce request this extension.

The Minnesota Environmental Policy Act (MEPA) specifies that the "final detailed environmental impact statement… shall accompany the proposal through an administrative review process."

> *Prior to the preparation of a final environmental impact statement, the governmental unit responsible for the statement shall consult with and request the comments of every governmental office which has jurisdiction by law or special expertise with respect to any environmental effect involved. Copies of the drafts of such statements and the comments and views of the appropriate offices shall be made available to the public.* ***The final detailed environmental impact statement and the comments received thereon shall precede final decisions on the proposed***

1

FEIS ID #239

239-1.

Whether the hearing record is left open for at least a week after release of the final EIS for this project is a decision to be made by the administrative law judge assigned to the matter. It is a not a matter that can be addressed by this EIS and is outside of the scope of the EIS (Appendix A).

FEIS ID #239

> ***action and shall accompany the proposal through an administrative review process.***

Minn. Stat. §116D.04, Subd. 6a.Comments (emphasis added).

This MEPA mandated accompaniment cannot occur when the Environmental Impact Statement is released after the public and evidentiary hearings have been completed and after public comment closes.

DRAFT ENVIRONMENTAL IMPACT STATEMENT COMMENTS

GENERAL COMMENTS

- CETF and No CapX2020 take no position regarding routing alternatives – this project is not needed and should not be granted a routing permit.

239-2

- The EIS should have explanation of relative weights of criteria, such as characteristics where a route would be prohibited, where avoidance should be used, or where mitigation would in fact mitigate the impacts, and where some mitigation is possible but it does not offset the impacts.

239-3

- Cumulative impacts, and impacts of phased and connected actions must be considered. This project, as proposed, is part of a 17 project MVP Portfolio, two of which are in Minnesota, both in southern Minnesota. All the projects, in concert, will help export power from one part of the Midwest to another, and these impacts must be considered.

239-4

- The EIS should include an explanation of the "Buy the Farm" option, with a citation to Minn. Stat. §216E.12, Subd. 4 generally in the introduction. A bullet point reference to Buy the Farm should also be inserted in multiple areas under the "Mitigation" section, because BTF is a primary mitigation technique in areas where the line interferes with human settlement, commercial, and agricultural uses. The paragraph on p. 25 is not sufficient.

239-5

- Everywhere the DEIS uses the term "need" it should be changed to "want" or "desire."

239-6

- Define the need: The DEIS makes many statements about the "need" of this project, but it should specifically identify the "need" for this project. The best solution cannot be determined in the absence of a well-defined need. A proper utility application will include required capacity (what is the magnitude of the need?), location (where is the need?), timing (when is additional capacity required?) and the nature of the need (does it appear under normal system operations or in response to certain contingencies?). The need should be substantiated by sales agreements, demand, load flow results and load growth forecast studies. The EIS analysis should incorporate and vet the need description provided by the Applicants.

2

FEIS ID #239

239-2.

Section 7 of the EIS is a discussion of the relative merits of routing options analyzed in the EIS. It compares the routing options to the routing factors of Minnesota Rule 7850.4100 and includes discussion of how routing options might avoid or mitigate specific impacts of the project.

239-3.

Though there are 17 multi-value projects (MVP) in the MISO portfolio, the analysis in this EIS, per the scoping decision, is limited to analysis of ITCM's proposed project. Analysis of the human and environmental impacts of planned MVP projects in other states is beyond the scope of this EIS (Appendix A), and the cost of such an analysis, if it could be performed, would outweigh any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

Department of Commerce, Division of Energy Resources (DER) staff has conducted economic analysis of a select number of MVP transmission line scenarios: MVP3, MVP3 + MVP4, and MVP3 + MVP4 + MVP5. This analysis is included in the direct testimony of Dr. Steve Rakow, Tables 2 through 11, in the CN docket (CN-12-1053), March 28, 2014, eDockets Number 20143-97730-06.

239-4.

Section 3.8.1 of the EIS discusses Minnesota Statute 216E.12, subdivision, which is sometimes referred to as the "Buy the Farm" statute. This is an appropriate location in the document for this discussion. The inclusion of this statute as a possible mitigation measure for potential impacts of the project is discussed in subsequent, specific comments regarding these impacts. See responses to comments 239-80, 239-81, 239-82 and 239-90.

239-5.

The term "need" is appropriately used in the EIS. All applicants who apply to the Commission for a certificate of need, by virtue of having applied, indicate that they believe there is a need for their project, consistent with applicable Minnesota statutes and rules. Prior to the Commission determining that there is a need for a project, the applicant's believe that there is a need is just that – a belief. To call this belief a "want" or "desire" would be more confusing than helpful. It is clearly understand that though an applicant applies for a certificate of need, this need is not proven to be truly a need for the State of Minnesota until the Commission determines that it is, and issues a certificate of need for a specific project.

239-6.

The need for the project is stated in Section 4.1 of the EIS. As indicated in this section, for purposes of analysis, the EIS assumes the need as stated by ITCM in its certificate of need application. In short, ITCM indicates that its project is needed to enhance regional electrical reliability, to increase transmission capacity to support additional generation and to reduce congestion on the electrical grid.

FEIS ID #239

239-7

- Identify potential solutions for the specific need: The best solution will account for the unique characteristics of the area with the electrical need. Broadly, the affected area should be well-characterized in terms of its physical and electrical characteristics:
    - *Physical Description* -- The applicant should present electrical service territory along with political/topographical maps. These maps should identify existing and planned utility facilities and load centers as well as critical outage facilities if the need is driven by contingencies. Existing land uses, endangered species, critical or protected habitats should also be clearly identified.
    - *Electrical Description* -- The applicant should demonstrate that it fully understands the nature and location of the factors driving the need for new infrastructure. Electrical loads in the area should be identified by customer class i.e., residential, commercial, industrial, agricultural, that is driving the need.
    - *Forecasts* -- Historical and projected customer end-use data should be presented. Load data identified by categories above, including Load Duration Curves, Hourly Load Shapes/Daily Load Curve at a minimum should be presented.
    - *Demand Side Alternatives* -- The applicant should quantify existing and projected Demand Side Management (DSM) programs including saturation and penetration data, details of interruptible service and frequency and duration of interruptions. Address unique factors such as reliability and power quality requirements, reliability studies, and consumer- or customer-owned generation should be included in the application.

239-8

- The DEIS repeatedly uses the terms "wind generation" and "wind" and "enable new wind" which is inaccurate. The transmission system, and transmission operators, transmission service providers, and utilities, may not discriminate in provision of services. The transmission system must be open to all. What is present in the system is much coal.

239-9

- The EIS should clearly state that this project does not displace coal generation, it provides transmission for what generation is in the system and what generation could be built in the future.

239-10

- The EIS should clearly state that this project connects into the 345 kV system that extends into the Dakotas and Iowa and is connected to many megawatts of coal generation.

239-11

- Where the DEIS refers to safety and/or health impacts, the Department of Health should be requested to review the information and submit a comment.

239-12

- To the extent that the DEIS claims that this project would facilitate or enable wind generation, the FEIS should provide the basis for that statement and quantify it.

3

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239-7.

The comment suggests or requests that the applicant provide specific pieces of information and analysis. As the comment is directed to the applicant, the EIS cannot address this request. Further this EIS cannot provide the information described as it is outside the scope of the EIS (Appendix A).

239-8.

The commenter is correct in that the electrical transmission grid does not discriminate between sources of electrical generation. However, where wind generation is discussed in the EIS (Section 4), it is discussed, appropriately, in the context of the stated need for the project.

239-9.

The EIS does not make any statements regarding coal generation, nor make any representations that the project would displace coal generation. Thus, no statement rebutting a non-representation is necessary.

239-10.

The EIS clearly states that the project connects to specific substations (e.g. Lakefield Junction substation, Huntley substation), which afford (or will afford) connections with other transmission lines that travel throughout the Upper Midwest. As discussed in comment 239-8 and as noted by the commenter, the electrical grid does not discriminate between sources of electrical generation. Thus, whether or not there is coal generation connected to transmission lines that connect to this project is not relevant.

