

Federal Draft Environmental Impact Statement

Helpful ideas for your comments from volunteers and experts

These details are meant to be helpful as you prepare comments for submission to the RUS in person at hearings or online by April 1st. They are the findings of volunteer experts and do not necessarily represent the position of any of the opposition coalition partner groups or individuals.

Link to Fed DEIS: <https://www.rd.usda.gov/publications/environmental-studies/impact-statements/cardinal-%E2%80%93-hickory-creek-transmission-line>

EXECUTIVE SUMMARY section

The RUS accepts the six Project needs at face value. We request that a data-driven analysis be conducted to verify whether these needs actually exist and their size and scope.

Non-Transmission alternatives and Low-Voltage alternatives have been implemented in combination with each other to achieve all of the same goals cited in the Project's six-point need. The Final EIS must independently evaluate, for the Project and each Alternative, the potential benefits from fulfilling the six Project needs.

The list of potential environmental consequences applies to the transmission alternatives. Most of the listed concerns would not be present with Non-Transmission Alternatives. For consistency in the Final EIS, a separate list of Environmental Commitments associated with Non-Transmission Alternatives should be provided.

1. PAGE: ES-6

OMMISSION, MISSTATEMENT, OR THEME: (What is stated incorrectly, omitted or contrary to the public good?)

“The non-transmission, lower-voltage and underground alternatives were evaluated on the [above] six-point need for the Proposed Action, but were not carried forward for detailed analysis.”

First, the proposed CHC project and the RUS DEIS do not include quantitative or qualitative data supporting the Project's six-point need. In other words, it's not clear that the needs are significant or real.

Second, Non-Transmission alternatives and Low-Voltage alternatives have been implemented in combination with each other to achieve all of the same goals cited in the six-point need. The

high potential of NTAs is documented in the Energy Center of Wisconsin's 2009 study, "Energy Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin".

KEY CONCEPT: (From reviewer's perspective, how might one comment on this point?)

First, the Final EIS must include quantitative and qualitative data to verify the Project's claim that there are six Project needs. It's one thing to claim there is a need. It's another to demonstrate the size of the need. The quantitative and qualitative data must demonstrate the following regarding the six needs:

- a) What are the reliability failures the Project would resolve
- b) Where is congestion a limiting factor in supplying an adequate amount of electricity
- c) What are the lower prices of 'lower cost generation'
- d) What are the quantitative benefits from increasing transfer capability between WI and Iowa
- e) What is the evidence of line losses without the Project
- f) What are the *unmet* WI or Federal public policy requirements

Second, the Final EIS must independently evaluate, for the Project and each Alternative, the potential benefits from fulfilling the six Project needs. In other words, if the six Project needs actually exist and are significant, what would the energy savings be from fulfilling those needs with the Project and with all the Alternatives, including Non Transmission and Low Voltage Alternatives?

2. PAGE: ES-6

OMISSION, MISSTATEMENT, OR THEME:

"address reliability issues on the regional bulk transmission system and ensure a stable and continuous supply of electricity is available to be delivered where it is needed even when facilities (e.g., transmission lines or generation resources) are out of service;"

KEY CONCEPT:

First, the Final EIS must cite the reliability violations the Project or any Alternative would resolve. It's not clear that there any. Wisconsin is among the most reliable states for electricity.

Second, it's not clear that the economic value of avoiding reliability projects, or upgrades, justifies building the project. The Final EIS should include estimates of the economic value of the reliability projects or upgrades avoided by each of the Alternatives, including Non Transmission and Low Voltage Alternatives.

3. PAGE: ES-2

OMISSION, MISSTATEMENT, OR THEME:

“alleviate congestion that occurs in certain parts of the transmission system and thereby remove constraints that limit the delivery of power from where it is generated to where it is needed to satisfy end-user demand;”

KEY CONCEPT:

First, the Final EIS should clearly demonstrate where congestion is a limiting factor in supplying an adequate amount of electricity.

Second, the Final EIS should provide an estimate of the economic benefits for Wisconsin electric consumers of the ability of the Project and each of the Alternatives to relieve transmission congestion.

4. PAGE: ES-2

OMISSION, MISSTATEMENT, OR THEME:

“expand the access of the transmission system to additional resources including: 1) lower-cost generation from a larger and more competitive market that would reduce the overall cost of delivering electricity and 2) renewable energy generation needed to meet state renewable portfolio standards and goals and support the nation’s changing electricity mix;”

KEY CONCEPT:

First, the Final EIS should include evidence of lower prices.

Second, the Final EIS should include calculations of the energy savings from access to lower cost generation under modest, zero, and negative energy use growth for the Project and for all alternatives, including Non Transmission and Low Voltage Alternatives.

5. PAGE: ES-2

OMISSION, MISSTATEMENT, OR THEME:

“ increase the transfer capability of the electrical system between Iowa and Wisconsin;”

KEY CONCEPT:

First, there are strong indications in the DEIS that Wisconsin utilities will not increase their use of out-of-state energy to the degree suggested by the Applicants. Table 1.4-2 of the DEIS, volume one, lists 150 MW of in-state solar generation that would be owned by two WI utilities. None of the generation in Table 1.4-2 would require transfer capacity between Iowa and WI.

