DRIFTLESS AREA LAND CONSERVANCY’S COMMENTS TO THE
RURAL UTILITIES SERVICE ON ITS SCOPE OF THE
ENVIRONMENTAL IMPACT STATEMENT IN DECIDING WHETHER TO FINANCE THE
PROPOSED CARDINAL-HICKORY CREEK TRANSMISSION LINE AND TOWERS

Submitted on behalf of the
Driftless Area Land Conservancy
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INTRODUCTION AND OVERVIEW

The Driftless Area Land Conservancy and its members, by their attorneys, submit these comments to inform the Rural Utilities Service’s (“RUS”) scoping process for the Environmental Impact Statement (“EIS”) on its decision whether to finance the proposed large Cardinal-Hickory Creek transmission line and tall towers in the Driftless Area of southwest Wisconsin and northeast Iowa. The RUS’s EIS must “[r]igorously explore and objectively evaluate all reasonable alternatives,” including no-build and robust non-transmission alternatives. 40 C.F.R. §§ 1502.2, 1502.14(a), 1508.25(b). The RUS must evaluate claims of “need” for these proposed costly transmission line based on the current factual data showing flat demand for electricity in Wisconsin. RUS must evaluate whether any purported need can be met through alternatives that result in less harmful environmental impacts. 42 U.S.C. §§ 4321, 4331, 4332(2)(C)&(E). The RUS must consider all reasonable direct environmental effects and indirect environmental effects of the proposed large Cardinal-Hickory Creek transmission line, and cumulative environment impacts in light of the nearby Badger-Coulee transmission line. 40 C.F.R. §§ 1508.7, 1508.8, 1508.25.

The Driftless Area is a unique eco-region and special scenic landscape. The Driftless Area is recognized internationally and by the Departments of Natural Resources in four states as a region of vital conservation opportunity and concern. This region contains multiple rare habitats, and it is the largest contiguous area of fish and wildlife habitat in the Upper Mississippi River basin area. Because this area was untouched by glaciers – they didn’t “drift” – during the last Ice Age, the landscape was not scraped and flattened, and many unique natural communities remain. The special and beautiful Driftless Area topography thus contains hundreds of rolling hills with deep river valleys nestled in woodland, prairie and riparian habitats. More than 1,200
streams, including world-class trout fishing streams, traverse more than 4,000 river miles and create a network of 600 spring-fed creeks that flow through porous limestone bedrock, sustaining many uncommon species and serving as a rest stop for more than half of North America’s migratory bird species.

This huge transmission line is not needed for electricity reliability in Wisconsin, and it would harm beautiful scenic rural landscapes, and degrade clean rivers and streams. The Driftless Area is a region deeply valued by its residents and tourists alike. The U.S. Department of Agriculture recognizes that the Driftless Area’s “diversity of habitat provides critical habitat for dozens of species of concern in the State Wildlife Action Plans, and has been cited as one of North America's most important resources.” ¹

The Driftless Area Land Conservancy (“DALC”) is a not-for-profit conservation organization with many local members who work to maintain and enhance the health, diversity and beauty of southwest Wisconsin's natural and agricultural landscape through permanent land protection and restoration and other preservation actions, and to improve people's lives by connecting them to the land and to each other. DALC protects land and other natural resources in the southwest Wisconsin area around the proposed Cardinal-Hickory Creek transmission line corridors. DALC has serious concerns about the significant adverse environmental impacts of the proposed transmission line and very tall towers in the Driftless Area. DALC’s members and volunteers live in, own property in, and use and enjoy the Driftless Area near the proposed transmission line corridors. DALC members hike, fish, camp, hunt, bike, swim, boat, ski, picnic and otherwise enjoy the state parks, natural areas, recreation areas, scenic landscapes and other resources that would be harmed by the proposed transmission line and very tall towers.

The controversial proposed Cardinal-Hickory Creek high-voltage 345 kV transmission line and its very tall towers would cut a large swath for up to 135 miles through many vital natural resource conservation areas in the Driftless Area. American Transmission Company’s, ITC’s and Dairyland Power Cooperative’s (“Dairyland”) proposed transmission line is estimated to cost at least $500 million to build, plus financing costs and then the annual “rate of return” (i.e., profit) that would be charged to consumers.

The proposed huge Cardinal-Hickory Creek transmission line would start in Dubuque County, Iowa, cross the Mississippi River at Cassville, cut through the protected Upper Mississippi River National Wildlife and Fish Refuge, and then run through various proposed corridors, cutting a swath through designated conservation areas and some of Wisconsin’s most scenic landscapes before terminating in Middleton just west of Madison. This proposed transmission line and towers would run by and through parklands and conservation areas such as the Military Ridge Prairie Heritage Area, which the Wisconsin Department of Natural Resources identifies as the highest priority for landscape-scale grassland protection and management in Wisconsin, and the continentally significant Dodgeville and Wyoming Oak Woodlands/Savanna Conservation Opportunity Area.

RUS’s scoping of the EIS must fully and fairly consider a number of key issues and alternatives under the governing law. The National Environmental Policy Act (“NEPA”), Council on Environmental Quality regulations and guidance, RUS’s own NEPA implementing regulations, and the applicable case law include many specific requirements for the EIS. To meet those requirements, the RUS’s EIS must do the following in its scope and implementation:

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2 RUS has already determined that this proposed project is in the “mandatory EIS” category under subpart D of RUS’s new 2016 NEPA regulations. 7 C.F.R. § 1970.151.
1. The “purpose and need” section of the EIS must in broad terms describe the overall purpose and need to which RUS is responding in deciding whether or not to provide financing for the Cardinal-Hickory Creek transmission line. It cannot foreclose the requirement that RUS “rigorously explore and objectively evaluate all reasonable alternatives,” including both no-build alternatives and non-transmission alternatives, respectively. 40 C.F.R. § 1502.14. If RUS’s purpose and need statement was limited to analyzing only different corridors for this proposed transmission line, that would violate NEPA. See, e.g., Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664, 667 (7th Cir. 1997) (agency violated NEPA by defining impermissibly narrow purpose for project and failing to consider a full range of alternatives).

2. The EIS must fully and fairly analyze current objective, factual data in determining the purported “need” for the proposed new transmission line to import power into the Madison area for electricity reliability. As shown below, electricity demand in Wisconsin (and northern Illinois) is actually flat and potentially declining. See Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 349 (1989) (“[NEPA] ensures that the agency, in reaching its decision, will have available, and will carefully consider, detailed information concerning significant environmental impacts; it also guarantees that the relevant information will be made available to the larger audience that may also play a role in both the decisionmaking process and the implementation of that decision.”). 40 C.F.R. § 1500.1 (“The information [in NEPA documents] must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.”).

3. The EIS must “rigorously explore and objectively evaluate” a full range of “all reasonable alternatives.” The EIS must analyze the significant environmental impacts of the proposed transmission line and tall towers, and also all reasonable alternatives, including both:
(1) a no-build alternative, and (2) non-transmission alternatives. These non-transmission alternatives should include a combination of implementing energy efficiency, demand response, new wind power and solar energy development, and other distributed generation in Wisconsin, batteries and other energy storage development in Wisconsin, and local reliability improvements. 42 U.S.C. § 4332(2)(C) & (E); 40 C.F.R. §§ 1502.2, 1502.14, 1502.16.