239-11.

Section 5.3.1 of the EIS and Appendix H discuss potential health impacts associated with EMF produced by transmission lines. This discussion includes and depends upon the analysis of the Minnesota Department of Health as incorporated in the work of the Minnesota State Agency Working Group on EMF Issues (see Appendix H).

239-12.

As indicated in Section 4.1 of the EIS, for purposes of analysis, the EIS assumes the need as stated by ITCM in its certificate of need application. This need, as described by ITCM, includes the facilitation of wind generation.

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239-13
- To the extent that the DEIS claims that this project would allow wind to displace coal, it should identify what coal generation would be displaced and the basis for that claim.

239-14
- To the extent that the DEIS states that this project would lower costs, it should state what costs would be lowered and who would pay these lower costs, what customers, what ratepayers, in what location, what hub (who benefits).

239-15
- The FEIS should be neutral and not specify "wind generation" because the transmission system is operationally neutral.

239-16
- The EIS should include information on benefactors of the claimed reduced congestion costs.

239-17
- The EIS should note that according to ICF's Independent Assessment of Midwest ISO Operational Benefits, "benefits" are correlated with increased use of coal generation:

  > *RTO operational benefits are largely associated with the improved ability to displace gas generation with coal generation, more efficient use of coal generation, and better use of import potential.*

  Attached, p. 14, Independent Assessment of Midwest ISO Operational Benefits, ICF (2007); online: http://nocapx2020.info/wp-content/uploads/2008/08/icf_miso-benefits-analysis_final_02282007.pdf

239-18
- The EIS should describe "need" with sufficient detail to be meaningful. The way "need" is used in the DEIS, there are no alternatives that would meet that "want" other than stuffing money in their corporate pockets.

239-19
- The DEIS often uses the term "citizens" where a more correct term would be "people" or "humans."

239-20
- The EIS should state the capacity of the project as proposed, and of alternatives, including the configuration, voltage, amps and MVA rating.

239-21
- The EIS should consider externalities, such as the cost and impacts of continued and/or increased use of coal generation.

239-22
- The EIS should consider cost and impacts of line loss and need for increased reactive power inherent in long distance transmission.

239-23
- The EIS should include a spreadsheet of FAA listed public and private airports in the project area. The FAA lists airports by county. Airports are frequently left out of environmental review, and comments at EIS meetings reflect that this may well be the case with this EIS.

4

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239-13.

The EIS does not claim that the project would allow wind generation to displace coal generation.

239-14.

As indicated in Section 4.1 of the EIS, for purposes of analysis, the EIS assumes the need as stated by ITCM in its certificate of need application. This need, as described by ITCM, includes the reduction of congestion on the regional transmission grid resulting in lower costs for the delivery of electrical energy. The expense to study how this reduction of congestion and costs would be spread across the electrical grid, customers, and ratepayers outweighs any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

DER staff has provided testimony in this matter on the costs and benefits of ITCM's proposed project. See the direct testimony of Dr. Steve Rakow in the CN docket (CN-12-1053), March 28, 2014, eDockets Number 20143-97730-06.

239-15.

See response to comment 239-8.

239-16.

See response to comment 239-14.

239-17.

The report cited in the comment is not relevant to this project. The report discusses the benefits of forming a regional transmission operator (RTO) such as MISO. The report does not discuss (nor can it, being released in 2007) the incremental costs or benefits of ITCM's proposed project.

239-18.

The need for ITCM's project is stated in Section 4.1 of the EIS. For purposes of analysis, the EIS assumes the need as stated by ITCM in its certificate of need application.

239-19.

This comment is noted and included in the record for this EIS. EERA staff believes that the use of the term "citizens" in the EIS is entirely appropriate.

239-20.

Section 3.7.1 has been modified to address this comment. Additional information has been added about the conductors proposed by ITCM for this project. Such detailed information is not available for system alternatives discussed in Section 4; thus, these alternatives are discussed according to their respective voltages.

239-21.

The EIS does not discuss coal generation as related to ITCM's proposed project. As discussed in Section 4.6 of the EIS, generation, of any type, does not meet the stated need for the project.

Externalities are discussed in the testimony of DER staff. See the direct testimony of Dr. Steve Rakow in the CN docket (CN-12-1053), March 28, 2014, eDockets Number 20143-97730-06.

239-22.

Line losses and the need for reactive power are topics outside the scope of the EIS (Appendix A). Line losses are discussed in the testimony of DER staff. See the direct testimony of Dr. Steve Rakow in the CN docket (CN-12-1053), March 28, 2014, eDockets Number 20143-97730-06.

(continued next page)

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239-23.

Potential impacts to airports and airstrips are discussed in Section 5.2.4 of the EIS and in Sections 6 and 7 as appropriate. Maps in Section 6 include all airports and airstrips in the project area, including those identified during the scoping process for the EIS. An FAA listing by county is not necessary to ensure that airports and airstrips are properly identified.

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FEIS ID #239

EIS COMMENTS SPECIFIC TO SECTIONS

COSTS - §1.1; 3.7.2; 3.9

239-24

- The DEIS cost benefit balance is skewed. Balance must be symmetrical, where costs are considered and weighed against benefits.

- Benefits attributed to this project are benefits of MVP 3 (not just this part of MVP3); MVP 3 and 4; MVP 3, 4 and 5; and all 17 MVP projects. These "benefits" must be separated out, and the costs must be balanced against these benefits. For example, the cost part of this balance must include separate analysis of the full costs of MVP 3, MVP 3 and 4, MVP 3, 4 and 5, and all 17 MVP projects; and the cost allocation attributable to Minnesota of MVP 3; MVP 3 and 4; MVP 3, 4 and 5; and all 17 MVP projects. The benefits part of this balance must include the full "benefits" of MVP 3, MVP 3 and 4, MVP 3, 4 and 5, and all 17 MVP projects; and the "benefits" to be realized by Minnesota of MVP 3; MVP 3 and 4; MVP 3, 4 and 5; and all 17 MVP projects.

- Where all 17 MVP projects must be built to realize the benefits, where modeling for benefits is modeling of all 17 MVP projects, consideration of just a part of the MVP Portfolio is inaccurate.

- In the cost/benefit analysis, each utility's share in the cost apportionment scheme must be clearly presented, and each utility's share in the benefits scheme must be presented.

Cost analysis must not be skewed

239-25

- Because the "route" in question is roughly ½ of MVP 3, and an even smaller part of the MVP Portfolio, costs as presented, and the cost allocation scheme, are skewed. Undergrounding part of the route, if considered as mitigation, would have a much higher percentage of cost for just that portion than if the cost of underground were considered against the cost of the entire route. This skewing must be avoided in the EIS.

- The cost of the Huntley Substation includes expansion capacity. The need for, cost, and identification of additional space and equipment should be specified.

- Table 3-4 should show the per mile breakdown of costs. Comparing §1.1 with Table 3-4, it looks to be over $2 million/mile, not including substations, and including substations, nearly $3 million/mile.

Cost information and analysis must be thorough – cost must not be primary driver

Often cost considerations are the primary driver. The proper focus of the EIS is to determine environmental impacts.

5

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239-24.

The EIS does not perform a cost-benefit analysis. It analyzes the potential human and environmental impacts of system and routing alternatives and how potential routing impacts could be avoided or mitigated. A cost-benefit analysis is outside the scope of the EIS (Appendix A).

239-25.

See response to comment 239-24; the EIS does not perform a cost-benefit analysis.

With respect to the Huntley substation site, Section 3.4.3 of the EIS describes the site and the acreage that ITCM has indicated is needed for the site.

With respect to Table 3-4, the costs presented are provided to give a general sense of what the project will cost and any differences in costs between the proposed routes. Additional tables in the EIS (e.g., Table 6-5) provide costs and lengths for specific routing options such that costs per mile can be fairly easily compared across these options.

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- Cost considerations should not be the primary driver in any environmental analysis. See MERA, Minn. Stat. Ch. 116B.04 (Economic considerations alone shall not constitute a defense hereunder.).