Second, the Final EIS should provide quantitative evidence of benefits from increasing the transfer capability (i.e. the amount of power transferred) between Iowa and Wisconsin. Because benefits depend on the amount of energy used, and energy use in the Midwest has been flat for the past decade, such a calculation should be carried out under modest, zero, and negative energy use growth.

6. PAGE: ES-2

OMISSION, MISSTATEMENT, OR THEME:

“reduce the losses in transferring power and increase the efficiency of the transmission system and thereby allow electricity to be moved across the grid and delivered to end-users more cost-effectively; and”

KEY CONCEPT:

First, the Final EIS should provide quantitative evidence of line losses without the Project.

Second, the Final EIS should include a quantitative assessment of the economic benefits that would arise from reducing line losses with the Project and with all the Alternatives under modest, zero, and negative energy use growth.

7. PAGE: ES-3

OMISSION, MISSTATEMENT, OR THEME:

“respond to public policy objectives aimed at enhancing the nation’s transmission system and to support the changing generation mix by gaining access to additional resources such as renewable energy or natural gas-fired generation facilities.”

First, it’s not clear that there are any unmet Wisconsin or Federal public policy requirements.

Second, priorities in Wis. Stat. §§ 196.025 rank the use of energy efficiency and conservation above that of the use of renewable energy and natural gas.

KEY CONCEPT:

First, The Final EIS should provide a comprehensive list of unmet Wisconsin or Federal public policy requirements.

Second, the Final EIS should include full discussion of Wis. Stat. §§ 196.025 and remove all statements asserting that only the Project meets the Six Need Test Points the RUS has drafted.

7. PAGE: ES-12

OMISSION, MISSTATEMENT, OR THEME:

Table ES-4. Environmental Commitments Common to All Action Alternatives

This list of potential environmental consequences applies to the transmission alternatives. Most of the listed concerns would not be present with Non-Transmission Alternatives.

KEY CONCEPT:

For consistency in the Final EIS, please provide a separate list of Environmental Commitments associated with Non-Transmission Alternatives.

Rob Danielson and Monica Sella

Chapter 1. Project Purpose and Need

It is not clear that the Project's purpose and need is verifiable. We request quantitative data demonstrating significant need in the six areas cited by the project.

We point out that with the seven high-voltage transmission lines already in place there has been minimal use of remote renewable energy and that such use has not significantly lowered carbon emissions. Non-Transmission Alternatives are lower in cost and directly and significantly lower carbon emissions.

Based on evidence provided, the net benefits to Wisconsin electric customers for CHC do not warrant the Project. We request that the final DEIS include monthly average energy savings over the life of the Project, which we estimate to be between half a cent and 6 cents per month per electric customer.

These monthly numbers aren't surprising given that the seven similar transmission lines built since 2005 have led to higher, not lower, rates and fees.

Rob Danielson and Monica Sella

1.2 Project Background

1.3 Electric System Reliability and Planning

1.4 Project Purpose and Need

The Draft EIS re-states and assumes with limited discussion and without any independent verification the purposes and needs asserted by the developers of the CHC line. In addition, it does little to quantify the seriousness of the needs asserted, making it difficult to compare the needs to the environmental impacts.

As an example, Section 1.4.2.3 on improved competitiveness, states that "A new transmission facility can improve the market structure and competitiveness if the facility enables external

suppliers to offer additional generation into a specifically defined market.” It goes on to give a few sentences on the theory behind this possibility. There is no attempt to quantify this, show that other lines have done this and to what extent or to otherwise make this “need” concrete. How can any environmental damage be measured against a theoretical benefit? Similarly, Section 1.4.3 speaks to reliability issues. It calls out the fact that the system is currently using operating guides to alleviate issues such as line overloads. It goes on to state that this may be acceptable but “...they do add complexity to real-time operations...” Again, how are we to measure the burden of complexity against the environmental impact? [CML]

1. PAGE: p. 13, CHAPTER 1.4.1

OMISSION, MISSTATEMENT, OR THEME: (What is stated incorrectly, omitted or contrary to the public good?)

“The C-HC Project would create an outlet for additional wind power that would bring electricity from the wind-rich areas of the upper Great Plains to load centers like Madison and Milwaukee, and to the remainder of the MISO footprint. The Utilities estimate that the incremental increase in transfer capability created by the C-HC Project would be approximately 1,300 MW throughout much of the year.”

KEY CONCEPT: (From reviewer’s perspective, how might one comment on this point?)

First, this excerpt is very misleading in that it implies that there would be 1300 MW more of wind energy transported by CHC. No evidence of demand for any such capacity is supplied. Interstate lines are open access lines with no guarantee as to what will actually be transported. The Final EIS should provide evidence and estimate the annual MWH of wind generation (generators in Table 2-2) that would be transported to “load centers like Madison and Milwaukee” only if the project was built and not transported on existing lines.