4. The EIS must address the full range of all significant direct, indirect and cumulative environmental impacts, including all of the topics that the RUS outlined at its scoping meetings. The proposed Cardinal-Hickory Creek transmission line will have significant adverse effects on the environment in the Driftless Area. It would run by and through parklands and conservation areas such as the Military Ridge Prairie Heritage Area, the continentally-significant Dodgeville and Wyoming Oak Woodlands/Savanna Conservation Opportunity Area, and the Upper Mississippi River National Wildlife and Fish Refuge. It would impact the Pecatonica State Trail, Military Ridge State Trail, Blue Mound State Park, and Governor Dodge State Park, and cause habitat destruction that would impact many species. It would harm many trout streams, and exceptional and outstanding water resources. The transmission line would also negatively impact and impair the value of privately-held conservation easements, including several held by DALC. Moreover, RUS must examine the “cumulative impacts” of the new Badger-Coulee transmission line and the proposed Cardinal-Hickory Creek transmission line in the Driftless Area. These and additional impacts of the proposed project must be thoroughly analyzed in the EIS, and compared to the impacts of all reasonable alternatives. 40 C.F.R. §§ 1502.14, 1502.16, 1508.7, 1508.8, 1508.25.

5. The EIS must address conflicts with Wisconsin’s siting law for proposed new high-voltage transmission lines.
I. RUS MUST DEFINE THE PURPOSE AND NEED TO BE SUFFICIENTLY BROAD IN ORDER TO ENABLE FULL CONSIDERATION OF ALL REASONABLE ALTERNATIVES, AND IT CANNOT BE NARROWLY DEFINED IN WAYS THAT FORECLOSE REASONABLE ALTERNATIVES.

The purpose and need statement is a key part of the National Environmental Policy Act environmental review process. It frames the issue that needs solving and the realm of possible alternatives. The purpose and need must therefore be written broadly enough not to foreclose reasonable alternatives. As explained in Simmons v. United States Army Corps of Engineers, 120 F.3d 664, 666 (7th Cir. 1997), a federal agency must consider “all reasonable alternatives” in an Environmental Impact Statement, and “[n]o decision is more important than delimiting what these ‘reasonable alternatives’ are. . . . To make that decision, the first thing an agency must define is the project’s purpose. . . . The broader the purpose, the wider the range of alternatives; and vice versa.”

In this case, the EIS cannot be limited to simply considering and selecting which route and corridors the Cardinal-Hickory Creek transmission line, as proposed, will take. The EIS must include a true “hard look” analysis of all reasonable alternatives, including non-transmission alternatives and the no-build alternative.

The goal of NEPA and its EIS requirement is “to insist that no major federal project should be undertaken without intense consideration of other more ecologically sound courses of action, including shelving the entire project, or of accomplishing the same result by entirely different means.” Environmental Defense Fund, Inc. v. United States Army Corps of Engineers, 492 F.2d 1123, 1135 (5th Cir. 1974). The key to accomplishing that goal is to make sure at the outset that the “purpose and need” of the “major federal action” under review is not defined too narrowly to preclude a genuine analysis of a range of reasonable alternatives:
[A]n agency may not define the objectives of its action in terms so unreasonably narrow that only one alternative from among the environmentally benign ones in the agency’s power would accomplish the goals of the agency’s action, and the EIS would become a foreordained formality. Nor may an agency frame its goals in terms so unreasonably broad that an infinite number of alternatives would accomplish these goals and the project would collapse under the weight of the possibilities.

_Citizens Against Burlington, Inc. v. Busey_, 938 F.2d 190, 198 (D.C. Cir. 1991) (internal citations omitted); _see e.g., Simmons_, 120 F.3d at 666 (“[I]f the agency constricts the definition of the project’s purpose and thereby excludes what truly are reasonable alternatives, the EIS cannot fulfill its role.”); _Van Abbema v. Fornell_, 807 F.2d 633 (7th Cir. 1986) (“[T]he evaluation of ‘alternatives’ mandated by NEPA is to be an evaluation of alternative means to accomplish the _general_ goal of an action; it is not an evaluation of the alternative means by which a particular applicant can reach his goals.”) (emphasis in original).

An agency like RUS would therefore violate NEPA if it simply adopts as its own the developer’s purpose in seeking approval for its particular project. _National Parks & Conservation Ass’n v. Bureau of Land Management_, 606 F.3d 1058 (9th Cir. 2010). RUS’s NEPA implementing regulations state:

> Applicants’ proposals must, whenever practicable, avoid or minimize adverse environmental impacts; avoid or minimize conversion of wetlands or important farmlands . . . when practicable alternatives exist to meet development needs; [and] avoid unwarranted alterations or encroachment on floodplains when practicable alternatives exist to meet development needs…. The Agency shall not fund the proposal unless there is a demonstrated, significant need for the proposal and no practicable alternative exists to the proposed conversion of the above resources.


This scope of the RUS EIS in this case must independently assess whether there is a genuine “demonstrated, significant need” for this particular high-voltage transmission line
proposal, and whether any “practicable alternative exists” that will better “avoid or minimize adverse environmental impacts.”

Consequently, the purpose and need in this EIS cannot simply reiterate the same purpose and need statement in Dairyland’s constricted Alternatives Evaluation Study (“AES”), because that would impermissibly restrict the range of alternatives to be considered. The elements in the AES purpose and need statement all assume the need for this proposed large transmission line between the Hickory Creek substation in Iowa and the Cardinal substation in Middleton, Wisconsin. In other words, the AES defines the purpose and need in such a narrow way that only the construction of this particular transmission line can satisfy the purpose and need, necessarily ruling out a variety of reasonable alternatives:

• “address[] reliability issues on the regional bulk transmission system” instead of “address reliability issues for Wisconsin customers.”

• “cost-effectively increase[] transfer capacity to enable additional renewable generation needed to meet state renewable portfolio standards and support the nation’s changing energy mix” instead of “help meet Wisconsin’s renewable portfolio standards.”

• “alleviate[] congestion on the transmission grid to reduce the overall cost of delivering energy” instead of “reduce the overall cost of energy in Wisconsin.”

• “respond[] to public policy objectives aimed at enhancing the nation’s transmission system and reducing carbon dioxide emissions” instead of “reduce greenhouse gas emissions.”

AES at 6.

The AES’s narrow focus eliminates reasonable non-transmission alternatives that could meet the broader underlying needs just as well, such as sensible combinations of building more local renewable energy to reduce greenhouse gas emissions and implementing more energy efficiency to reduce energy costs. If RUS’s EIS does not rigorously explore and objectively evaluate both non-transmission alternatives and a no-build alternative to the proposed Cardinal-Hickory Creek transmission line, then it will not comply with NEPA’s requirements. RUS
cannot adopt a limited purpose and need that acts as a “self-fulfilling prophecy” for this particular proposed large transmission line and tall towers and effectively precludes full and fair consideration of all reasonable alternatives. *Simmons v. United States Army Corps of Engineers*, 120 F.3d 664, 666 (7th Cir. 1997).

Furthermore, the proposed Cardinal-Hickory Creek transmission line’s purpose and need is to enable some unspecified out-of-state private business generating electricity in North Dakota, for example, to sell electricity over this privately-owned transmission line through Wisconsin to another party somewhere outside of Wisconsin, there are serious constitutional questions whether there is sufficient "public use" under the Takings Clause of the Fifth Amendment and the Due Process Clause of the Fourteenth Amendment to justify eminent domain to be applied in Wisconsin for the largely private purposes. *Cf. Kelo v. City of New London*, 545 U.S. 469 (2005).