239-26

- The EIS should make best efforts to quantify those aspects associated with the environment, such as preservation of natural land, wildlife habitat, migratory corridors, avoidance of increased mercury levels in waters, scenic viewsheds, etc. There is much information available on quantification of these factors.

239-27

- Cost analysis must provide enough information to determine why one option would cost more than another, other than apparent length.
- Other considerations add to cost, for example, turning corners requires more robust structures and hence, higher cost. Structures capable of double circuiting are more expensive. Foundations in sandy soil or wetlands could require additional engineering and materials, and cost more. Structures for large spans must also be more robust and cost more. These considerations must be addressed, the cost estimates must be itemized, etc., in sufficient detail to compare costs of the various alternatives.

239-28

- Analysis of project costs must also include costs such as the cost of loss of any funding due to construction of the project, costs of mitigation, etc.
- Costs of mitigation must be addressed up front to determine adequacy, if not, impacts may be left unmitigated and who will pick up the tab?

Route Permit Decision §2.2.3

239-29

- The DEIS states that:

  If issued a route permit by the Commission, ITCM may exercise the power of eminent domain to acquire land for this project.

  The EIS should provide a citation for this statement.

List of Potential Permits and Approvals Table 2-1

239-30

- The EIS should state specifically whether an eagle take permit is necessary.

Electric Safety Codes §2.4

239-31

- The EIS should provide links to relevant parts of NESC, particularly clearances, wherever NESC is referenced.

Proposed Project §3.1

239-32

- The EIS should include in the description of the project a statement of its connection to MVP 3, the 17 project MVP Portfolio, and the relative costs of each.

6

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239-26.

The EIS makes substantial efforts to quantify potential environmental impacts associated with the project.

239-27.

Costs for specific routing options are discussed in several places in the EIS. Tables in the EIS (e.g., Table 6-5) provide costs and lengths for these routing options. Where there are other costs considerations, e.g., specialty structures, removing existing lines from lakes, these costs are discussed in the associated text. See, for example, Section 6.1.2, Table 6-9, and associated text describing the cost of routing options near Fox Lake.

239-28.

The costs of mitigation measures are assumed to be included in project costs. The efficacy of mitigation measures is measured against the Commission's route permit. The Commission, through its permit, describes how potential impacts will be mitigated and includes any description of the level of mitigation.

239-29.

Text in Section 2.2.3 and Section 3.8.1 has been modified to address this comment. To EERA staff's understanding, ITCM's use of the power of eminent domain for this project is an unresolved legal question.

239-30.

The EIS notes that special use permits and endangered species act permits may be required from the U.S. Fish and Wildlife Service (USFWS). Analysis in the EIS of rare and unique natural resources for specific routing options (Section 6, Appendix K) indicates that no impacts to eagles are anticipated as a result of the project. Whether USFWS concurs in this assessment is a decision to be made by USFWS. ITCM has indicated in its route permit application (Section 10.1.5 of the application) that it will work closely with USFWS to obtain any required incidental or non-purposeful take permits.

239-31.

Section 2.4 of the EIS notes that Minnesota Statute 326B.35 requires utilities to construct and operate their facilities in accordance with the National Electrical Safety Code. To EERA staff's understanding, the code book is not an electronic document that supports electronic links (See http://standards.ieee.org/about/nesc). Applicable sections of the NESC have been added to Appendix C.

239-32.

Section 3.1 of the EIS has been modified to address this comment. Description of ITCM's proposed project, MVP 3, and MVP projects in general is included in Section 4 of the EIS.

Though there are 17 MVP projects in the MISO portfolio, the analysis in this EIS, per the scoping decision, is limited to analysis of ITCM's proposed project. Analysis of the costs of planned MVP projects in other states is beyond the scope of this EIS. The cost of such an analysis, if it could be performed, would outweigh any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

Department of Commerce, Division of Energy Resources (DER) staff has conducted economic analysis of a select number of MVP transmission line scenarios: MVP3, MVP3 + MVP4, and MVP3 + MVP4 + MVP5. This analysis is included in the direct testimony of Dr. Steve Rakow, Tables 2 through 11, in the CN docket (CN-12-1053), March 28, 2014, eDockets Number 20143-97730-06.

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Double-Circuit Structures §3.3.4

239-33

- The EIS should state that where the structures would be capable of carrying another line, it could be a line of virtually any voltage, not necessarily a 161 kV line.

Associated Facilities §3.4

239-34

- The EIS should describe the purpose for each substation and whether interconnection opportunities are present for local generation, i.e., at the Lakefield Junction sub, whether it is solely a tie to the Split Rock-Lakefield Jct line, and for both Lakefield Jct. and Huntley, whether there is additional incoming electricity from sources other than the 345 kV line (supported by powerflow diagrams).

Route Width, Right-of-Way and Anticipated Alignment §3.5

239-35

- The EIS should provide citation for statement that "[t]he ROW is that specific area required for the safe construction and operation of the transmission line."

239-36

- To the last full paragraph on p.15, the EIS should add that Applicants may seek to condemn land for an easement through power of eminent domain, and provide citation to Applicant's authority to invoke power of eminent domain.

239-37

- The EIS should include a reminder of Minnesota's policy of corridor non-proliferation, and that where there is a corridor, additional/future transmission projects may utilize this corridor.

Right-of-Way §3.5.2

239-38

- The EIS should clearly state in the narrative section that additional right-of-way will need to be acquired, i.e., where the existing easement is 150 feet, an additional 50 feet of ROW will need to be acquired, and on maps, identify areas where additional easement would be needed.

Route Alternatives and Route Variations §3.6

239-39

- The EIS states that "This EIS does not discuss all possible routing options." The Commission may not select a route that is not analyzed in the EIS – this should be stated, and it is not up to the public to provide this analysis or provoke its creation. All options going forward to the Commission must be reviewed in the EIS.

Transmission Lines §3.7

239-40

- The DEIS' first paragraph of this section describes conductors. The EIS should describe with specificity this conductor, as it is different from that typically used by Xcel Energy for 345 kV lines, and is a very high capacity conductor.

7

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239-33.

The structures for the project will be built to 345 kV/161 kV double circuit standards. They are not designed to accommodate voltages higher than these voltages; they could accommodate lines of lower voltage. The text in Section 3.3.4 is correct and reflects the highest voltages that could be placed on the proposed structures.

239-34.

See response to comment 239-10.

239-35.

The term "right-of-way" is defined in Minnesota Rule 7850.1000 as that "land interest required within a route for the construction, maintenance, and operation of a high voltage transmission line." "Right-of-way" has been further defined by Commission practice as that area required for safe operation of the transmission line, where such safety is defined by the National Electrical Safety Code (NESC) and North American Electric Reliability Corporation (NERC) reliability standards (see the Commission's generic route permit template, part 4.8.1, Appendix B of the EIS).

Section 3.5.2 of the EIS has been modified to further describe ITCM's proposed ROW for this project. Applicable sections of NESC and NERC standards have been added to Appendix C.

239-36.

See response to comment 239-29.

239-37.

Several sections of the EIS, particularly Section 7, discuss the routing factors in Minnesota Rule 7850.4100 that are used by the Commission in determining whether to issue a route permit. These factors and the relative merits discussion in Section 7 include the concept of non-proliferation.

239-38.

The discussion in Section 3.5.2 makes no assumptions about the route that will ultimately be selected by the Commission, and discusses the ROW widths that may be required for the project independent of whether there is existing ROW of any kind on any particular property. Further, Section 3.5.2 clearly states that ROW widths for the project are determined by the Commission and may be different than ROW widths requested by ITCM.

239-39.

The text in Section 3.6 of the EIS notes that there are many possible ways to connect the routing options identified for study in the EIS scoping decision (Appendix A) and analyzed in the EIS to create an "end-to-end" route for the project. The text is not intended to suggest that citizens should (or must) propose routes other than the routing options studied in the EIS during the permitting process.

239-40.

Section 3.7.1 has been modified to address this comment. See response to comment 239-20.