Second, Wisconsin will rely less and less on remote sources of renewable energy to meet renewable targets and CO2 reduction goals. The cost and environmental effectiveness of distributed generation in the form of energy efficiency, load management, and local community and residential solar and battery are such that adoption of an integrated mix of these renewable NTAs is a more viable alternative.

2. PAGE: p. 15, CHAPTER 1.4.2.1 ENERGY COST SAVINGS

OMISSION, MISSTATEMENT, OR THEME:

“When a new transmission line or non-transmission alternative is added to the electric system, prices in certain locations of the energy market can be lowered..... According to the Utilities’ planning analysis submitted as part of the application to the Wisconsin Public Service Commission, the C-HC Project would provide net benefits to Wisconsin customers of between \$23.5 million and \$350.1 million (American Transmission Company et al. 2018).”

KEY CONCEPT:

While this sounds impressive, a look at the impact on monthly electric bills over the 40 year life of the project suggests otherwise.

The Final EIS should provide the impact of the Applicants' estimated range of 40 year net benefits of \$23.5 to \$350.1 million on the average Wisconsin residential monthly electric bill over the assumed 40 year period (calculated in 2018 or 2023 dollars). Our *averaged* calculations show monthly energy savings of between half a cent and 6 cents per electric customer over the 40 year period.

**3. PAGE: p. 16, CHAPTER 1.4.2.3 IMPROVE COMPETITIVENESS
OMISSION, MISSTATEMENT, OR THEME:**

“.... The increased generation alternatives would increase competition, causing a reduction in market prices.... these reductions in market prices would also reduce end-user costs.”

KEY CONCEPT:

Since 2005, seven 345 kV expansion transmission lines have been added in Wisconsin under similar market pretenses, but end user costs (defined as both rates and fees) for Wisconsin electric customers have steadily increased. We note that the addition of these seven lines also coincides with Wisconsin joining the MISO electric market, which provides an excellent opportunity to test the electric market assumptions RUS has stated in Section 1.4.2.3.

Include in the Final EIS under Section 1.4.2.3 independent, quantitative analysis of Wisconsin average annual rates and facility fees for Dairyland Power Cooperative, WE Energies, Madison Gas and Electric, Wisconsin Public Service and Wisconsin Power and Light from 1990-2005 and from 2006-2017. Please include an explanation of the findings or, if not possible, indicate that market impacts on end user costs have not been confirmed.

4. PAGE: p. 17, CHAPTER 1.4.3 ADDRESS RELIABILITY ISSUES ON THE REGIONAL BULK TRANSMISSION SYSTEM

OMISSION, MISSTATEMENT, OR THEME:

“There are several transmission line overloads in southwestern and south-central Wisconsin. The three most serious overloads that must be eliminated under NERC requirements occur on the:

- **Turkey River–Stoneman 161-kV transmission line, connecting ITC Midwest to Dairyland;**
- **Turkey River–Stoneman 161-kV transmission line; and**
- **Townline Road-Bass Creek 138-kV transmission line.”**

KEY CONCEPT:

It's not clear that these facilities are in fact in violation of NERC requirements. Please include in the Final EIS references to NERC authored documentation demonstrating violations or other NERC recorded concerns involving the three above listed facilities.

Please also explain whether each of the three transmission facilities would be likely candidates for improvements with a Low Voltage Transmission Alternative.

5. PAGE: p. 17, Section 1.4.3 Address Reliability Issues on the Regional Bulk Transmission System

OMISSION, MISSTATEMENT, OR THEME:

“The Utilities have also identified 46 existing overloads that would be eliminated by the C-HC Project.”

KEY CONCEPT:

Please provide the source citation for the above quoted statement and include a listing of the potentially affected 46 transmission facilities by name and issue, the assumed demand growth rate(s), and the years that the facilities would be impacted if the Project was not built.

Rob Danielson and Monica Sella

1.5 Purpose of and Need for Federal Action

1.6 Required Federal and State Agency Approvals

1.7 Public Participation for Federal Decisions

Chapter 2. Proposed Project and Alternatives

“Energy Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin”, a study completed by the Energy Center of Wisconsin (2009), reveals the potential and power of Non-Transmission Alternatives to achieve energy goals.

Counter to what the RUS DEIS states, all components of non-transmission alternatives satisfy all six points that RUS has devised to test need for the project and all alternatives. The six points are:

- 1) increase transmission reliability
- 2) reduce transmission congestion
- 3) access lower cost generation and renewables
- 4) increase the transfer capability between Iowa and Wisconsin
- 5) reduce power transfer losses
- 6) respond to public policy objectives

We request a revision of all statements claiming NTAs cannot meet the six-point need test. And we ask that the Final EIS include a detailed analysis of distributed solar, energy efficiency, storage, and load management.

1. PAGE: p. 31, Chapter 2. PROPOSED PROJECT AND ALTERNATIVES

OMISSION, MISSTATEMENT, OR THEME: (What is stated incorrectly, omitted or contrary to the public good?)