**II. RUS MUST CONDUCT ITS NEED ANALYSIS AND OBJECTIVE EVALUATION BASED ON CURRENT FACTUAL DATA REGARDING THE FLAT AND POTENTIALLY DECLINING ELECTRICITY DEMAND AND SALES IN CENTRAL AND SOUTHWEST WISCONSIN.**

The proposed Cardinal-Hickory Creek transmission line would, if built, import more electricity from Iowa, Minnesota, North Dakota and South Dakota to Middleton (adjacent to Madison), Wisconsin. The RUS must address whether there is an the actual “demonstrated, significant need” for this additional electricity supply in central and southwest Wisconsin when the current factual data shows that electricity demand and sales are flat and potentially declining. RUS’s analysis of whether there is a need for more power cannot just rely on the Midcontinent Independent System Operator’s (“MISO”) multi-value project portfolio (“MVP”) analysis conducted more than five years ago even though the Wisconsin and Midwest energy market has since significantly changed. 40 C.F.R. § 1970.4(a).
First, the MISO MVP data is outdated. The proposed Cardinal-Hickory transmission line is the last and most expensive of the 17 lines in the MVP portfolio designated by MISO in 2011. The Midwest electricity market, especially in Illinois, Minnesota and Wisconsin, however, has greatly changed since 2011. Electricity demand and sales have flattened or declined because of energy efficiency, demand response, distributed generation, and due to the continued overall economic transition from energy-intensive heavy manufacturing to information technology and service-focused businesses. MISO based its MVP transmission lines analysis on forecasts that energy demand would increase by about 0.78% – 1.28% annually from 2012 – 2021. What has actually happened is quite different in the Madison Gas and Electric (“MGE”) and Wisconsin Power and Light (“WP&L”) service areas, and in Illinois and Minnesota, too. Both MGE’s and WP&L’s electricity sales have decreased since hitting their previous highest levels in 2011 and 2007, respectively, even as the utilities gained additional customers.

MGE’s highest retail electricity sales were in 2007 (pre-economic recession) and in 2011 (post-economic recession). Its retail electricity sales have decreased by about 2.0% (-0.5% per year) since 2011. MGE’s total sales have decreased since 2007 over the past five years and have been flat over the past decade, notwithstanding a growing economy and an 8% increase in the number of customers. WP&L’s highest retail electricity sales were in 2007 (pre-economic recession) and have since decreased by about 2.3% (-0.3% per year), notwithstanding economic growth and a 2.25% increase in the number of customers.

Therefore, there are much lower electricity sales and demand in MGE’s and WP&L’s service areas than in MISO’s regional forecast when it included the proposed Cardinal-Hickory Creek transmission line in its overall project portfolio. The Wisconsin economy has grown, but more energy efficiently. The delta between actual electricity sales and MISO’s projected
electricity sales is substantial. The declining/flat electricity sales trend line is clear. The charts below provide MGE’s and WP&L’s self-reported data in their filings with the U.S. Securities & Exchange Commission:

<table>
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<tr>
<th>Year</th>
<th>MGE Retail Electricity Sales (MWh)</th>
<th>Diff. f/Prior Year</th>
<th>Total Electricity Sales (MWh)</th>
<th>Diff. f/Prior Year</th>
<th>Customers</th>
<th>Cooling Degree Days Norm-665</th>
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<th>Summer Peak (MW)*</th>
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* 2015 data unavailable

MGE SEC 10-K Filing for Year Ending December 31, 2015 at page 7, 30, 35
http://www.sec.gov/Archives/edgar/data/61339/000116172816000028/f10k_2015.htm and MGE SEC 10-K Filings for all previous years.

<table>
<thead>
<tr>
<th>Year</th>
<th>WP&amp;L Retail Electricity Sales (MWh)</th>
<th>Diff. f/Prior Year</th>
<th>Total Electricity Sales (MWh)</th>
<th>Diff. f/Prior Year</th>
<th>Customers</th>
<th>Cooling Degree Days Norm-663</th>
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<th>Summer Peak (MW)</th>
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</table>
These overall flat or lower demand trends (and the consequent surplus electric generating supply) are not isolated to Wisconsin, but are occurring throughout most of the Midwest. For example, across the state border in Illinois, Commonwealth Edison’s electricity sales are decreasing 1.0% annually while it has gained 100,000 additional customers over the past three years and the Chicago region’s economy is growing. Likewise, Xcel-Northern States Power’s electricity sales in Minnesota decreased by about 1.5% over the past year due to lower energy use per customer even though the utility gained additional customers. American Electric Power, headquartered in Columbus, Ohio, projects that demand for its electricity in Ohio will likewise decline.

Second, MISO analyzed the benefits of the MVP portfolio as a whole. It specifically did not examine the benefits and value of individual transmission lines. MISO never found a separate need for the Cardinal-Hickory Creek transmission line in 2011 or, needless to say, in today’s electricity market. Nor did MISO conduct a cost-benefit analysis of the proposed Cardinal-Hickory Creek transmission line or analyze non-transmission alternatives. Moreover, the Cardinal-Hickory Creek transmission line is the last of the MVP lines, and, therefore, the question of whether this last line is still needed today must be objectively evaluated in the EIS.

The AES’ analysis of need is entirely insufficient as a practical and legal matter. In discussing supposed “need,” the AES relies heavily on transmission-building buzzwords like “reliability” and “congestion” without backing up those concerns.
In determining now whether there is actually a need for importing additional electricity supply into the Driftless Area in central and southwest Wisconsin, the RUS must consider new generation that is already planned and being built in the area, including among others:

- WP&L is building a large 700-megawatt new natural gas-fired power plant and a 2-megawatt solar energy generating facility in Beloit. ³
- WP&L is also eligible to purchase up to 200 megawatts of a new natural gas-fired plant to be built by either We Energies or Wisconsin Public Service Corporation starting around 2020.
- Two new wind farms totaling 200 megawatts are being developed just east of Platteville in Seymour and in the Town of Forest in St. Croix County, which will supply Dairyland and WP&L customers. In June 2016, Dairyland announced a power purchase agreement with EDP Renewables for 98 MW of wind energy from the Quilt Block Wind Farm in Seymour that is expected to be operational in late 2017. ⁴
- WPPI Energy, which provides electricity to 51 not-for-profit utilities, issued a request for proposals for 100 megawatts of wind power or other renewable energy resource supplies that will meet its “need for additional energy supply beginning in 2021 . . . in a manner that eases compliance with future environmental regulations such as the Clean Power Plan.” ⁵
- At least three more Wisconsin wind farms are planned in Rock County (150 megawatts), Monroe County (150 megawatts) and Green County (60 megawatts).

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• Dairyland Power is now buying 15 megawatts of new solar power, and WP&L and MGE have indicated possible interest in developing more new solar energy projects.

• Xcel Energy has estimated that it will add approximately 700 MW of capacity by 2019, including: 73 MW of hydroelectric, 60 MW of wind, 170 MW of solar, and 480 MW of natural gas-fired generation, of which 16% will be provided to serve electricity demand in Wisconsin.