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239-41

- The EIS should identify how many fiber optic strands are within the shield wire, how many are for transmission line control, whether there is excess capacity, whether the fiber optic cable will be leased out to third parties, revenue produced and if it is considered in capital cost and operational cost estimates, and whether leased capacity is available for internet service to rural communities.

Undergrounding, §3.7.2

Many aspects of undergrounding are not adequately explored.

239-42

- The EIS section on undergrounding should set out specific areas where it could be used to mitigate significant impacts, i.e., under lakes, through populated areas built up near existing corridor. Underground lines may be viable independent of significant aboveground constraints.

- The EIS should contain a full analysis of underground options, including location, configurations and cost should be included in the EIS. If there are other non-aerial options that are not underground, such as running along a bridge crossing, these should be analyzed as well.

- Where undergrounding routes are different than an underground version of an above-ground route, location should be considered. There may be feasible underground options at different locations where an above-ground route is not constructible.

- Applicants and regulatory agencies often state that they cannot underground higher voltage lines, but this is not true. Applicants could, they just do not want to underground, and will underground if ordered or if an agreement is reached, such as was done on the Chisago Project and the Hiawatha project. The prior undergrounding experience of applicants and other utility or other transmission providers should be incorporated into the EIS.

239-43

- A report released February 24, 2010, sheds light on undergrounding, where undergrounding was found to be feasible and not as expensive as previously thought. This report, from the Alberta Electric Service Operator is available online[1], and the findings of this report regarding undergrounding of high voltage transmission must be incorporated into the EIS. See Technical Report by CCI: Feasibility Study for 500 kV AC Underground Cables for Use in the Edmonton Region of Alberta [Posted: February 24, 2010]. Underground was also considered for part of the Mid-Atlantic Power Pathway, a 500kV transmission line. MAPP has since suspended by PEPCO, the project promoter. Connecticut requires undergrounding of transmission lines. In Minnesota, the Chisago (in part) and Hiawatha projects have been undergrounded.

[1] The iterations and comments and the full report are available on the AESO Feasibility Study for 50kV Underground Cables page: http://www.aeso.ca/transmission/20001.html

8

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239-41.

Any fiber optic capabilities associated with the project are outside the scope of the EIS (Appendix A).

239-42.

Section 3.7.2 provides a general overview of underground construction and operation of a transmission line. The situations where undergrounding is typically used and the costs of undergrounding are discussed in this section. No project-specific undergrounding configurations or costs are provided in the EIS as (1) aboveground placement of ITCM's proposed transmission line is feasible for its entire length and (2) specific routing options that would utilize undergrounding were not suggested during scoping or included in the EIS scoping decision. The comment is correct in that permittees are bound by the Commission's route permit, and if this permit requires the placement of a transmission line, or a portion of a line, underground, the permittee must construct the line accordingly.

239-43.

Section 3.7.2 notes that the cost of constructing an underground transmission line ranges from 4 to 14 times more expensive than an overhead line of the same voltage and distance. The report cited by the comment support this range; thus it is not necessary to add this report as a reference for the EIS.

The report cited by the comment analyzes the costs of undergrounding 10 and 20 kilometer (km) sections of a proposed 65 km. transmission line. The report concludes that capital costs per unit length of underground line are 6.5 to 8.7 times higher than costs for an overhead line (see Table 4 of the report, www.aeso.ca/downloads/CCI_Feasibility_Study_for_500_kV_AC_Underground_Cables.pdf)

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239-44

- Costs of underground should be more specific, with estimates for a range of different situations, i.e., urban setting, prairie, wetland, rocky bluff.
- When comparing cost of undergrounding, identify party paying that cost, whether ratepayers in state, ratepayers of specific utilities, and/or the utilities subject to MVP cost allocation.
- Underground lines still generate electric and magnetic fields, but the DEIS is vague about EMF levels. Specifics should be disclosed in this narrative, with a wide range of amp/current levels, to equitably compare impacts of EMF between underground and above ground.

Lake Crossings §3.7.3

239-45

- The DEIS should evaluate underground lake crossings.

Construction Process §3.8.4

239-46

- The EIS should address construction practices, including traffic interruptions and diversions, use of helicopters, and implosive devices to connect pieces of conductor.

Abandonment and Decommissioning, §3.8.7

239-47

- The EIS should address the efficacy of partial removal of transmission foundations, and consider the potential for and impacts of concrete leachate and/or wooden pole treatments contaminating ground and/or surface waters.
- The EIS should address the impact on agriculture or other land uses of a foundation removed only 5 feet below the surface.
- The EIS should question the suggested practice of pushing over a pole if the pole cannot be cut. If it can be installed, it can be removed.

Right of Way Acquisition, §3.8.1, 2 and 3.

239-48

- RoW acquisition costs vary widely and should be addressed. §3.8

239-49

- The EIS erroneously presumes that a private transmission-only corporation has the power of eminent domain. This must be corrected.
- ITC Midwest, as a private transmission-only company, will likely have to pay market rate for any easement expansion. Increased acquisition costs for a transmission-only company should be identified.

239-50

- Right of way access and equipment staging areas require access agreements, and may also require easements and compensation.

9

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239-44.

See response to comment 239-42. How potential costs of undergrounding might be allocated among entities involved in an underground transmission line project is outside the scope of the EIS (Appendix A). Section 3.7.2 discusses EMF with respect to underground transmission lines. The discussion is appropriately general as there no project-specific undergrounding configurations or underground routing options analyzed in the EIS (see response to comment 239-42).

239-45.

See response to comment 239-42.

239-46.

Section 3.8.4 discusses the construction process for the project generally. The concerns of the comment are discussed in other section of the EIS. Potential impacts to traffic flow due the project are discussed in Section 5.2.1. Potential noise impacts are discussed in Section 5.1.3 and Appendix F. ITCM indicates that, at this time, it does not anticipate using helicopters or implosive devices to construct the project. ITCM indicated in its route permit application that it will use compression splices for conductor installation (see Section 3.3.2 of the application).

239-47.

Section 3.8.7 discusses those practices that ITCM will use to remove abandoned or decommissioned transmission line structures resulting from the project. These practices are also spelled out in the Agricultural Impact Mitigation Plan for the project (Appendix E). The efficacy of these practices and the AIMP is a question to be resolved on a case-by-case basis by the enforcement mechanisms of the AIMP and the Commission's route permit, not the EIS. For example, it is not possible for the EIS to analyze the efficacy of a commitment such as "if an existing transmission structure to be removed for purposes of the Project has a concrete footing, ITC Midwest will work with the Landowner to determine at what depth the footing must be removed so farming operations can continue on the property" (Appendix E, page 4). The efficacy will have to be determined by, among others, the agricultural monitor anticipated by the AIMP. No impacts to groundwater are anticipated due to structure foundations (see Section 5.6.1).

239-48.

The topic of ROW acquisition, including ROW acquisition costs, is outside the scope of the EIS (Appendix A).

239-49.

See response to comment 239-29.

239-50.

Sections 3.8.2 and 3.8.3 discuss that permissions (including, possibly, temporary easements) may be needed for ROW access and staging areas.

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239-51

- Routing areas with increased easement should be specified, on maps and with legal descriptions, disclosing right of way that needs to be acquired.

239-52

- Valuation process of parkland, prime ag land, and other high value parcels, should be discussed.

239-53

- Evaluation of right of way width should be addressed, and state and federal standards or recommendations should be disclosed and cited.
- Factors considered in state or federal standards regarding right of way width should be disclosed and analyzed.

Electromagnetic field – charts in EIS are way off -- §3.7.2 and §5.3

239-54

- The DEIS appears to accept utility information without vetting. Accepting utility information without independent verification and independent calculation based on conductor specifications is insufficient – all utility claims as to current levels, amperage and MVA, must be independently verified.