“ Under NEPA regulations established by the Council on Environmental Quality (CEQ), this DEIS identifies and evaluates reasonable alternatives to the proposed project, as well as the No Action Alternative. Reasonable alternatives are those that are “practical or feasible from the technical and economic standpoint and *using common sense, rather than simply desirable from the standpoint of the applicant*” (CEQ 1981: Question 1) (40 CFR 1502.14).”

KEY CONCEPT: (From reviewer’s perspective, how might one comment on this point?)
It is not clear in the present DEIS that RUS followed the NEPA regulations as stated above.

In the Final EIS, in Tables 1.7-4 and 1.7-3 listing Municipal and NGO parties, please provide descriptions of the Non-Transmission Alternatives *each party* submitted during the scoping phase. Please include active links to the pertinent comment documents on record.

2. PAGE: p. 31, Chapter 2. Proposed Project and Alternatives

OMISSION, MISSTATEMENT, OR THEME:

In determining reasonable alternatives, RUS considered a number of factors such as the Proposed Action’s purpose and need (described in Chapter 1), *state of the art technology, economic considerations, legal considerations, comments received during the scoping period, availability of resources, and the time frame in which the identified need must be fulfilled.*”

KEY CONCEPT:

In the Final EIS, in Tables 1.7-4 and 1.7-3 under the descriptions of the Non-Transmission Alternatives submitted, itemize the *components* suggested, (e.g. Town Delegation concerning load management, Town Delegation concerning energy efficiency, Town Delegation concerning substation supporting utility/community solar) and state whether each suggested NTA component took into consideration each of these criteria:

- State of the art technology
- Availability/Study Area Applicability
- Economic considerations

- Time Frame considerations

Rob Danielson and Monica Sella

2.1 Development of Alternatives

2.2 Alternatives Considered but Not Evaluated in Detail

Section 2.2.2 re-states the purported needs for the CHC line in order to measure the non-transmission alternatives against them. The way that the needs are re-stated compounds the issues noted under 1.4 above.

First, the needs are re-stated as absolutes. The manner in which they are re-stated makes it virtually impossible for any portfolio of non-transmission alternatives to meet those needs. It is written in such a way that the overarching need is “to increase the capacity of the regional transmission system.” This must be done, says the draft, to do things such as “expand the access of the transmission system to additional resources” and “increase the transfer capability of the electrical system between Iowa and Wisconsin.” As discussed under Section 1.4, many of the needs put forth are not quantified or are theoretical. Now they are re-stated as black and white needs.

Second, the draft EIS considers each non-transmission alternative separately against the full portfolio of needs and the full capacity of the proposed CHC line. The portfolio of non-transmission alternatives is not considered as a whole even though a combination of alternatives likely what would be used.

As a result of these two things, each non-transmission alternative fails and is therefore not given a detailed analysis.

As an example, Section 2.2.2.4 discusses demand response. The draft EIS states that demand response does not meet 4 of the 6 needs identified. It states that it fails to: (1) address reliability issues on the regional bulk transmission system at a scale commensurate with transmission, (2) expand the access of the transmission system to additional resources, (3) reduce the losses in transferring power, or (4) respond to public policy objectives aimed at enhancing the nation’s transmission system and supporting the changing generation mix..

In addition, picking up on the language in (1) above, the draft EIS specifically dismisses demand response because “the level of demand response needed to provide sufficient congestion relief to match the scope of the C-HC Project, is not known to currently exist.” But what about a combination of demand response, distributed generation, energy efficiency, etc.?[CML]

3. PAGE: p. 56, 2.2.2.1 REGIONAL AND LOCAL RENEWABLE ELECTRICITY GENERATION

OMISSION, MISSTATEMENT, OR THEME:

“Many comments received during public scoping suggested that RUS consider community-scale and residential photovoltaic solar projects as an alternative to constructing a 345-kV transmission line..... Thus, without sufficient power storage

capacity residential photovoltaic solar systems have limited usefulness in resolving the identified grid reliability deficiencies in the region.”

KEY CONCEPT:

We take issue with this statement. By design, NTAs address reliability needs defined by the low-voltage transmission alternative.

As described on p.6 and p.19 of Town Delegation suggestions about NTA design, [<https://www.rd.usda.gov/files/uwp-lgc.pdf#page=6> <https://www.rd.usda.gov/files/uwp-lgc.pdf#page=19>], solar facilities positioned adjacent to substations of identified transmission facilities reduce local load, increase pass-through transmission capacity, and prolonging the lifespan of expensive components such as transformers, thereby addressing reliability deficiencies and avoiding the reliability costs of doing upgrades.

The Final EIS must independently evaluate, for the Project and for residential solar and substation supporting solar facilities, the potential benefits from mitigating grid reliability deficiencies. In lieu of providing this detailed analysis, significantly amend or omit the “Six Point Need Test from the RUS’s DEIS including all mention of it in section 2.2.2.