RUS must also consider the “cumulative impacts” on purported need of other new transmission lines for the area. 40 C.F.R. §§ 1502.7, 1508.25. For example, the Public Service Commission of Wisconsin approved a Certificate of Public Convenience and Necessity for the new Badger-Coulee 345 kV high-voltage transmission line – connecting Minnesota and La Crosse to Middleton, Wisconsin – that will likewise import out-of-state electricity supply from Iowa, Minnesota, North Dakota and South Dakota into the Wisconsin power market. 6 This is in addition to the out-of-state electricity supply to be imported by the proposed Cardinal-Hickory Creek transmission line from Iowa, Minnesota, North Dakota and South Dakota into Middleton, Madison and central and southwest Wisconsin.

The arguments made in the AES regarding the need for the proposed transmission line miss the mark. The AES states that there is a capacity import limit into Wisconsin from Iowa, that some wind farms have only been able to get conditional interconnection agreements and that “the development of additional wind generation in Iowa is dependent on increasing transfer capability.” AES at 26-27. However, a limit on bringing more power from Iowa into southwest

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6 An appeal of the Commission’s decision is pending in the state court based on contentions that ATC did not meet the statutory standards for demonstrating “need” for the Badger-Coulee transmission line. If the state court upholds the Commission’s decision and finds that the Badger-Coulee is needed, then that would weaken ATC’s argument that another huge new transmission line is also needed. If, on the other hand, the state court reverses the Commission’s “need” determination for the Badger-Coulee transmission line, then it is much less likely that ATC can demonstrate “need” for its proposed new Cardinal-Hickory Creek transmission line.
Wisconsin could only be a problem if there were a need for more power in southwest Wisconsin, and only if that need could not be met from local sources. As explained above, there is not a “demonstrated, significant need” for more electricity supply in Wisconsin, and even if there were, the RUS must “rigorously explore and objectively evaluate all reasonable alternatives” – including non-transmission alternatives involving local clean distribution generation and energy efficiency and demand response – for meeting any such “demonstrated, significant need.”

The AES also states that a NERC report found that even in the absence of the Clean Power Plan, more transmission will be needed “to maintain the bulk power system’s reliability.” AES at 32. However, this overly generalized statement of the United States’ overall transmission system is not relevant to RUS’s more focused analysis here regarding the need, if any, for this specific proposed Cardinal-Hickory Creek transmission line to achieve reliability in Wisconsin.

III.  RUS MUST “RIGOROUSLY EXPLORE AND OBJECTIVELY EVALUATE ALL REASONABLE ALTERNATIVES” INCLUDING NON-TRANSMISSION ALTERNATIVES AND THE NO-BUILD ALTERNATIVE.

The “[s]cope consists of the range of actions, alternatives, and impacts to be considered in an environmental impact statement…. [A]gencies shall consider 3 types of actions, 3 types of alternatives, and 3 types of impacts.” 40 C.F.R. § 1508.25 (emphasis added). The three types of actions are connected actions, cumulative actions (such as the Badger-Coulee transmission line) and similar actions. 40 C.F.R. § 1508.25(a). The three types of “[a]lternatives … include: (1) No action alternative. (2) Other reasonable courses of actions. (3) Mitigation measures (not in the proposed action).” 40 C.F.R. § 1508.25(b).

Under NEPA, the RUS must “rigorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R. § 1502.14(a). The choice of what alternatives to include in an EIS “and the ensuing analysis, forms ‘the heart of the environmental impact statement.’” Simons v.
United States Army Corps of Eng’rs, 120 F.3d 664, 666 (7th Cir. 1997) (citing 40 C.F.R. § 1502.14); 42 U.S.C. § 4332(2)(C)(iii). To accomplish this required analysis in the EIS process, the RUS must:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.
(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.
(c) Include reasonable alternatives not within the jurisdiction of the lead agency.
(d) Include the alternative of no action.
(e) Identify the agency’s preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.
(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.


A. **RUS Must Consider “No-Build” Alternatives.**

The scope of RUS’s EIS must include a full and fair analysis of “the alternative of no action” – namely, the “no-build” alternative. 40 C.F.R §§ 1502.14(d), 1502.16, 1508.25(b)(1). The RUS cannot just “go through the motions” on this required no-build alternative. That would violate NEPA. For example, as the District Court held in *Sierra Club, Illinois Chapter v. U.S. Department of Transportation*, 962 F. Supp. 1037, 1043 (N.D. Ill. 1997):

However, the final impact statement in this case relies on the implausible assumption that the same level of transportation needs will exist whether or not the tollroad is constructed. In particular, the final impact statement contains a socioeconomic forecast that assumes the construction of a highway such as the tollroad and then applies that forecast to both the build and no-build alternatives. The result is a forecast of future needs that only the proposed tollroad can satisfy. As a result, the final impact statement creates a self-fulfilling prophecy that makes a reasoned analysis of how different alternatives satisfy future needs impossible.
B. RUS Must Analyze Other Courses Of Action – The Reasonable Alternatives Cannot Be Limited to Choosing Only Between The Proposed Cardinal-Hickory Creek Transmission Line and No-Build Alternative.

RUS’s alternatives analysis cannot be limited to simply comparing a particular transmission line’s corridors and a no-build alternative. The agency must robustly analyze “[o]ther reasonable courses of actions.” 40 C.F.R § 1508.25(b)(2). In this case, therefore, RUS must analyze non-transmission alternatives, as NEPA requires federal agencies to “rigorously explore and objectively evaluate all reasonable alternatives.” 40 C.F.R § 1502.14(a). An EIS must “[i]nclude reasonable alternatives not within the jurisdiction of the lead agency.” 40 C.F.R. § 1502.14(c).

C. EIS Must Consider a Range of Reasonable Alternatives, Including Non-Transmission Alternatives.

The scope of RUS’s EIS for the proposed Cardinal-Hickory Creek transmission line must consider and analyze a variety of reasonable alternatives, including non-transmission alternatives. The cursory and dismissive approach taken in the AES to non-transmission alternatives is not permissible. An EIS must “[d]evote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.” 40 C.F.R. § 1502.14(b).

The EIS must consider reasonable non-transmission alternatives including a combination of both Wisconsin utility-scale renewable energy generation and distributed solar energy and wind power generation with energy storage technologies, energy efficiency and demand response, as well as local distribution and transmission upgrades if needed. The AES improperly stacks the deck and dismisses several of these alternatives by claiming that each alternative individually cannot satisfy the alleged need. For example, the AES rejects energy efficiency by arguing that “an increase in energy efficiency” to levels necessary to replace the transmission
line entirely with energy efficiency “is simply not possible.” AES at 47. That each-standing-alone-in-isolation approach is not a reasonable or sensible consideration of alternatives under NEPA. 40 C.F.R. §§ 1502.14, 1502.16, 1508.25. The scope of RUS’s EIS must rigorously explore and objectively evaluate non-Cardinal-Hickory Creek transmission line alternatives.

The AES’s blanket rejection of non-transmission alternatives is impermissible. For example, the AES states that demand response is not an acceptable alternative because it would not “increase the transfer capability between Iowa and Wisconsin.” AES at 47. The EIS must include a solution-neutral purpose and need statement, so that alternatives are not eliminated simply because they are different than the proposed project. Simmons v. U.S. Army Corps of Engineers, 120 F.3d 664 (7th Cir. 1997). Reframing the purpose and need in the EIS, as discussed above, should help to address this problem.