239-55

- Magnetic fields should be calculated for:
  - Utility stated "peak" of 3,000 amps;
  - Thermal limits of ??? amps;
  - A range of amperage values in between.
- Magnetic fields should be calculated for a range of distances:
  - Under center line;
  - 25, 50, 75, 100, 125, 150, 200, 250, and 300 feet from the centerline;
  - Identification of distance at which mG level falls to 2 mG.
- Magnetic field levels must be calculated for a year that the project is projected to be operational, and five and ten years out, because this project is part of a 17 MVP project interconnecting for export and use of the line will increase as more MVP projects are in service.
- Raymond Kirsch, Commerce Environmental Review Manager, and John Wachtler, Barr Engineering, have been provided with a magnetic field calculation spreadsheet, and a discussion was had previously about calculation of magnetic fields with John Wachtler, and both are on notice that there is a simplified spreadsheet method of calculation of magnetic fields. An Excel version will be filed in eDockets.

Alternatives § 4.0

239-56

- The EIS should clarify that the alternatives presented in this section are "system" alternatives.

Need for the Project §4.1

10

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239-51.

See response to comment 239-38

239-52.

The topic of ROW acquisition, including ROW acquisition costs, is outside the scope of the EIS (Appendix A).

239-53.

See response to comment 239-35.

239-54.

EERA staff has reviewed ITCM's modeled electric and magnetic fields for the three time scenarios described in the EIS (2017, 2023, a future maximum loading at some time in the future) and compared them with modeling done for other similarly-sized transmission projects. EERA staff finds that the ITCM's modeling is consistent with the modeling for these projects.

Additionally, EERA staff compared ITCM's estimated future maximum generation that would be carried by the line (2,000 MW) with MISO's estimated future wind generation for Minnesota and the Dakotas (MISO MVP Report January 2012, Table 4-2, https://www.misoenergy.org/Library/Repository/Study/Candidate MVP Analysis/MVP Portfolio Analysis Full Report.pdf). These estimates compare well, considering that not all of the MISO-estimated wind generation in Minnesota and the Dakotas will be carried by the project. ITCM's future maximum loading model included the caveat that this is a future maximum that could be carried without a single contingency overloading other facilities.

239-55.

Section 5.3 and Appendix H of the EIS present predicted magnetic field levels for three time scenarios (2017, 2023, and a future maximum loading at some time in the future). Predicted magnetic field levels are provided at regular distance intervals out to a distance of 300 feet from the transmission line centerline. The distance at which magnetic field levels fall below two milligauss varies with structure and conductor configurations but this distance is within the distances modeled (i.e., with 300 feet from the centerline).

Magnetic field levels for a future maximum loading are based on a projected 2,000 MW of new generation being added in southwest Minnesota which would load the 345 kV system to the point where a single contingency would overload other facilities. Loading above this level could not occur without additional facility additions. As discussed in the response to comment 239-55, EERA staff believes this future maximum loading is an appropriate projection.

Under normal operating conditions, the project is not expected to carry current near the thermal rating of the conductors because transmission facility loading is limited during normal operations to ensure that the system can withstand any single contingency (e.g. loss of another element of the system) without overloading other elements of the transmission system. Higher loadings than those discussed in Section 5.3 and Appendix H would only be expected to occur immediately following extreme contingencies during peak conditions.

To illustrate this type of scenario, an extreme contingency – the loss of two 345 kV lines, north and south of the Lakefield Junction Substation, during summer peak conditions in 2023 with wind generation in and around the Lakefield Junction Substation at a high level – has been simulated and analyzed. The results of this analysis are presented here in a format similar to Table 5-5.

(continued next page)

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Structure Type	Timeframe (System Condition)	Current Amps)	Distance to Proposed Centerline in Feet (Magnetic Field in mG)										
			-300	-200	-100	-50	-25	0	25	50	100	200	300
Single-Pole Davit Arm, 345/161 kV Double-Circuit	2023 Summer Peak Extreme Contingency	1502/ 394	5.3	10.9	37.8	98.9	154.4	146.1	81.9	42.2	17.2	6.5	3.6
Single-Pole Davit Arm, 345 kV Single-Circuit	2023 Summer Peak Extreme Contingency	1502	6.3	13.0	43.7	110.1	167.0	155.3	96.3	58.7	26.3	9.1	4.8

The likelihood of this contingency scenario occurring under actual operating conditions is very small, and it would be considered an extreme scenario, beyond those normally examined in planning studies. Because this scenario is based on contingencies that are more severe than normal planning criteria, the resultant high loading of the system creates overloads on other facilities that would have to be alleviated through either generation re-dispatch or other operating measures. Therefore, the duration of the loadings in the above table would only be for a short time (1-2 hours maximum) before actions were taken to reduce system loading or restore the facilities experiencing the outage to service. Thus, the magnetic field levels shown have a very low probability of occurrence and if they were to occur, would do so for a short period of time (1-2 hours) before line loading could be reduced.

The discussion and analysis in Section 5.3 regarding potential health impacts related to EMF is unchanged, even under this contingency scenario. Predicted EMF levels at the edge of the transmission line ROW are below all state and international guidelines. No adverse health impacts are anticipated due to EMF for persons living or working near the project. Consistent with the Commission's prudent avoidance approach for EMF, basic mitigation measures to minimize EMF exposure levels are appropriate.

239-56.

Text in the introduction to Section 4 has been modified to address this comment.

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239-57

- The EIS must define the need, as above. The EIS should specifically identify the "need" for this project. The best solution can not be determined in the absence of a well-defined need. A proper utility application will include required capacity (the magnitude of the need), timing (when is additional capacity required?) and the nature of the need (does it appear under normal system operations or in response to certain contingencies?). The need should be substantiated by load flow results and load growth forecast studies. The EIS analysis should incorporate and vet the need description.

239-58

- The alternatives analysis should identify potential solutions for the specific need. In this application, and EIS, the only "solution" reviewed is transmission, which makes sense because this is a transmission only company wanting to make profits from building transmission and providing transmission service. To a hammer, everything looks like a nail. The best solution will account for the unique characteristics of the area with the electrical need. Broadly, the affected area should be well-characterized in terms of its physical and electrical characteristics:
    - *Physical Description* -- The applicant should present electrical service territory along with political/topographical maps – ITC is not a utility and has no service territory. These maps should identify existing and planned utility facilities and load centers as well as critical outage facilities if the need is driven by contingencies. Existing land use, endangered species, critical or protected habitats should also be clearly identified
    - *Electrical Description* -- The applicant should demonstrate that it fully understands the nature and location of the factors driving the need for new infrastructure. Electrical loads in the area should be identified by customer class i.e., residential, commercial, industrial, agricultural. The applicant should also identify who would be affected by the identified need, who pays, who benefits.
    - *Forecasts* -- Historical and projected customer end-use data should be presented. Load data identified by categories above, including Load Duration Curves, Hourly Load Shapes/Daily Load Curve at a minimum should be presented.
    - *Demand Side Alternatives* -- The applicant should quantify existing and projected Demand Side Management (DSM) programs including saturation and penetration data, details of interruptible service and frequency and duration of interruptions. Address unique factors such as reliability and power quality requirements, reliability studies, and consumer- or customer-owned generation should be included in the application.

- Claims of "regional reliability," "capacity to support additional generation" and "reduced congestion and lower costs" are all economic issues.

- The EIS states that:

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239-57.

See response to comment 239-6.

239-58.

See response to comment 239-7.

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ITCM notes that the need for its project has been substantiated by its own studies and by those of MISO.

239-59 The EIS should clearly state that ITCM and MISO are in the transmission business, interested in building transmission, expanding the transmission system, and in selling transmission services.

239-60
- The EIS should state in references to PROMOD modeling that PROMOD is economic modeling.

239-61
- The EIS claims that "there is not enough room, so to speak, for this power on existing lines." The EIS should explain that were coal plants in the Dakotas or Iowa to be shut down, there would be "room, so to speak" for adding wind generation on these lines.

239-62
- The EIS should demonstrate that individual and viable combinations of alternatives were evaluated, not just each option by itself. All individual and grouped alternatives should be well characterized in terms of cost, construction lead time, environmental impact, risk mitigation, operating costs, etc. and analyzed with respect to the need previously defined.