4. PAGE: p. 56, 2.2.2.1 REGIONAL AND LOCAL RENEWABLE ELECTRICITY GENERATION

OMISSION, MISSTATEMENT, OR THEME:

“The average residential solar project, also known as rooftop solar, is 5 kilowatt (kW) (U.S. Energy Information Administration 2015). ... For context, as of December 2017, approximately 85 MW of solar generating capacity has been installed in Wisconsin (RENEW Wisconsin 2017).”

KEY CONCEPT:

These numbers appear to come from Renew Wisconsin, a party in the contested case before the Wisconsin PSC, and must be verified In the Final EIS with data from recent, state-required Focus on Energy Evaluation document(s).

5. PAGE: pp. 56-57, Section 2.2.2.2 ENERGY STORAGE

OMISSION, MISSTATEMENT, OR THEME:

p. 56, DEISv1, – “...storage would be required to replace the increased transfer capability that would be provided the C-HC Project.”

P. 57 – “However, a tremendous amount of storage would be required to replace the increased transfer capability that would be provided the C-HC Project.”

KEY CONCEPT:

The current DEIS contains no evidence of a need for the proposed 1200-1300 MW of increased transfer capability.

At this time, load management is a more affordable NTA component than battery storage. Battery storage could be evaluated to supplement load management, solar, and energy efficiency resources during late afternoon and evening hours of summer peak demand. The Final EIS should independently evaluate 40 year energy savings per kW from economically prudent, targeted installations of battery storage. In lieu of providing this detailed analysis, significantly amend or omit the “Six Point Need Test from the RUS’s DEIS including all mention of it in section 2.2.2.

6. PAGE: p. 58, SECTION 2.2.2.3 ENERGY EFFICIENCY

OMISSION, MISSTATEMENT, OR THEME:

“ Participation in energy efficiency programs is voluntary in Wisconsin (PSCW 2011).”

KEY CONCEPT:

In the Final EIS, please detail for Wisconsin ratepayers and decision makers the Focus on Energy incentives for all types of distributed generation including those for home and business solar development. Please also provide a description of the monetary and environmental achievements of the entire program.

In the Final EIS, please include Wisconsin statutory requirements pertaining to Energy Efficiency.

A sample from one PSCW document reads:

The Wisconsin Public Service Commission must address the priorities in Wis. Stat. §§ 196.025 requiring the Commission to give priority to specific methods of meeting energy demands to the extent these methods are “cost-effective and technically feasible.”

The Commission must consider options based on the following priorities, in the order listed, for all energy-related decisions:

- Energy conservation and efficiency
- Noncombustible renewable energy resources
- Combustible renewable energy resources
- Nonrenewable combustible energy resources, again in the order listed:
 - ~ Natural gas
 - ~ Oil or coal with a sulfur content of less than one percent o All other carbon-based fuels

7. PAGE: p. 58, SECTION 2.2.2.3 ENERGY EFFICIENCY

OMISSION, MISSTATEMENT, OR THEME:

p. 58, DEISv1, “To replace th[e] [P]roject with energy efficiency, energy-efficiency efforts would have to eliminate demand to a level that all the Renewable Portfolio Standards and Goals would be met with existing renewable resources and that the reliability and congestion benefits would be achieved through a dramatic reduction in flows on the regional grid.”

KEY CONCEPT:

In the Final EIS, please provide the independent, quantitative analysis substantiating the above statement or remove/modify the statement. Specifically, address the following:

- a) There is no data demonstrating plans for WI utilities to contract renewable energy from wind facilities RUS has assumed are *contingent* upon approval of the Project.
- b) There is, as yet, no comprehensive list of unmet Wisconsin or Federal public policy requirements pertaining to renewable energy. If available, please include the listed documents in the Final EIS appendices
- c) There is, as yet, no independent quantitative analysis under modest, zero and negative load growth to estimate the economic benefits of the Project and all Alternatives from relieving transmission congestion and avoiding reliability projects (upgrades).
- d) In lieu of conducting this analysis, please explain in the Final EIS Executive Summary whether the Applicants have estimated these savings in their calculations of 40 year, net benefits ranging from \$23.5 to \$350.1 million for Wisconsin electric customers.

8. PAGE: p. 58, SECTION 2.2.2.3 ENERGY EFFICIENCY

OMISSION, MISSTATEMENT, OR THEME:

“MISO considered energy efficiency in all four of its futures modeling efforts and found that energy efficiency could not eliminate the need for the C-HC Project (Dairyland et al. 2016a).”

KEY CONCEPT:

This information appears to be outdated. In Section 2.2.2.3 in the Final EIS, please cite the date of this early MISO publication and name the involved futures referenced by Dairyland so that decision makers and electric customers are less likely to confuse this publication with more recent information.

Please also incorporate the need to follow Wisconsin statutory requirements in meeting energy demands by exploring combinations of the higher priorities that include energy efficiency, conservation, and non-combustible renewable energy resources (Wis. §§ 196.025).