The AES also fails to discuss the benefits of the alternatives. The EIS must include information about the alternatives “so that reviewers may evaluate their comparative merits.” 1502.14(b). For example, non-transmission alternatives often offer significant flexibility and can be deployed where (and sometimes even when) they are needed most. A Public Service Commission of Wisconsin report showed that for every dollar invested in energy efficiency in 2015 through its Focus on Energy program, $3.51 in economic and non-economic benefits were created.7 This cost-to-benefit ratio is even higher in 2014 when the program created $756 million in economic benefits and $6.66 in benefits for every $1 in costs, because some of the 2015

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7 Wisconsin PSC, Energy Efficiency and Renewable Resource Program Activities in Wisconsin: Calendar Year 2015, https://psc.wi.gov/reports/documents/2015FOEreport.pdf at 2 (“By providing incentives, technical resources, and information, Focus aids residents in lowering their cost of living and businesses in improving their bottom lines. This drives millions of dollars in energy savings, and helps to improve our state’s environmental health and preserves our natural resources. . . . Non-economic benefits include the prevention of the following emissions: 7,932,278 tons of carbon dioxide; 4,930 tons of nitrogen oxide; and, 11,269 tons of sulfur dioxide.”).
programs were pilot efforts designed to try new technologies and program approaches, instead of maximizing savings achievement.

Lazard’s Levelized Cost of Energy Analysis and many other studies have found that energy efficiency and demand response (such as interruptible rates) are by far the least costly way to meet overall energy needs. Demand response can be deployed in a targeted way when it is needed. Distributed renewable energy generation is less reliant on expensive large new transmission lines and is more flexible in meeting localized power needs. The EIS should also consider that the costs of many non-transmission alternatives, including renewable energy and energy storage technologies, are decreasing rapidly and will likely continue to do so.

The EIS should also consider alternatives based on changes to the electricity system and markets. A U.S. Department of Energy Report (2015) explains:

Changes to power system operations and markets can provide significant existing flexibility, often at lower economic costs than building new transmission infrastructure. Operations examples include more frequent dispatch (which reduces the time frame over which a generator must follow a specified output level), smart network technologies, and increased plant cycling.

Moreover: “In market structures that more comprehensively value services provided to the grid, demand-side resources and storage could provide low-cost grid services, allowing more efficient grid operations and avoiding generation or transmission investments.” Id. at 3-12.

RUS’s EIS must consider whether the proposed Cardinal-Hickory Creek transmission line would actually meet the claimed needs. For example, the AES includes only a cursory discussion of the proposed transmission line’s ability to actually help states meet their renewable portfolio standards (“RPS”).

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The developers and the AES have not provided any assurance or analysis of exactly how much wind power or other renewable energy generation versus fossil fuel-generated electricity will actually be carried on this proposed open access transmission line. The AES claims that increased transfer capacity from Iowa to Wisconsin will allow more wind farms to be built, yet ignores the possibility that the transmission line might also act as a lifeline for economically struggling fossil fuel plants. RUS’s EIS must also analyze whether reasonable alternatives, such as building wind power and solar energy generation in Wisconsin, would better meet the needs of increased renewable energy generation and decreased greenhouse gas emissions.

The AES also makes several questionable assumptions that more renewable energy generated in states in Iowa, Minnesota, North Dakota and South Dakota will be both eligible to meet RPSs in Illinois, Indiana, Michigan and Wisconsin and that it is needed for these states to achieve their RPSs. For example, Illinois’ new energy legislation includes an RPS of 25% by 2025, but it has a strong preference for the development of in-state renewable energy resources. Indiana does not have a mandatory RPS at all. Michigan’s RPS generally requires renewable energy to be generated either in-state or within the service territory of a utility to which the RPS applies. Wisconsin already met its RPS of 10% by 2015.

The scope of the RUS’s EIS must include an analysis of whether the proposed Cardinal-Hickory Creek transmission line would achieve economic benefits itself, and in comparison to other alternatives. The AES acknowledges that MISO “did not evaluate the economic benefits of each component of the [MVP] Portfolio.” AES at 24 (emphasis added). Moreover, the scope of RUS’s EIS should consider upgrades to existing grid infrastructure, and alternative transmission line corridors outside of the Driftless Area that has special ecological and wildlife values and special scenic landscapes.
IV. RUS MUST FULLY AND FAIRLY ANALYZE ALL DIRECT, INDIRECT, AND Cumulative Impacts For The Proposed Cardinal-Hickory Creek Transmission Line And All Reasonable Alternatives.

The scope of an EIS must include consideration of all direct, indirect, and cumulative impacts. 40 C.F.R. § 1508.25(c). The EIS “should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.” 40 C.F.R. § 1502.14. In addition, “[t]he information [in NEPA documents] must be of high quality. Accurate scientific analysis, expert agency comments, and public scrutiny are essential to implementing NEPA.” 40 C.F.R. § 1500.1(b). It is important that the EIS consider the impacts of the proposed project both during the construction and operation phases, as those impacts may be very different. The EIS must also analyze and compare the environmental and other impacts of reasonable alternatives to the proposal. Federal regulations require that each alternative be discussed in enough detail “so that reviewers may evaluate their comparative merits.” 40 C.F.R. § 1502.14(b). It would not be permissible for RUS to do only a “qualitative” analysis of non-transmission alternatives that only generally describes the types of impacts that might be expected. The EIS must include a quantitative and detailed analysis of all reasonable alternatives, in addition to the analysis of the proposed action and the no-build alternative.

A. Environmental Impacts

The EIS must include a thorough discussion of environmental impacts, including impacts to geology and soils, vegetation, surface water, groundwater, floodplains, wetlands, wildlife, endangered and threatened species, woodlands, agricultural lands, aesthetics, noise, cultural resources, air quality, land use, archeological and historical sites, conservation areas, recreation areas and health and safety. The Cardinal-Hickory Creek transmission line would cut directly
through the Driftless Area and damage important natural and historical resources, adversely impact endangered species, and disrupt scenic landscapes.

The Driftless Area is recognized internationally and by the Departments of Natural Resources in four states as a region of vital conservation opportunity and concern. This region contains multiple rare habitats, and it is the largest contiguous area of fish and wildlife habitat in the Upper Mississippi River basin area. Because this area was untouched by glaciers during the last Ice Age, the landscape was not scraped and flattened; an ancient landscape shaped by wind and water erosion with unique natural communities remains. The unique and beautiful Driftless Area topography thus contains hundreds of rolling hills with deep river valleys nestled in woodland, prairie and riparian habitats. More than 1,200 streams, including world-class trout fishing streams, traverse more than 4,000 river miles and create a network of 600 spring-fed creeks that flow through porous limestone bedrock, sustaining many uncommon species and serving as a rest stop for more than half of North America’s migratory bird species.

There are a number of concerns raised by large transmission line projects generally, and those should be considered. For example, transmission lines cause not only the destruction of habitat, but also fragment remaining habitat and create an avenue for invasive species. Maintenance of the rights-of-way may include spraying chemicals that damage the ecosystem and surrounding vegetation. Of course, aesthetic impacts are also a significant concern.

1. **Threatened and Endangered Species**

The proposed transmission line and tall towers would impact many high-quality habitats that are home to threatened, endangered and other species of concern. The area’s southern sedge meadows, oak openings and barrens, pine relicts, dry prairies, mesic and dry-mesic forests, fast and cold streams, dry and moist cliffs, and forested seeps shelter and nurture diverse populations
of birds, insects, amphibians, reptiles and plants. If the proposed transmission line were to be built through these special areas, many species could be put at risk.