No-Build Alternative §4.2

239-63
- The EIS should quantify the excess generating capacity, essentially reflected in the capacity of this project.
- The EIS should consider the "no-build alternative" of shutting down coal plants equal to the excess capacity to free up room on the transmission system "for wind."
- The EIS should consider the "no-build alternative" of shutting down coal plants equal to the MN/IA 345 kV transmission project's capacity to free up room on the transmission system "for wind."

239-64
- The DEIS improperly states that "The no-build alternative would not meet the need for the project." This is due to two false presumptions:

  1. That this project is to provide an outlet for wind generation and that could adversely affect Minnesota's ability to meet mandated renewable energy goals. Minnesota is well on its way to meet its goals and there is no demonstration in the Application that we are in any danger of not meeting those goals. Other states are well on their way, as evidenced by Illinois recent statements that they have plenty of wind on line and in development. This error must be corrected.

  2. That No-Build would not address heaving loading on the 161 kV system. It would have no effect. A no-build with decreased coal generation would address it in a positive way. This error must be corrected.

12

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239-59.

Both ITCM and MISO are appropriately described in the EIS. Section 3.2 describes ITCM and its business activities; Section 4.1 describes MISO and its duties with respect to the regional electrical transmission grid.

239-60.

The EIS makes no reference to PROMOD modeling; thus, no description of this modeling is necessary.

239-61.

The EIS does not examine a system alternative based on the shuttering of coal plants in the Dakotas or Iowa. Such an alternative is outside the scope of the EIS (Appendix A).

239-62.

As discussed in Section 4, the only system alternatives that are feasible, available, and could meet the state need for the project are transmission line alternatives – i.e., transmission line projects with a different voltage or different endpoints. Thus, there are no combinations of system alternatives that could meet the need for the project and no such combinations are discussed in the EIS.

239-63.

As discussed in Section 4.2, the no build alternative assumes that all other electrical facilities in southern Minnesota (and other states) remain as is. As discussed in the response to comment 239-61, the shuttering of coal plants is outside the scope of the EIS (Appendix A).

239-64.

The analysis in Section 4 of the EIS assumes the need for the project as stated by ITCM in its certificate of need application. This need includes capacity to support additional generation, particularly wind generation in the region. If the project is not built, this aspect of the stated need could not be met. ITCM's stated need also includes relieving heavy loading on the existing 161 kV transmission line system in southern Minnesota. This heavy loading currently exists. If the project is not built, this aspect of the stated need could not be met. The comment may disagree with ITCM's stated need for the project; however, based on this need, the no-build alternative could not meet the need.

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239-65

- The EIS falsely states that not building this project would reduce reliability, however, there is no support provided for this statement. The SPS in the area is not used, not needed, at this time, and there is no demonstration of "overloads."

239-66

- The EIS falsely states that this would adversely affect wind farm development, yet as above, Minnesota is well on its way to meet its goals and there is no demonstration in the Application that we are in any danger of not meeting those goals.

239-67

- The EIS should reflect other states efforts in renewable development and progress to their own RES goals.

239-68

- The EIS should reflect that this project is premised on economic desire for a market for surplus generation, and should provide supporting documentation of the existence, location, and receptivity of this market for surplus generation, renewable or otherwise.

Demand Side Management §4.3

239-69

- The DEIS should not exempt ITC MIDWEST from consideration of DSM in environmental review. The EIS should examine the need claim and determine whether DSM could meet the "need" for the electricity.

- The DEIS confirms the problem of surplus generation when it states:

  This is because decreased electricity use within the project area would result in even more surplus generation that must be exported to regional load centers over the existing transmission system.

  This statement discloses the surplus generation, and discloses the purpose of this project, to export to regional load centers.

Purchased Power §4.4

239-70

- The DEIS states "the need for the project is of a transmission nature, not generation." This exposes the "want" and not the "need." "Purchased power would still have to be delivered along an inadequate electrical transmission system" is presuming a location for the recipient of the purchases power. Power could easily be generated and purchased at the far end of the line, and should not be dismissed as an alternative. This is economic "need," and purchased power would satisfy any "need" at the other end of the line.

Transmission Line of a Different Size §4.5

239-71

- This DEIS section addresses only voltage and different endpoints. The EIS should also address different capacities, and different transmission conductor configurations that would produce different capacities.

13

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239-65.

The EIS does not claim that the no-build alternative would reduce reliability. Section 4.2 states that the no-build alternative would not meet the need for the project because the alternative does not (1) provide an outlet for additional generation, particularly wind generation, (2) does not address heavy loading on the existing 161 kV system in southern Minnesota, and (3) does not relieve congestion on the existing transmission grid.

239-66.

See response to comment 239-64.

239-67.

An analysis of other states' progress toward their renewable energy goals is outside the scope of the EIS (Appendix A), and the cost of such an analysis would outweigh any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

Other states' renewable energy goals are include in MISO's planning for and designation of MVP projects (see response to comment 239-54).

239-68.

Whether ITCM's state need is premised on an economic desire (or any other desire) does not affect the analysis in the EIS. The EIS assumes the need for the project as stated in ITCM's certificate of need application. Whether there are markets, receptive or otherwise, for the additional generation proposed to be facilitated by this project, is a question outside the scope of the EIS (Appendix A).

239-69.

As noted in Section 4.3 of the EIS, ITCM does directly serve retail customers; therefore is has no means to make retail customer reduce their energy usage. Accordingly, demand side management (DSM) cannot meet the stated need for the project.

239-70.

The EIS assumes the need for the project as stated in ITCM's certificate of need application. This need includes capacity to support additional generation in the region. Purchased power cannot meet this need.

As the comment notes, it is possible for generation to be located and purchased at the locations where the electrical power is needed, rather than transmitting power to these locations. Whether this is a solution that is lower cost, otherwise satisfies state and regional policy goals, or is a "better" solution is a question outside the scope of the EIS (Appendix A).

239-71.

Section 4.5 of the EIS discusses transmission lines of a different size, including lines with a different voltage, lines with a different conductor capacity (161 kV rebuild), and lines with different endpoints. The 161 kV rebuild option addresses conductor capacity. EERA staff is unaware of any conductor configurations that would produce substantively different transmission capacities than that capacity supported by the conductor(s) utilized.

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239-72

- The EIS should address whether this conductor configuration and size are appropriate to connect into the Xcel standard configuration of 345 kV line with bundled 954 ACSS conductor, single and/or double circuited. Using differently rated lines could cause increased substation costs.

239-73

- The EIS should document different substation costs for different size transmission liens.

Projects with Different Voltages §4.5.1

239-74

- The EIS should have a chart with the range of voltage and conductor options, such as Exhibit 35, Application Appendix 7, SW MN 345 kV Transmission Project, PUC docket 01-1958, attached. http://nocapx2020.info/wp-content/uploads/2010/03/attachmentc-ex-35-app-7-conductor-spec.pdf

- The DEIS attaches too much meaning to "voltage." EIS should note that voltages do not determine capacity, or rating, of a transmission line. Voltage is one factor, the others being amperage and the conductor specifications.

Upgrading Existing 161 kV Facilities § 4.5.2

239-75

- The dEIS states that a 161 kV alternative couldn't span natural resources, and a 345 kV could, when there is now an existing 161 kV line spanning that natural resource. This makes no sense – clarify.

239-76

- The DEIS states that a 161 kV upgrade "would have less transmission capacity" but it's not been clearly stated what the capacity of the line proposed will be, what capacity is desired. The EIS must clearly, in many places as appropriate, state the capacity of the project as proposed.

239-77

- The DEIS concludes this section stating that:

  ... ITCM's analysis indicates that it is less effective than a 345 kV line at meeting the need for the project.

  The EIS should provide the **STATE'S** analysis, not parrot the Applicants.

Projects with Different Endpoints §4.5.3

239-78

- This is a rather bizarre concept that should be eliminated from the EIS -- it seems like an exercise in drawing random lines on a map.

Generation Rather than Transmission §4.6

239-79

- The EIS should be corrected to reflect the fact that generation rather than transmission would meet the need – there is no requirement that generation be in any particular location, and generation at the receiving end would logically meet any "need." It

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239-72.