9. PAGE: p. 58, SECTION 2.2.2.3 ENERGY EFFICIENCY

OMISSION, MISSTATEMENT, OR THEME:

“Implementing energy efficiency programs also would have to be monitored continuously to make sure that load levels do not increase to the point where they cause problems for the transmission system (PSCW 2011).”

KEY CONCEPT:

There is no data to indicate that this is, in fact, an issue. Indeed, the smoothing effect of energy efficiency is expected to increase in coming years. [See EIA: *Electricity intensity of U.S. homes and commercial buildings decreases in coming decades*, <https://www.eia.gov/todayinenergy/detail.php?id=38332>]

Please substantiate this above cited statement on p.58 with independent or third party evidence or remove it entirely from the Final EIS.

10. PAGE: p. 58, SECTION 2.2.2.3 ENERGY EFFICIENCY

OMISSION, MISSTATEMENT, OR THEME:

“In addition, energy efficiency does not meet the primary six-point need for the Proposed Action.”

KEY CONCEPT:

By virtue of its ability to provide economic benefits under needs 1-5 of the “Six Point Need Test,” energy efficiency matches any qualification of need ascribed to the Project or other Alternatives under the test the RUS has drafted. For need #6 of the test, cost effective uses of energy efficiency rank this resource as preferred in addressing need by virtue of Wis. §§ 196.025.

The potential of energy efficiency is noted in the 2009 report, “Energy Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin study.” In this section in the Final EIS, please include quotations from the PSC’s press release that accompanied the 2009 study. See <https://www.seventhwave.org/sites/default/files/PS2009release.pdf>

The Final EIS should independently evaluate 40 year energy savings per kW from accelerated investments in energy efficiency. In lieu of providing this detailed analysis, significantly amend or omit the “Six Point Need Test from the RUS’s DEIS including all mention of it in section 2.2.2.

11. PAGE: p. 58, SECTION 2.2.2.4 DEMAND RESPONSE

OMISSION, MISSTATEMENT, OR THEME:

“ FERC defines demand response as “changes in electric use by demand-side resources [consumers] from their normal consumption patterns in response to changes in the price

of electricity, or to incentive payments designed to induce lower electricity use at times of high wholesale market process or when system reliability is jeopardized.”

“The level of demand response needed to provide sufficient congestion relief to match the scope of the C-HC Project, is not known to currently exist.”

KEY CONCEPT:

The amount of Demand Response, or “Load Management,” required to retain reliability standards is a function of the kW capacity reduction required for each reliability project to meet *potential* increases in demand, as determined under a range of growth scenarios.

In the Final EIS, please use Pro Mod to calculate projected congestion conditions under a range of growth scenarios for the Project and the Demand Response Alternative to arrive at an estimate of congestion-related economic savings created from Demand Response.

12. PAGE: p.58-59, DEMAND RESPONSE

OMISSION, MISSTATEMENT, OR THEME:

“The PSCW has noted that the Energy Efficiency and Customer-Sited Renewable Resource Potential in Wisconsin study completed by the Energy Center of Wisconsin (2009) suggests that peak demand could cost-effectively be reduced by 1.6% annually on a statewide basis, after a ramp-up period. If this level of reduction could be achieved in the C-HC Project area, peak demand growth could be negative. However, as indicated above, there is no regulatory authority to ensure energy user compliance with load reduction and energy efficiency goals and, thus, no mechanism has been identified that would ensure adequate participation over time (PSCW 2011).”

KEY CONCEPT:

In the Final EIS, please include the above paragraph in both the energy efficiency and the distributed renewable energy sections where decision-makers and electric customers will be able to better understand the profound significance of the very high potential of NTA’s based on the Energy Center of Wisconsin’s 2009 study.

13. PAGE: p.58-59, DEMAND RESPONSE

OMISSION, MISSTATEMENT, OR THEME:

“The PSCW has previously noted that demand response programs rely on voluntary compliance by electricity users.”

KEY CONCEPT:

In the bi-annual Strategic Energy Assessment 2022, PSCW tracks the availability of load management resources in Wisconsin. Table 5, *Available Amounts of Programs and Tariff to Control Peak Load, MW* on p. 20 shows a significant amount that is projected to increase. See: <https://psc.wi.gov/Documents/Reports/SEA2022.pdf#page=20>

As RUS, indicates, the program is driven by economic demand in Wisconsin. In the Final EIS, include Table 5 data and an explanation that the PSC of Wisconsin projects Demand Response programs to grow in coming years.

Rob Danielson and Monica Sella

2.3 Description of Alternatives

Section 2.3.1 briefly discusses the no-action alternative. It states that this alternative “provides a benchmark, enabling decision makers to compare the magnitude of environmental effects of the action alternatives.” It goes on to state in two very short paragraphs, that under the no-action alternative (1) wind generation in Iowa would not be adequately served, (2) operating guides would need to stay in place, and (3) other transmission improvements would likely be needed in the future (Table 2.4-1 is referenced, but it is not clear this is the right table).