For example, Henslow’s Sparrow is a Wisconsin threatened species and a federal species of concern. According to Wisconsin’s Natural Heritage Inventory, Henslow’s Sparrow is found in 12 of the 16 townships or ranges that the proposed transmission line would impact in Dane and Iowa Counties. The Loggerhead Shrike is a state endangered species and a federal species of concern, and it is found in 2 of the 16 townships or ranges in Dane and Iowa Counties. Other threatened bird species in the area include the Acadian Flycatcher, Bell’s Vireo, Cerulean Warbler, Hooded Warbler and Upland Sandpiper.

The rare Rusty-Patched Bumble Bee has been identified in 8 of the 11 townships or ranges in Iowa County that would be impacted by the proposed transmission line, and Regal Fritillary butterfly populations, which are state endangered, are found in four townships or ranges that the proposed transmission line would cross.

Of the impacted townships and ranges in Iowa and Dane Counties, Blanchard’s Cricket Frog populations (state endangered) are found in eight; Pickerel Frog populations have been identified in 8; Blanding’s Turtle populations (fully protected) have been recorded in six, and Ornate Box Turtle populations (state endangered) have been found in six. The fish species Lake Sturgeon, Lake Chubsucker and Pugnosed Shiner (state threatened) have all been identified in at least one township or range that the proposed transmission line would impact.

The transmission line could also impact whooping cranes, which according to sitings and satellite telemetry data, have a range that includes areas in Clayton and Dubuque Counties in Iowa and in Grant, Iowa, Sauk and Dane Counties in Wisconsin. Many of the data points are very close to the proposed transmission line corridors. “Collision mortality from power lines is
considered biologically significant” for whooping cranes, and one study found that “in the migratory Wisconsin population, 3 out of 18 mortalities (17%) were from collisions with power lines.”

There are also many remnants of savanna, pine relict, oak forest, and wetland in and around the proposed corridors, which are likely not catalogued. Many of these remnants are likely home to rare species, which similarly may not be documented. RUS should work with local consultants and experts to inventory these remnant habitats and rare species so that the impacts to them from the proposed transmission line can be included in the EIS. The EIS must compare the impacts on threatened and endangered species from the proposed transmission line and the impacts (if any) from the alternatives described above.

2. **Conservation and Recreation Areas**

The proposed Cardinal-Hickory Creek transmission line would also harm a large number of lands of great conservation, ecological and scenic importance, and these impacts must be fully considered in the EIS. For example, one of the proposed corridors for this transmission line would cut through the northern edge of the Military Ridge Prairie Heritage Area, which is the Wisconsin Department of Natural Resources’ “highest priority for landscape-scale grassland protection and management in Wisconsin,” as the Nature Conservancy explains:

The Military Ridge Prairie Heritage Area (MRPHA) is a 95,000+ acre grassland landscape in Dane and Iowa counties in southwest Wisconsin. The area provides habitat for 14 rare and declining grassland bird species and contains more than 60 prairie remnants, representing one of the highest concentrations of native grasslands in the Midwest. The agricultural history of the area has helped keep the landscape much as it was when the first settlers saw it and has made it possible for plants and animals like grassland birds, which have disappeared in more developed parts of the Midwest, to survive… [It] represents one of the best

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opportunities in the Midwest to protect prairie remnants and area sensitive species, such as grassland birds.  

The Military Ridge Prairie Heritage Area is also part of a larger 490,000-acre protected “Southwest Wisconsin Grasslands and Stream Conservation Area” macrosite established by the Wisconsin Department of Natural Resources. The purpose of this conservation area is to protect grassland birds and trout streams. The proposed transmission line corridor would run along the northern border of the Southwest Wisconsin Grasslands and Stream Conservation Area, and it would cut through the savannah ecosystem and would provide an optimal opportunity for owls and raptors to perch and locate rare grasslands birds to hunt and kill.

The northern proposed route would also cut through the Dodgeville and Wyoming Oak Woodlands/Savanna Conservation Opportunity Area as it runs along the steep and winding County Roads ZZ and Z. The Wisconsin Wildlife Action Plan states that this Conservation Opportunity Area has “continental significance” and notes that parts of the Driftless Area have high biodiversity and a significant number of rare species.

The proposed transmission line would also impact state recreational trails. One of the proposed transmission line corridors would impact a significant part of the Pecatonica State Trail, which has wildlife and scenic significance; it is an important recreational area enjoyed by hikers and bikers. Another of the proposed corridors for the huge transmission line and tall towers would run along and cross over the Military Ridge State Trail. About 25 miles of this 40-mile biking and hiking trail, which passes by state parks, forested areas, wetlands and grasslands, would be impacted by the transmission line. Because the trail runs along the top of Military

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Ridge, around the highest elevation in the area, transmission lines built there would be very visible. There is also a proposed recreation/hiking trail from Blue Mounds to Spring Green, which would be adversely impacted by the proposed line.

The proposed Cardinal-Hickory Creek transmission line and tall towers would also disrupt and harm a large section of the Upper Mississippi River National Wildlife and Fish Refuge, which is “unmatched” for its scenic and wildlife value. This National Wildlife Refuge has wooded bluffs hundreds of feet high and is a crucial migratory pathway and breeding location for birds, such as bald eagles and great blue herons, and is home for many additional species of wildlife, fish and plants. Id.

The Upper Mississippi River National Wildlife and Fish Refuge is a Ramsar Convention Wetland of National Importance and Globally Important Bird Area, specifically for waterfowl. Id. According to the U.S. Fish and Wildlife Service, “during peak fall migration…hundreds of thousands of canvasbacks, common mergansers, goldeneyes, mallards, shovelers, blue-winged teal, and coots gather on the refuge.” Even if the proposed transmission line would replace an existing line crossing the Mississippi River and the total number of crossings of the Mississippi River would not increase, that should not be the end of the inquiry. The EIS may not simply assume that if the number of transmission lines crossing the Upper Mississippi River National Wildlife and Fish Refuge is the same, there is no impact on the refuge. First, there will undoubtedly be impacts from the construction activity itself. Second, the EIS should consider whether the existing line that the Cardinal-Hickory Creek transmission line would “replace” would be decommissioned soon anyway. The U.S. Fish and Wildlife Service, a consulting

agency for this EIS, should act not only maintain the status quo, but also to “conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”

Transmission lines have also been shown to be lethal to birds. Millions of birds die each year in the United States due to collisions with or electrocution by power lines. Based on multiple studies in the northern United States and Canada, waterfowl are the bird group most vulnerable to death by transmission lines. This presents a significant danger to the thousands of waterfowl congregating on the Upper Mississippi River National Wildlife and Fish Refuge each year.

The proposed transmission line might impact bald eagles. Bald eagles are protected under the federal Bald and Golden Eagle Protection Act, and are listed as a species of Special Concern in Wisconsin. There are 51 active bald eagle nests in the four Wisconsin counties where the proposed transmission line would run, and 26 of the nests are within townships in the transmission corridors.