Whether the conductor proposed by ITCM meets an "Xcel standard" or any other standard for substation connections is a question outside the scope of the EIS (Appendix A). To EERA staff's understanding, connections with the Lakefield Junction substation and the proposed Huntley substation are standard connections that present no special requirements for the project (see Section 3.4 of the EIS).

239-73.

No substantive difference in substation costs is anticipated for transmission line alternatives that could meet the need for the project. A 161 kV rebuild would have substation requirements similar to ITCM's proposed project. Substation costs might be slightly lower, but not substantially. A 345 kV line with different endpoints would have substation requirements nearly identical to ITCM's proposed project.

239-74.

Section 4.5 discusses the possibility of utilizing a transmission line of a different voltage to meet the stated need for the project. This analysis screens out all voltage options except 161 kV as being able to meet the need for the project without introducing a new transmission voltage in the area and without imposing significant substation upgrade costs. The chart suggested by the comment includes conductor size, resistance, heat transfer capability, and MVA rating. None of these conductor characteristics is relevant to the analysis of using a transmission line of a different voltage to meet the need for the project as that analysis is presented in Section 4.5; thus, such a chart is unnecessary for the EIS.

The operating voltage is just one characteristic of a conductor. However, it is a good proxy for other conductor characteristics such as capacity, and is likely the most important characteristic for determining if a particular line is a good fit within a region's electrical grid.

239-75.

Section 4.5.2 includes the general observation that spans for 345 kV lines are longer than spans for 161 kV lines, and thus 345 kV lines are typically more capable of spanning natural resources. This capability may or may not lead to more resources being spanned. It may, however, reduce impacts to certain resources. For example, the existing Lakefield to Border 161 kV line crosses the Pilot Grove Lake WPA utilizing six single pole structures. Crossing this WPA with a new double-circuit 345/161 kV line is anticipated to reduce the number of structures within the WPA to three (see Section 6.2.2).

239-76.

Section 4.5.2 discusses an upgrade of the existing 161 kV line in comparison to ITCM's proposed 345 kV line. Thus, the text in 4.5.2 indicates that the 161 kV line would have less transmission capacity than a 345 kV line. Section 3.7.1 has been modified to include additional information about conductors proposed for the project and their capacities.

239-77.

Section 4.5.2 does provide EERA staff's analysis of the potential human and environmental impacts of the 161 kV rebuild option. ITCM claims that the 161 kV rebuild option is less effective at meeting the need for the project than a 345 kV line. The effectiveness of the 161 kV rebuild option in meeting the need for the project is outside the scope of the EIS (Appendix A). The effectiveness of the 161 kV rebuild option is addressed by the Department in DER staff's testimony. Dr. Steve Rakow's direct testimony concludes that the 161 kV rebuild option has a lower transfer capacity than a 345 kV line under most scenarios (CN-12-1053, March 28, 2014, eDockets Number 20143-97730-06).

239-78.

This comment is noted and included in the record for this EIS.

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239-79.

The EIS assumes the need for the project as stated in ITCM's certificate of need application. This need includes capacity to transmit additional generation throughout the region. Generating power, rather than transmitting it, cannot meet this need.

As the comment notes, and as is discussed in the response to comment 239-70, it is possible for generation to be located and purchased at the locations where the electrical power is needed, rather than transmitting power to these locations. Whether this is a solution that is lower cost, otherwise satisfies state and regional policy goals, or is a "better" solution is a question outside the scope of the EIS (Appendix A).

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239-79 continued

wouldn't meet the Applicant's want, but that is not what is at issue in this proceeding, it is "need."

- The premises in this DEIS section are false, first, that to satisfy the claimed "need" we'd have to build generation here to ship elsewhere; second, it presumes "elsewhere" wants it, and third, it accepts ITC Midwest's business model and "want" as need.

Human Settlements, §5.1

239-80

- The DEIS "desktop survey" is inadequate. Commerce must do an on-the-ground survey of the full route and route alternatives to assure representations of human settlement by Applicant and EIS are accurate, i.e., homes are shown properly; buildings are visible; residents, churches, schools, etc., are shown and not characterized as "outbuildings," etc.
- Identify areas where routes and alignments should "avoid residences, businesses and other places where citizens congregate."
- Explain types of structures and situations where "use of structures which are, to the extent possible, harmonious with human settlements and activities," and identify where this is possible on routes analyzed in the EIS.
- A bullet point reference to Buy the Farm, Minn. Stat. §216B.12, Subd. 4, should also be inserted in multiple areas under the "Mitigation" section.

Aesthetics, §5.1.1

239-81

- It would be useful to address the "degree of impacts" more specifically, i.e., a chart with distances from homes showing proximity; presence "or absence" of shielding terrain and vegetation, because in this area it's mostly absent; what expansion of the present RoW would mean for those living along it (comments heard at meetings that if it were expanded, it would come too close to homes, barns, etc.).
- A bullet point reference to Buy the Farm, Minn. Stat. §216B.12, Subd. 4, should also be inserted in multiple areas under the "Mitigation" section.

Displacement, §5.1.2

239-82

- The EIS should have a chart regarding displacements, and impact of expansion of right of way on those near the easement.
- A bullet point reference to Buy the Farm, Minn. Stat. §216B.12, Subd. 4, should also be inserted in multiple areas under the "Mitigation" section.

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239-80.

EERA staff conducted an on-the-ground review of ITCM's proposed route and connector segments. Barr Engineering staff conducted an on-the-ground review of most all routing options in the EIS scoping decision. Photographs throughout the EIS, taken by EERA and Barr staff, document a sampling of the locations and routing options reviewed.

Locations along routing options where potential impacts could be avoided by selecting specific routes or alignments are discussed in Section 6 of the EIS. The introduction to Section 5 includes this guidance for the reader.

As describe in Section 5.1.1, aesthetic impacts can be mitigated by the use of structures and the placement structures that are, to the extent possible, harmonious with the natural and built landscape. This landscape often includes horizontal (e.g., roads) and vertical (e.g., buildings, wind turbines) elements. In short, putting "like with like" is anticipated to minimize the aesthetic impacts. Where this "like with like" mitigation strategy could be employed for specific routes or alignments is discussed in Section 6 of the EIS.

The list of possible mitigation measures in Section 5.1.1 has been modified to include use by a qualifying landowner of Minnesota Statue 216E.12, subdivision 4.

239-81.

Additional detail on aesthetic impacts, including distances to homes, is included for specific routing options in Section 6 of the EIS. The list of possible mitigation measures for aesthetic impacts in Section 5.1.1 has been modified to include use by a qualifying landowner of Minnesota Statue 216E.12, subdivision 4.

239-82.

As discussed in Section 5.1.2 and in Section 6, no displacements are anticipated as a result of the project. The proximity of the line to residences for specific routing options is discussed in Section 6. As no displacements are anticipated as a result of the project, the protections of Minnesota Statue 216E.12, subdivision 4, are not a relevant mitigation measure. The protections are relevant for certain impacts that may occur with the project (see response to comments 239-80, 239-81 and 239-90).**239-83.**

See response to comment 239-46.

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Noise, §5.1.3

239-83
- The DEIS has a section on construction noise, but does not address specifically the noise level impacts of construction noise impacts such as helicopters and conductor seam explosions.

239-84
- Noise associated with HVTL operation, specifically corona related. Corona ionization is ultra violet, a known carcinogen. See attached.

239-85
- Low frequency noise is not covered by the Minnesota Rules, and low frequency noise levels should be disclosed.

239-86
- The noise created by the explosions used to join lines is implusive noise, which is also not covered by the Minnesota Rules, and the impulsive noise levels should be disclosed.

239-87
- The DEIS recommends "prudent routing to avoid areas where residents in the project area live, work and congregate." What this means in practice should be stated in the FEIS, such as "prudent routing to avoid areas where residents in the project area live, work and congregate means that the transmission line should be ____(distance) away."