I was unable to find a summary of the environmental impacts compared to the no-action alternative. Instead, within each section the draft EIS simply states that under the no-action alternative the line would not be built and there would be no impacts. There is no actual conclusion as to the magnitude of the environmental impacts as compared to the short-falls of the no-action alternative stated in Section 2.3.1. When combined with the fact that many of the asserted needs for the line are not really quantified there is limited useful benchmarking in the draft EIS. [CML]

Section 2.3.2.4 describes the environmental impacts of Alternative 4 - The South Baseline Corridor. This corridor is part of the route identified by CHC’s developers as their preferred route. There are missed impacts here and, therefore, I assume there are misses on other routes as well. As an example, nowhere in the document do I see the impact of this route on the baseball fields located in Barneveld and Cobb, but I believe that each of these is within the 300 foot analysis area. [CML]

3.12.2.3.5 Property Values

This section discusses property values, citing numerous studies that lead to the conclusion that the negative impact on home values would be moderate and short-term. The problem here is that the studies cited seem to have been conducted in urban and suburban landscapes, very different from the rural landscape of Southwest Wisconsin. The studies cited contradict a study cited in a Wall Street Journal article as well as the presentation given by Kurt Kielisch and the testimony of a landowner in Ridgeway (at the Iowa County Board Meeting) who has been trying to sell his property for over a year. There are gaps here including: what the impact of the lines would be on rural property land values, the impact on organic farm values and artisan cheesemakers’ businesses, and on landowners for whom their properties are their retirement fund. (*Michelle Citron*)

2.4 Description of the Proposed Project

2.5 Connected Actions

2.6 Comparison of Alternatives

Chapter 3. Affected Environment and Environmental Consequences

3.1 Introduction 3.1.1 General Project Setting

From WI GreenFire comments: diversity of region provides critical habitat for dozens of species of concern in the WI State Wildlife Action Plans.

Public trust lands on the route include Federally Managed: Upper Mississippi River National Wildlife and Fish Refuge and Ice Age Scenic Trail AND State Managed: Belmont Mound, Blue Mound, Governor Dodge State Park, Military Ridge and Pecos Trails, Blackhawk Lake Recreation Area, Military Ridge Prairie Heritage Area, Southwest WI Grassland and Steam Conservation Area, Belmont Prairie, Thompson Memorial Prairie, Erbe Grassland Preserve, Pleasant Valley Conservancy, Ridgeway Pine Relict, Wyoming Oak Woodlands/Savanna, Ihm Driftless Area, Thomas Driftless Area.

Public trust waters on route: Mississippi River, Lower Wisconsin State Riverway, Grant and Platte Rivers, Jack Oak and Cassville Sloughs, headwaters of the Sugar and Pecos watersheds and more than twenty Class 1 or Class 2 trout streams in Dane and Iowa counties including Black Earth Creek and Trout Creek Fishery and Wildlife Areas, Conley Smith Creek, Elvers Creek and Love Creek.

Rebuild and possible relocation of crossing Mississippi River at Cassville, WI.

3.2 Geology and Soils

3.3 Vegetation, including Wetlands and Special Status Plants

From WI GreenFire comments: Habitat fragmentation of rare natural ecosystems like pine relicts, grasslands of dry and dry-mesic, sand and mesic of tallgrass prairie. Plus fragmentation of rare algalic talus slopes that are known only in the Driftless Area. Threats to periglacial relicts such as northern monkshood. Introduction of native-threatening invasive species through construction, maintenance and management practices.

3.4 Wildlife, including Special Status Species

From WI GreenFire comments: Fragmentation and potential destruction of habitat of globally rare terrestrial snails, grassland birds (which are in serious decline).

Sediment in trout streams can cover invertebrate food sources and inhibit spawning by preventing adequate oxygen exchange. Invasive species reduce stream bank plant biodiversity and decrease insect food production (a valuable source of food for fish) as well as decrease small mammal, bird, reptile and amphibian species associated with cold water ecosystems (some of these species are considered state threatened or endangered). Aquatic invasives can be introduced by "hitchhiking" on machinery crossing the lengthy proposed corridor including New Zealand mud snails, zebra mussels, Eurasian milfoil and *Myxobolus cerebralis* (a parasite fatal to salmonids like trout).

Eight species that are federally listed as threatened or endangered may occur in the CHC route area: whooping crane, northern long-eared bat, rusty patch bumblebee, Hine's emerald dragonfly, Iowa Pleistocene snail, Higgin's eye pearly mussel, sheepsnose mussel, and spectacle case mussel. All potential areas where these species reside need special evaluation in the EIS. (Other species of concern and those on state endangered lists can be found on page 7-8 of the WI GreenFire comments.)