In addition to the impacts on the Military Ridge Prairie Heritage Area, the Southwest Wisconsin Grasslands and Stream Conservation Area, the Dodgeville and Wyoming Oak Woodlands/Savanna Conservation Opportunity Area, the Pecatonica State Trail, the Military Ridge State Trail, and the Upper Mississippi River National Wildlife and Fish Refuge summarized above, the proposed huge Cardinal-Hickory Creek transmission line and tall towers will impact: Governor Dodge State Park, Black Hawk Lake State Park and Blue Mounds State Park; state natural areas and preserves; scenic and recreational rivers such as Black Earth Creek,

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Grant River and the Platte River; wetlands including those adjoining Black Earth Creek and Pecatonica River; the Black Earth Creek Watershed Area; numerous trout streams and exceptional and outstanding resource waters; and numerous other critical natural resources and wildlife habitat along the proposed transmission line corridors.

RUS should also consider privately protected conservation easements and restoration efforts. For example, the EIS should analyze impacts on DALC’s conservation easements and property included in the Wisconsin DNR’s Landowner Incentive Program. Several DALC easements are either directly in or close to a proposed corridor. For example, DALC holds a conservation easement on part of the Thomas Farm on US 18/151 just west of Barneveld within one of the proposed corridors. The easement was purchased with funds from both the USDA Farm and Ranch Lands Protection Program and the Wisconsin Knowles-Nelson Stewardship Program, and the stone barn on the property is listed on the National Register of Historic Places.

The impacts of the proposed transmission line on all of these areas must be considered in the EIS and compared to the impacts from all reasonable alternatives.

3. **Cultural and Historical Resources**

RUS must analyze what impacts the proposed transmission line and alternatives would have on cultural and historical resources in the area. 40 C.F.R. § 1502.16 (requiring discussion of environmental consequences to include discussion of impacts on “historic and cultural resources”). The Driftless Area includes many important cultural and historical sites that could be adversely affected by the proposed Cardinal-Hickory Creek transmission line. The area contains the rich history of over 11,500 years of Paleo-Indian peoples, and many Native American tribes have sacred sites and cultural resources across the Driftless Area.
There are archeological sites located within the region that date back to the Archaic, Woodland and Mississippian periods, and many include pottery, arrowheads, and artificial mounds, among other important historical relics.  

Wisconsin “has the highest concentration of prehistoric mounds in the country, and is the epicenter for effigy mounds.” Transmission line construction in or around archeological sites is of particular concern. As the Public Service Commission stated: “Transmission line construction and maintenance can damage sites by digging, crushing artifacts with heavy equipment, uprooting trees, exposing sites to erosion or the elements, or by making the sites more accessible to vandals.” Rock art is common throughout the region, and fragile carved rock formations would be especially vulnerable to vibrations from pile driving.

B. Greenhouse Gas Impacts

The EIS must also include a discussion of greenhouse gas and climate change impacts from the proposed Cardinal-Hickory Creek transmission line or that might affect the proposed line, and must compare these impacts to those related to the non-transmission alternatives discussed above. As explained in the Council on Environmental Quality’s (“CEQ”) recently released guidance document on greenhouse gases, “[c]limate change is a fundamental environmental issue, and its effects fall squarely within NEPA’s purview.” CEQ GHG Guidance at 2. The guidance document elaborates: “[c]onsistent with NEPA, Federal agencies should consider the extent to which a proposed action and its reasonable alternatives would contribute to

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climate change, through GHG emissions, and take into account the ways in which a changing climate may impact the proposed action and any alternative actions.” *Id.* at 9.

First, the EIS must include a cradle-to-grave analysis of the greenhouse gas emissions from the construction of the proposed Cardinal-Hickory Creek transmission line, from mining the iron ore to make the steel to make the towers, to clearing the rights-of-way corridors, to erecting the towers, to manufacturing and installing the transmission line, to operation and maintenance, to eventual decommission. CEQ guidance acknowledges that “[s]ome proposed actions will have to consider effects at different stages to ensure the direct effects and reasonably foreseeable indirect effects are appropriately assessed; for example, the effects of construction are different from the effects of the operations and maintenance of a facility.” *Id.* at 18. The EIS must also include an analysis of the decrease in greenhouse gas sequestration from cutting down trees and converting agricultural areas, wetlands, etc. As explained in the CEQ guidance, “‘emissions’ includes release of stored [greenhouse gases] as a result of land management activities affecting terrestrial [greenhouse gas] pools such as, but not limited to, carbon stocks in forests and soils, as well as actions that affect the future changes in carbon stocks.” *Id.* at 1, n.1. Projected greenhouse gas emissions from the full lifetime of the transmission line can then be used as a proxy for determining climate change impacts from the project. *Id.* at 10.

Second, RUS must consider indirect greenhouse gas emissions and activities that “have a reasonably close causal relationship” and may occur “as a consequence” of a proposed action. *Id.* at 16, 13. Therefore, the EIS must analyze the greenhouse gas emissions related to the electricity generation mix carried on the line and ways in which the proposed line would impact the electricity market. For example, if the proposed transmission line is built, it will be “open access” under Federal Energy Regulatory Commission rules and will likely be used by a mix of
fossil fuel and renewable generation. The line may provide access to new markets to existing coal and gas plants in the western MISO states, and thereby make these plants economical when otherwise they would shut down. The environmental consequences of these circumstances, including greenhouse gas impacts, would need to be addressed in the EIS.

Third, the EIS must consider the impacts and interplay between climate change and the proposed project looking forward. CEQ guidance “[c]ounsels agencies to use the information developed during the NEPA review to consider alternatives that would make the actions and affected communities more resilient to the effects of a changing climate.” *Id.* at 5. For example, climate change will lead to more frequent and intense weather events across the country, including the MISO region, which may lead to increased risk of damage to transmission infrastructure, downed lines, and blackouts. RUS must consider the resiliency of the proposed action in comparison to the resiliency offered by reasonable alternatives: “Investments in energy efficiency, smart grid technologies, storage, and distributed generation can contribute to enhanced resiliency and reduced pollution, as well as provide operational flexibility for grid operators.”21 These resiliency benefits must be disclosed and discussed.

Climate change will also make some of the resources in the Driftless Area more vulnerable. This will increase the stress on ecosystems already negatively impacted by the proposed transmission line.

C. Economic and Property Impacts

The EIS must also include an analysis and discussion of economic impacts and other impacts to communities and property owners. To begin with, RUS must analyze negative impacts on property values and conservation easements from the construction and operation of

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the proposed high-voltage transmission line. High-voltage transmission lines have a statistically significant negative impact on property values. A valuation guidance report by Appraisal Group One, which included a review of many empirical studies, including several from Wisconsin, concludes that “it can be stated with a high degree of certainty that there is a significant negative effect ranging from -10% to -30% of property value due to the presence of the high-voltage electric transmission line.”

A well-regarded study from Montana analyzing the effects of large transmission lines on property values found properties up to 1,000 feet from a transmission line had values fall by 15%. There are also detrimental impacts on the quality of life of people whose scenic views are disrupted and who sometimes report being bothered by buzzing and crackling sounds produced by transmission lines.