Corona, Ozone and UV information – Noise and Electronic Interference, §5.1.3 & 6, 5.3

239-88
- The EIS should contain information regarding increased ozone levels due to corona, and also due to increased emissions from coal plants on the western end of the line that will contribute significantly to ozone levels.
- The EIS should contain information on the health impacts of corona, ozone, and Ultra Violet, including a comment from the Dept. of Health.

Noise §5.1.3

239-89
- The noise of the line and substations should be considered in foggy, misty and rainy conditions when transmission lines are noisier.
- Establish specifications for all transmission conductors, substation equipment, including transformers, switching gear, etc.
- Perform noise modeling based on equipment specifications.
- Include chart with substation noise modeling in the FEIS.
- Address substation mitigation techniques, including but not limited to a contained building, underground building, walls, berms and evergreen plantings.
- Construction noise should be more broadly addressed, such as helicopters and explosions.

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239-83.

See response to comment 239-46.

239-84.

Potential noise impacts due to the project, including operational noise, are discussed in Section 5.3 and Appendix F. See response to comment 239-95 regarding corona discharge and ultraviolet light.

239-85.

No specific low frequency noises or noise impacts are anticipated as a result of the project. Section 5.1.3 and Appendix F discuss the potential sources of noise and noise impacts.

239-86.

See response to comment 239-46.

239-87.

Routing options that avoid or mitigate specific impacts are discussed in Section 6 of the EIS. Placing transmission lines away from areas where residents live, work and congregate is one strategy for mitigating potential noise impacts.

239-88.

Section 5.3.5 discusses potential public health impacts related to ozone produced by the transmission line due to corona discharge. MPCA and EPA emission limits protective of human health are discussed in Section 5.3. Any potential health impacts due to increased emissions from coal plants at some distance west of the project area are outside the scope of the EIS (Appendix A). See response to comment 239-95 regarding corona discharge and ultraviolet light.

239-89.

Section 5.1.3 and Appendix F analyze and discuss noise levels under rainy conditions (see, e.g., Table F-3). Equipment specifications were utilized in modeling and predicting noise levels related to the project. ITCM has indicated that it will request transformers be tested at the factory to ensure that the transformers meet noise specifications (Appendix F). Table F-4 includes modeled and predicted substation noise levels.

Text in Section 5.1.3 has been modified to note that potential noise impacts due to substations could be mitigated by natural or built sound barriers. Regarding helicopters and implosive devices, see response to comment 239-46.

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Property Values §5.1.4

The EIS should contain:

239-90

- A range of property valuation and devaluation scenarios;
- Socioeconomic discussion should address impacts of devaluation to government and individual landowners;
- Socioeconomic discussion should address impacts of devaluation to tax base of local governments;
- Costs above should be addressed in the project cost section of the EIS.
- A bullet point reference to Buy the Farm, Minn. Stat. §216B.12, Subd. 4, should also be inserted in multiple areas under the "Mitigation" section.

Substation lighting §5.1.1 and 5.1.5

239-91

- Light, particularly in a park, is pollution. Frequently substations are lit up like an intergalactic space station or refinery. The EIS should include information about substation or other lighting for this project and determine whether there is an impact on the park and its visitors.
- The EIS must include a lighting plan and an analysis of lighting impacts.

Federal and state DOT policy on utility accommodation must be considered – this has been an issue in previous transmission constructability and routing §5.2.1.

239-92

- Federal policy or policies regarding Utility Accommodation and statutory restrictions on sharing of Rights of Way must be disclosed and addressed.
- Specifically identify areas where planned route is not feasible due to easement considerations, i.e., fall distance, land not available, access roads not available.
- If analysis concludes that routes are infeasible, this should be clearly stated, and then remove infeasible route options from consideration.
- If aerial routes are infeasible, this should be clearly stated, and then aerial routes should be removed from consideration.

Conductor Blowout §5.2.1

239-93

- Conductor blowout is a factor in corridor sharing with MnDOT that was not adequately addressed in the DEIS. Blowout is the distance the conductor cables can blow away from the centerline in wind. For the majority of the length of this project, the right of

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239-90.

Section 5.1.4 and Appendix G review and discuss studies on potential property value impacts related to transmission lines. These studies represent of range of impact scenarios. Potential adverse impacts on local governments due to property value impacts would be difficult to quantify and would also require an estimate of potential positive impacts on local governments resulting from the transmission line. The cost of such an analysis would outweigh any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

Costs related to the acquisition of a ROW for the project are outside the scope of the EIS (Appendix A). To the extent the comment suggests that potential impacts described in the EIS should be monetized (if they could be estimated and monetized) and added to the cost of the project, such analysis, if it could be performed, would outweigh any relevance to a reasoned choice among system or routing alternatives. See Minnesota Rule 4410.2300, Subpart H.

The list of possible mitigation measures in Section 5.1.4 has been modified to include use by a qualifying landowner of Minnesota Statue 216E.12, subdivision 4.

239-91.

The comment's reference to a park is unclear. There are no parks near the Lakefield Junction substation or the proposed Huntley substation sites. No impacts due to substation lighting are anticipated as a result of the project, as there will be no incremental change in lighting with the project. ITCM indicates that no additional lighting will be installed at the Lakefield Junction substation as a result of the project. ITCM indicates that the Huntley substation will have 2-4 security lights. However, the Huntley substation is replacing the Winnebago Junction substation, which already includes similar lighting.

239-92.

MnDOT's utility accommodation policy is discussed in Section 5.2.1. EERA staff reviewed all routing options proposed during the EIS scoping decision with MnDOT staff to assess their feasibility particularly with respect to MnDOT's accommodation policy. All of the routing options included in the EIS scoping decision and analyzed in the EIS are feasible and could be permitted, as such permits are required, by MnDOT.

239-93.

As discussed in Section 5.2.1, the project must be constructed in conformance with MnDOT's accommodation policy. This means that any blowout of the transmission line must also conform to this policy. As discussed in Section 2.4 of the EIS, the project must be constructed in compliance with NESC requirements. These requirements provide for the safe operation of the line under all conditions, including windy conditions under which line blowout could occur. Diagrams depicting transmission line blowout have been added to Appendix C.

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239-93 continued

way is 150 feet, with just 75 feet on each side of the centerline. This means that in extreme winds, the conductor could extend beyond the edge of the right of way.[2]

- The MnDOT and birdseye blowout diagram should be presented in the EIS.[3]

Airports §5.2.4

239-94

- The EIS should include a spreadsheet of FAA listed public and private airports in the project area. The FAA lists airports by county. Airports are frequently left out of environmental review, and comments at EIS meetings reflect that this may well be the case with this EIS.

Electromagnetic fields §5.3

239-95

- The DEIS should address the full spectrum of Hz inherent in transmission, and not limit consideration to 60 hZ. Levels such as RV, microwave, and UV must be considered. See attached UV articles.

239-96

- The DEIS' acceptance of utility information without independent verification and independent calculation based on conductor specifications is insufficient – all utility claims as to current levels, amperage and MVA, must be independently verified.

239-97

- Electric fields should be calculated for a range of current potential.
- Magnetic fields should be calculated for:
  - Utility stated "peak" of 3,000 amps;
  - Thermal limits of ??? amps;
  - A range of amperage values in between.
- Magnetic fields should be calculated for a range of distances:
  - Under center line;
  - 25, 50, 75, 100, 125, 150, 200, 250, and 300 feet from the centerline;
  - Identification of distance at which mG level falls to 2 mG.
- Magnetic field levels must be calculated for a year that the project is projected to be operational, and ten years out, because this project is part of a 17 MVP project for export and use of the line will increase as more MVP projects are in service.
- Raymond Kirsch, Commerce Environmental Review Manager, and John Wachtler, Barr Engineering, have been provided with a magnetic field calculation spreadsheet, and a discussion was had previously about calculation of magnetic fields with John Wachtler, and a spreadsheet for this calculation is being eFiled with this comment.

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[2] Blowout chart of Exhibit available online: http://nocapx2020.info/wp-content/uploads/2010/02/blowout.pdf
[3] A "Birds Eye" blowout chart can be found online: http://nocapx2020.info/wp-content/uploads/2010/02/attachment4-full.pdf

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