Avian and bat species -- creating and maintaining habitat for grassland birds and bats has been a special project called the Bird Conservation Area (BCA) and encompasses more than 10,000 acres of public and private land (Southwest Wisconsin Grassland and Stream Conservation Area - SWSGCA). Birds and bats that depend on this area for habitat will likely be adversely affected by the CHC due to habitat loss, degradation or fragmentation. Raptors, grassland birds, songbirds, bats -- all need special evaluation to determine the effects of habitat fragmentation. The Federal EIS must address avian mortality from collisions with power lines (8-57 million bird deaths annually), the declining bat population and address indirect mortality of bats, birds and other species or behavioral modifications that lead to mortality. [EB]

3.5 Water Resources and Quality

From WI GreenFire comments: Coldwater streams and headwaters/springs that are critical source of groundwater for the cold and cool water communities and habitat for several rare species. Wetlands and southern sedge meadows that are common with groundwater systems as well as emergent marshes and floodplain forests -- all threatened by potential fragmentation, destruction or invasive species. Wetlands are fairly scarce in the Driftless and therefore the significant of functional value of wetlands in this region is higher. All wetlands need to be identified and evaluated, surveyed and assessed for potential impact directly, secondary impact or cumulative impacts. A Nationwide Permit (NWP) must be obtained for any project that discharges dredged material or fill into wetlands to determine compliance with National Environmental Policy (NEPA) and The Clean Water Act (CWA).

A mitigation plan is only required for certain wetland areas proposed to be filled and is not required for the majority of the adverse environmental impacts expected to occur including

impacts to upland habitats, wildlife, degraded but not filled wetlands, areas invaded by non-native invasive species, irreversible losses to rare communities and loss of restoration potential. [EB]

3.6 Air Quality

3.7 Noise

3.8 Transportation

3.9 Cultural and Historic Resources

3.10 Land Use, including Agriculture and Recreation

From WI GreenFire comments: Land trusts, natural area managers and others need to conduct regular prescribed burning regimes to support rare fire-dependent ecosystems and this plus other restoration work would likely be restricted in powerline corridors. Important areas would be degraded, but also may not be eligible for Conservation Reserve Program (CRP) payments, possibly leading to increased erosion and sedimentation if the land is instead farmed. All CRP land within the corridor needs to be evaluated. [EB]

Trout streams, bird-watching, public trust lands for hunting and fishing. Trout stream demand far exceeds public access in SW Wisconsin. Tourism accounts for \$20.6 billion of WI economy annually and supported almost 200,000 jobs in 2017. The Driftless area's tourism supports robust economy and must be considered in the EIS -- the towers would have a deleterious effect on the natural beauty of the area thus reducing the draw for recreation and tourism. [EB]

3.11 Visual Quality and Aesthetics

3.11 defines a major visual impact as one where changes to the characteristic landscape would be considered significant when those changes dominate the landscape and detract from current user activity. A moderate visual impact is one where proposed changes would attract attention and contribute to the landscape, but would not dominate the landscape and user activities would remain unaffected.

Section 3.11.2.7.1 states that there are 9 private residences within the right of way (ROW) of Alternative 4 and 52 within the 300 foot analysis area but outside of the ROW. It goes on to state that the 9 would have a major impact from the project and the rest would have a moderate impact. Given the definitions above these classifications seem wrong. A home located within 300 feet of the project will have a view that is dominated by it and the line will detract from the use of the home. There are 10 homes on a single street in Mt. Horeb and at least 20 homes in

Cobb within this area, meaning that entire subdivisions and communities will experience these major impacts.

In addition there are baseball fields in Barneveld and Cobb within the 300 foot analysis area and not mentioned anywhere in the draft EIS. [CML]

3.11.2.3.2 Scenic Resources

This section includes a number of photographs of the proposed routes with simulated photos of how the towers will look in the landscape. The simulated photographs uses numerous techniques, well known to photographers, to diminish the visual impact of the towers. These include using wide angle lenses that distort perspective making the towers in the distance look smaller than they would to the eye, shooting from high up looking down on the towers which also make them look smaller than they would in the landscape, inserting the towers in a landscape with trees fully leafed out that hides and visually distracts the eye from seeing the towers, and shooting a tower in town that is placed amidst distribution lines diminishing its visual impact. They never place a person in the landscape, which would give a more accurate depiction of the massive size of the towers or their visual impact in the landscape. (*Michelle Citron*)

3.12 Socioeconomics and Environmental Justice

From GreenFire comments: The economic value of conserved lands needs to be evaluated as well. This includes all the prairie lands, water resources and streams that have been significantly invested in by the USDA's Natural Resources Conservation Service, USFWS, Farm Service Agency and Farm Bill Programs, WI DNR, The Nature Conservancy, The Prairie Enthusiasts, Pheasants Forever, DALC, Trout Unlimited, FLOW, Lower WI State Riverway, etc. [EB]

3.13 Public Health and Safety

3.14 Upper Mississippi River National Wildlife and Fish Refuge

From WI GreenFire comments: The USFWS would need to issue a special permit and easement across its lands for construction in the refuge. USFWS has authority and trust responsibility under the Endangered Species Act, Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The Refuge Manager would need to complete a written compatibility determination to assure that CHC would not "materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission and or the purpose(s) of the national wildlife refuge."