Transmission lines can interfere not only with property owners’ enjoyment of their property, but also with their practical use of their land. Many DALC members are involved in agriculture on some scale. Transmission towers and lines can interfere with farming operations by limiting movement of farm vehicles and irrigation equipment, preventing or limiting the use of planes for spraying, interfering with rotational grazing, and by causing the removal of wind breaks. The actual erection of the towers and placement of the line requires the use of heavy

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24 There have been studies that have reached somewhat different results. The findings in the case studies cited in this memo, however, are supported by another study conducted by Colwell and Foley in Central Illinois, which a literature review by Mountain View Research listed as especially methodologically sound compared to the many other studies they had evaluated. A multivariate regression analysis of selling prices based on ten variables, including proximity to the transmission line, found “a significant negative relation between selling price and proximity to the transmission line for properties within 200 feet.” Lita Furby et al., Electric Power Transmission Lines, Property Values, and Compensation, Journal of Environmental Management (1988), http://sds.hss.cmu.edu/risk/articles/ElectricPowerTransLines.pdf. Another study vetted by the same organization and conducted by the University of Waterloo found, with a sample size of more than 1,000 sales, that property values near transmission lines were 16% – 29% lower than those of similar properties, and that smaller properties in particular were disproportionately impacted. Id.
machinery, which can compact dirt, leave ruts in fields, and introduce contaminated soils. The spraying of chemicals to manage a transmission line corridor can interfere with nearby organic farming operations. Some local organic farmers have expressed concerns that this spraying could potentially result in loss of their organic certification. High-voltage transmission lines can also cause disruptions to animal herds due to stray voltage issues.

DALC members and other local businesses are located on the proposed corridor. DALC member Uplands Cheese, which produces award-winning cheeses from grass-fed cows and sells to international markets, is especially environmentally sensitive. DALC member Botham Vineyards is a destination winery because of the quality of the produce and its setting in the beautiful Driftless Area. The Deer Valley Lodge and Golf Course has fairways built around natural native prairies and woodlands. It provides habitat to several threatened and endangered species, including the federally-listed Regal Fritillary butterfly, and attracts golfers because of its natural setting. These and other businesses would be severely negatively impacted by the proposed transmission line.

Impacts on property values have subsequent impacts on the amount of revenue local governments bring in through property taxes. The EIS should consider that decreased property values will mean local governments in the area will have less money to spend on schools, roads, and other important infrastructure.

The EIS must also consider effects on recreation and tourism. The harmful visual impacts are magnified in the Driftless Area where many people choose to live, buy properties, recreate, and visit in part because of the scenic landscape views. Tourism is growing in the Driftless Area and is an important driver of economic growth.  

very tall towers will disrupt the scenic landscapes and park areas that attract visitors to the special Driftless Area. The proposed transmission line would be especially visible if it is built along a ridge, as is indicated in one of the proposed corridors.

The EIS must also consider the economic cost of actually building the proposed Cardinal-Hickory Creek transmission line, and compare this to the cost of reasonable alternatives. The analysis should also discuss how that cost will be distributed and the effects on ratepayers’ utility bills. This analysis must include the economic benefits from alternatives, such as local energy resource development, energy efficiency, and demand response.

D. **Cumulative Impacts**

The scope of the EIS must also include cumulative actions and cumulative impacts. 40 C.F.R. §§ 1508.25(a)(2) and (c)(3). This means that the EIS must discuss past, present and reasonably foreseeable projects in the area and explain how these projects and other circumstances may, in combination with the proposed transmission line, cause cumulative impacts in the region. For example, RUS must consider the new Badger-Coulee transmission line, a high-voltage line that would run from Minnesota to La Crosse, Wisconsin and then to the same Cardinal substation in Middleton, Wisconsin. The EIS should also consider the planned conversion of 28 miles of US 18/151 from Dodgeville to Verona to a freeway and the new Vortex Optics industrial park in Barneveld. The freeway conversion/expansion will be a significant project – including “four new interchanges, seven grade-separated crossings . . . , 21 miles of new and altered local roads and one pair auxiliary lanes”\(^\text{26}\) – and will impact areas that

would also be directly impacted by one of the proposed corridors for the Cardinal-Hickory Creek transmission line.

As with every type of impact, RUS must compare the cumulative impacts from the proposed transmission line with the impacts from all reasonable alternatives.

V. RUS’S EIS MUST ANALYZE CONFLICTS BETWEEN THE PROPOSED CARDINAL-HICKORY CREEK TRANSMISSION LINE CORRIDORS AND THE WISCONSIN SITING LAWS.

RUS must also analyze Wisconsin state laws when comparing alternatives. An EIS must include a discussion of “[p]ossible conflicts between the proposed action and the objectives of Federal, regional, State, and local . . . land use plans, policies and controls for the area concerned.” 40 C.F.R. § 1502.16. The Wisconsin Energy Priorities Law establishes a clear, specific priority order for siting all new transmission lines and related facilities:

In the siting of new electric transmission facilities, including high-voltage transmission lines, . . . it is the policy of this state that, to the greatest extent feasible that is consistent with economic and engineering considerations, reliability of the electric system, and protection of the environment, the following corridors should be utilized in the following order of priority: (a) Existing utility corridors. (b) Highway and railroad corridors. (c) Recreational trails, to the extent that the facilities may be constructed below ground and that the facilities do not significantly impact environmentally sensitive areas. (d) New corridors.

Wis. Stat. § 1.12(6).

The Public Service Commission of Wisconsin recognizes that “this statute prefers corridor sharing because it imposes only an incremental addition of impacts to an area that is already affected by a cleared corridor, instead of the larger burdens caused by siting a transmission line in a new corridor.” Application of American Transmission Company, 2006 Wisc. PUC LEXIS 309, *40 (June 30, 2006). Many segments of the proposed Cardinal-Hickory Creek transmission line corridors do not comply with these Wisconsin statutory requirements.
When running through recreational trail areas such as the Military Ridge State Trail and Pecatonica State Trail, transmission lines should be placed underground – not overhead – and should not significantly harm environmentally-sensitive areas. The Public Service Commission of Wisconsin has explained:

The plain wording of the priorities in that subsection are intended to protect recreational corridors from being used as routes for overhead transmission lines. The statute requires any transmission line located in a recreational trail corridor to be placed underground, if the corridor is to be used in the identified priority list. Further, a transmission line in a recreational trail corridor cannot significantly impact environmentally sensitive areas. . . . If an overhead segment is proposed, it should be designed to minimize the impact on the trail corridor and then it may be considered among the lowest priority of all the options listed, including new corridors.

Application of American Transmission Company, 2006 Wisc. PUC LEXIS 384, *29-30 (August 10, 2006). Siting overhead new transmission lines along recreational trails should “among the lowest priority of all the options listed.” These conflicts with the state siting laws must be analyzed by RUS in the scope of its EIS in this case.

CONCLUSION

The Driftless Area Land Conservancy appreciates the Rural Utilities Service’s consideration of these comments on the lawful and appropriate scope for the Environmental Impact Statement in this case. DALC and its attorneys would be pleased to meet with RUS officials to discuss questions or suggestions involving any of the above comments, including: (1) a properly defined purpose and need statement; (2) the current available factual data on Wisconsin electricity demand and the availability of renewable energy generation, other energy supply, energy efficiency and demand response resources; (3) the NEPA requirements for an EIS that “rigorously explores and objectively evaluates all reasonable alternatives” including non-transmission line alternatives and no-build alternatives; (4) the significant direct impacts, indirect
impacts, and cumulative impacts on the environment in the Driftless Area in southwest and central Wisconsin where the proposed large Cardinal-Hickory Creek transmission line and tall towers are proposed to be sited; and (5) conflicts with Wisconsin siting laws.

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